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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, OCTOBER 14, 1913. Number 1.

Yarmouth County Agricultural Exhibition

BEAUTIFUL autumn weather greeted the opening day of the Yarmouth County Agricultural Exhibition for the western counties, and despite the heavy rain and thunder storm on the second and third day, the big reputation which this exhibition has always had for excellence and attractiveness, coupled with special excursion rates from all points on the railway and steamboat lines centering at Yarmouth brought about a fair average attendance.

As this has been a very dry season, naturally one would not expect the exhibit of fruit, vegetables or stock to be quite up to the mark but with a very few exceptions everything was first class.

ADDITIONS AND IMPRONEMENTS TO THE BUILDING.

This exhibition is fortunate in having on its Board of Directors some of our most intelligent and successful farmers and business men with E. K. Spinney, Esq. as President and Mr. Wm. Corning, Secretary. Always alive to the growth and increasing importance of the Western Counties exhibition, they have annually increased the capacity of the plant. This year a large addition was made, 30x50 feet to the main building to serve as a machinery hall. The hall is well lighted, with large doors, and a concrete floor. The main bui,ding is thus relieved of the jar, vibration and smoke from the gasoline engines, and the heavy weight of automobiles and farm machinery. The upper storey is to be used for the Winter Short Courses, all of which have hitherto been given at Truro. Even with this increased accommodation the whole building was crowded with exhibits, many being turned away. If the stock show keeps on increasing, more yard room will have to be found.

THE FLOWER SHOW.

No doubt the most attractive exhibit, the centre piece of all, in the main building is the flower show with its wealth of colour and profusion of beautifu, foliage plants. Starting twenty-five years ago with one small table it has grown up to its present handsome proportions in charge of Mrs. Chas. R. Kelley. Of the two towering collections by professionals, the first prize was carried off by S. F Trask second by C. W. Durland. The one collection by an amateur, Mrs. Dr. I. M. Lovitt was fully up to that of the peofessionals. The wild flowers, four collections, cut flowers and collections of foliage plants were gorgeous. These, with the very large show of ferns, palms and flowers growing in beds made a display of wondrous beauty and whose fragrance filled the entire arena.

Chas. Grace and Wm. Butler, of Yarmouth were the judges.

VEGETABLES.

All the ordinary garden vegetables for table purposes with some newer varieties made a good showing. Pumpkins, squash, cauliflower, roots for stock were not so large in size as last year. Tomatoes, cucumbers, etc., were good. The showing of home grown seeds far excelled any previous exhibit.

The judges were Wm. Archibald, W. H. Allen, Geo. Moses, Chas. Doane all of Yarmouth.

THE SEED EXHIBIT.

Corn, beans, grains, cabbage and turnip was pronounced of such excellent quality, by the Dominion Inspector of Seeds, that where the quantity of any one kind exceeds 25 pounds they are to be recommended for the Dominion County at 25 cents per pound.

THE DISPLAY OF FRUIT.

The display of fruit was not so large as in some previous years. That shown was well up to the mark in size, color, shape and flavor. The Annapolis or Cornwallis valley is not the only part of Nova Scotia where fruit can be grown. In years gone, our native fruit, won prizes in open competition from Kings and Annapolis counties. Our apples keep better and we are free from the pests that are proving so troublesome in the better advertised apple growing sertions. For twenty years teachers in very many school sections in Nova Scotai have kept records of dates at which our wild flowers and fruit trees are "first seen" in blossom and "when blossoming has become common." This system is one of the many good things inaugurated by Dr. A. H. Mackay, Superintendent of Education.

These "Phenological Observations," as they are called, are published annually in the October Journal of Education. A careful study of these statistics will show that in our "Orchard-Farm Belt, spring opens earlier, blooms of all kinds are "first seen," "become common" earlier, and that the winters are less severe than in any other part of Nova Scotia."

Fruit growing conditions in the sheltered inland valleys, referred to, along the D. A. Railway, along the Carleton, Tusket and Salmon Rivers, in Deerfield, Pleasant Valley, Carleton, Kempt and other places are simply ideal.

There were some splendid exhibits in collections of apples for commercial purposes, apples in barrels and boxes and plates of all the well known varieties, such as Gravensteins, Russets, Pippins, King of Tompkins, Sweets, Spy, Fall Jennettings, Greenings, Wolf River and many others.

The exhibit of pears was not large but contained some fine Clapps Favorite, Bartlett, and Duchess and there were some good Lombard, Moore's Arctic and Burbank plums.

Mrs. Cail and Mrs. Dr. I. M. Lovitt had their usual fine collection of grapes grown under glass.

The judge in this section was G. H. Vroom.

DAIRY PRODUCE

was judged by W. A. Mackay.

The Yarmouth Creamery had a full and attractive display of creamery in boxes, crocks, 2 pound prints and fancy prints. In 1912-13 they have shipped about $40,200.00 of butter out of the county, and the price of butter and butter fat has increased about 30 per cent. The packages of "Hygenic cheese" made from buttermilk compares well with any fancy cheese on the market. This successful industry recently established in Yarmouth is in charge of Messrs. Porter and Chipman, Yarmouth County boys, Nova Scotia educated.

The exhibit of home made butter was in all respects equal to the creamery product, in some cases the points ran higher. Yarmouth butter is the product of Yarmouth's high grade dairy stock and is better than the best made elsewhere.

DOMESTIC MANUFACTURERB.

Judges, Mrs. W. R. Crosby, Mrs. Geo. A. Handy.

The exhibit was smaller than in former years but contained some excellent mats hooked from yarn and braided mats, patch work and fancy quilts, sox, blankets and homespun. The first prize for knitted quilt going to a lady 80 years old. One fancy hand-woven spread, that had been in use 75 years, would seem to indicate the durability of hand made goods.

BREAD AND PRESERVES.

Judges, Mrs. Cann and Miss Baltzer.

This was a very fine display n' tempting delicacies, and was much larger than for years, covering five large tables. It is to be regretted that the value of prizes is not commensurate with fine quality and appearance ol the exhibit. White bread, brown bread, corn cake, all kinds of cake, buns, pies, pickles, preserves, canned vegetables and eatables too numerous to mention, were a source of very favorable comment. There was one bottle of raspberries, put up in 1863, by Mrs. Capt. Amos Dennis that still looked good.

SCHOOLS.

Judge, Geo. D. Blackadar.

The exhibit of mechanical, free-hand and perspective drawing in pen and ink, charcoal, or colored crayons was excellent. Collections of the above by schools or individuals and specimens of writing including business forms and for penmanship, and maps are a credit to our schools and show the class of work carried on there. Some of the work is so good as to deserve a place in the fine arts department. The same is true of collections of named wild flowers and minerals. The work in manual training, hall chairs, tables, racks stands, boxes and of inlaying was a surprise to the adult carpenter. These two departments are a big improvement on former years.

FINE ARTS.

Judges, J. C. Creelman, Mrs. E. J. Vickery, Mrs. S. Crosby.

It is hard to do justice to the splendid exhibit in this department. The work was of very high class order. Both professionals and amateurs, in oils and water colors, in pen and ink or charcoal produced work of which

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they may well feel proud. Under the direction of Mrs. Lindsay Burrill the drawings and paintings were tastefully displayed on the walls and tables of the long gallery which was thronged with admiring spectators.

THE FANCY AND NEEDLE WORK DEPARTMENT

was judged by Mrs. Jas. Stoneman and Mrs. J. G. Burrill. Here also the display of silk on linen, laces, sofa pillows, sewing by children was well up to the mark and an object of much admiration.

HARDWARE, STOVES, ETC.

The two exhibitors in this class were the Burrill-Johnson Iron Co. and Mr. Alex. P. Ross. The former exhibited their own make of stoves made in Yarmouth. These stoves are well known for being durable, efficient and economical. They show such familiar makes as the Silver Moon base burner,which will give more heat with the same fuel than any stove made in Canada, and a large line of cast-iron ranges, parlor stoves, and stoves for vessels or fishing schooners. Their kitchen ranges, the Model Grand, Model Duchess and Model Queen are filled up with the latest improvements and have a very large sale.

Mr. Ross is agent for the McClary stoves and ranges, the well-known Pandora, Regina, Kootenay and Gladova, and the famous airtights. They make good the claims made for them that they are easy to operate, bake and cook perfectly, reduce fuel and increase comfort.

The Rub-Ber-Oid and Ka-Lor-Oid Roofing Company had a model cottage, covered with their celebrated fire-resisting, roofing composition, made of wool-felt, saturated with rubber gums. This roofing has withstood severe fire three years ago in Yarmouth and more recently at Truro, is durable and easy to lay. E. H. Cunningham was in charge of the exhibit.

Seven makes of cream separators were lined up on the raised platform around the arena. We have long known the perfect work done by the DeLaval and the Melotte. They are all good machines, every up-to-date farmer finds one a necessity. A selection must be a matter of some perplexity, for each machine has some specially good quality about it.

In machinery hall was a fine display of gasoline engines, sleighs, waggons and various machinery for making farming operations easy.

The L. M. Trask & Co., Halifax, N. S., handle chiefly the Ferro, heavy-duty, four cycle gasoline engine. "Better than steam," "The engine that mastered Niagara." This engine and Mr. Trask, the agent, are well and favorably known all over the Maritime Provinces and Newfoundland.

Mr. Clifford Kelley, Manager the Eastern Motor Company, exhibited a fine Ford Touring car, the only auto shown. Gasoline engines, a stationary engine, mounted on a truck operating a saw for cord wood or stove wood and a grain crusher.

The largest exhibit was that of Mr. Chas. O'Hanley. It deserves especial notice, as Mr. O'Hanley is a pioneer in gasoline engines in Nova Scotia, and his exhibit was one of the best ever seen in this province. In one large block was a group of four engines including the Stanley, the Bridgeport and the Adams. One of them was equipped with a gasoline transformer that enabfes it to burn kerosene, gasoline, alcohol or benzene or any combination of those fuels. Another had the Perfex all-in one, ignition system, the newest thing in ignition systems. absolutely water-proof, and was shown running under water. He has a stationary engine specially made for him, run by kerosene or gasoline for all farm purposes, fitted with a special hoisting devise that can be put to any commercial purpose on land or water. A 2 H. P. engine can be run for ten hours at a cost of 15 cents. Mr. O'Hanley is headquarters for motor-boat or motor-engine supplies and specialties and fittings of every kind.

BOOTHS, ETC.

In numbers and appearance, on the main floors and in the Gallery the booths were the finest ever seen.

The Yarmouth Electric Railway booth lighted with hundreds of small and large lights, parlor and hall lights suspended for inside lighting, larger ones for outside purposes,, with their many colored, softly modulated globes and reflectors formed a very pleasing, attractive exhibit. Here was an electric stove and the counters were cooking and other utensils of every variety for domestic purposes, all in full swing.

Wm. Lloyd Porter's booth displaying ladies' ready made cloaks, dresses, dress goods and a fine lot of furs in boas, muffs and claoks quite filled the eyes of the ladies.

The Nova Scotia Agricultural College's travelling booth with its exhibits of insects injurious to plants, with their life histories, and in the same way, a demonstration of how to kill farm weeds with a 3 per cent. solution blue visIiol without injuring the crops, was both interesting and educational. A. W. Penchard had a beautiful decorated booth in which he demonstrated the scientific fitting of eye glasses.

In the galleries, the refreshment booths and those of special exhibitors were handsome and artistic. Amongst the best we might mention those of R. H. Davis & Co., Printers and Booksellers; Porter & Robbins, The Reliable Shoeman; R. K. Smith, Wall Papers; W. N. Allan, Trunks, and Overcoats; The Real Lace Booth, Mrs. Bodger; The Domestic Science Booth, Miss Baltzer; The Yarmouth Herald, Printers Publishers, Bookbinders; Tip-Top-Tea; King Cole Tea; B. F. Trask's booth and Candy-made while-you-wait booths.

The fortune-telling booth conducted by Miss Eva Pelton, proceeds for the Yarmouth Hospital Society, was a source of much amusement to all who "dared their fate." Specially attractive was the "Children's Benefit Fund" booth, proceeds of which go to swell a fund being collected by Yarmouth ladies, the interest on which money is given to help secure proper treatment of sick children. This was best patronIled in the show and received a large sum for their kindly purposes.

Pianos and organs and piano players were represented by G. R. McNutt of Yarmouth, the Johnson Piano Company, of Halifax, and the Amherst Pianos Ltd. The latter being the only makers east of Montreal. Mr. McDonald, Manager. In the booth with McNutt was a display of Robin Hood flour, consisting of bread and pastries in every edible form.

These, with a small exhibit of salt and pickled fish, wooden pumps, yokes and a few novelties comprise about all that was interesting inside the building.

The stock yard presented an animated appearance, the attention of the large crowds being about equally divided with what was inside the building. Even in the pouring rain, daintily-gowned ladies in rubber surtouls showed their interest in this part of the exhibit. Who knows just how far the appreciation of the fair sex has helped to place Yarmouth's dairy stock so high.

Our largest breeders specialize on some particular breed that, for good and sufficient reasons, appeals to them. There is Dr. I. M. Lovitt, Proprietor of Lawndale Farm whose hobby is Shorthorn Durhams, beef cattle, Mr. H. W. Corning, M. P. P., of Chegoggin, breeds Guernseys for dairy purposes; J. C. Corning, the Cann Bros., of Chegoggin and S. A. Cook, of Cheboque, devote themselves to Jerseys for dairy also; Prickney Bros.. of Prickney's Point, have for their pets, the beautiful dark-red Devons, fine oxen stock whilst Osborne Churchill, of Ohio, raises Ayrshires for both dairy and beef.

All of thses herds have a reputation throughout the Maritime Provinces, where for years at the leading exhibitions they have carried off most of the honors, returning home with shields full of prize ribbons. But it must not be supposed that the above are the only ones who breed these high grade animals. In not a few instances first honors are won here by the smaller breeders, of whom there are many for Yarmouth is one of the best grazing counties in Canada. In addition to this there is the mixed breeds, the grades, some of our profitable dairy stock being of the latter variety and they are at the same time very hardy and easy keepers. All of tnis stock, sires and dams, old and young, looked in good condition. For the farmer can supplement shortage of pasture with short feed, though he can rarely supply lack of moisture for garden crops.

Working oxen were fewer in numbers than last year and steers, a big exhibit, with fat oxen, looked well.

The judges were John Corning, Edward Allen, Howard Hulsman, Wm. A. Killam.

SHEEP.

Judge, Nathan Lamont.

The sheep pens were fairly well filled with such well known breeds as Cotswolds, Shropshire, Cheviots, and the Merino-horned sheep. The competition was very keen. Some fine pens were shown by Chas. Butler, Chebogue, Rev. Gordon Lewis of same place and H. W. Corning, M. P. P.

SWINE.

were judged by the judges of the dairy cattle class, and were in splendid condition and made a fine showing, especially some brood sows with large liitters, fat spring pigs and boars. The breeds represented were Yorkshire, Berks, Chester White and Poland China. Amongst the larger exhibitors and prize winners were J. C. Corning, Chegoggin, W. A. Churchill, Hebron, Yar. Co., and H. W. Corning, M. P. P.

POULTRY.

Judge, W. H. Henry, Shubenacadie.

Though not over large the exhibit of hens, geese, ducks, game birds, pheasants, white rabbits was fairly representative. The fowls looked well and were up to standard. F. W. Pickles, of Hebron, Yar. Co., znd R. J. Melvin were the largest exhibitors in the class. One new breed of hens, the Campine, introduced this season from Ohio, U. S. nicknamed the "Egg machine" was a likely looking specimen. But all the old standard varieties, the Leghorns, Wyandottes, Brahmas, Plymouth Rocks, Rhode Island Reds, etc., have proven their egg-produsing qualities.

There was a single pair of turkeys. The show of ducks, Muscovey, Rouen, Pekin and of geese, Toulouse and Emden was the largest and finest ever seen in Yarmouth.

HORSES

Judge, Wm. Murray, Pictou.

Horses were well represented in all classes of Roadsters, Carriage Horses, General Purpose Horses and Light and Heavy Draught Horset. The number exhibited was larger, esptc.ially of colts. What was before noted about specializing on breeds of cows, holds true of the horses. There is hardly a scrub horse in the county. There has even been more improvementin the horse show than in any other part of the exhibition. The heavy rain prevented the usual display of driving so much enjoyed by everyone, but rains just now are good for everything but exhibitions.

By way of amusement there were the usual booths outside the rink where you shoot three balls for five cents or a poor cigar if you win.For inside entertainment was Yarmouth's fine concert band and the management provided two splendid specialities in the shape of a thrilling acrobatic and balancing performance on a revolving ladder and a troupe of trained dogs. The exhibition in itself is a diverting, entertaining affair. The management seem to estimate just how much move to add and the performers are the best it is possible to procure and the most suitable.

The 1913 exhibition has been altogether one of the most successful ever held in the Western Counties.

Under Ground Silos in South Dakota.

In the dry subsoil region of the great plains many underground or pit silos have been built and have proven successful. The authorities of the South Dakota Agricultural College have authorized Professor Larsen to expend $700 in an investigation of the pit silo. Several will be erected (if that is the proper term to describe the digging of a hole in the ground) in different parts of the state and records kept of the character of the subsoil and rainfall. This is agood move and some valuable facts should be forthcoming.

"It is a well established fact," says Professor C. Larsen, "that silos are the cheapest conservers of feeds for dairy cattle and young stock. The various kinds of silos placed on top of the ground require a considerable outlay of money. Many farmers, especially the new settlers in the western part of the state have not the means with which to build asilo nor possess the machinery for filling it. Realizing the great importance of silos and silage to the state of South Dakota, it was thought that the pit or underground silo would preserve the silage just as well as those erected on the top of the ground.

"Pit silos are comparatively cheap. Nearly all the cost of building such silos is represented in the cost of common labor. It is the intention to dig the hole or pit about 16 feet deep and make it about 18 to 20 feet in diameter, then plaster the inside with two coats of cement.

"The advantages of such a silo are: (1) that it is cheap, (2) that such a silo will not freeze in the winter, (3) such a silo will not blow down.

"The disadvantages are that: (1) more labor is required to get the silage out, (2) there is some danger of carbonic acid gas accumulating near the bottom of the pit. For this latter reason the experimental silos have not been dug deeper than 16 feet.

"The money authorized for these silos is from fcdetal funds. This is the first time that experiments have been conducted with pit silos. There are, however, a few underground silos scattered over the semi-arid portions of the United States."

The Cape Breton Island Exhibition

The Second Annual Cape Breton Island Exhibition was held in the Iron City, Sydney, on September 30 to October 4th.

The exhibition grounds had been considerably improved since last year but despite this fact the enclosure was taxed to its utmost capacity when on certain days of the fair the turnstiles recorded an attendance of upwards of twenty thousand people.

With a population ol upwards of 75-000 residing within a radius of twelve miles from Sydney, the majority of which are busily employed in the mining and manufacturing industries for which Cape Breton is noted and with ideal transportation facilities connecting the various industrial centres, Sydney makes an ideal spot in which to hold an exhibition.

People who are inclined to be rather skeptical about farming possibilities in Cape Breton receive their answer from the display made at Sydney by Cape Breton farmers.

At no exhibition that we visited this year was there a better display of well grown vegetables, fruits and grains, threshed and in the sheaf. In the latter class the sheaves outside the money's pale were better than some of the best prize winners at some of the earlier fall fairs. The vegetables and fruits were as various and well-grown as one can find anywhere.

The fruit was a potent reminder that, in many varieties, the Cape Breton counties are not a whit behind the best fruit growing sections of Nova Scotia.

Jno. McMillan, George's River and R. B. Murray, Coxheath had the first and second prize collections or seed.

D. R. Nicholson, Coxheath, had the best collections of field roots and garden vegetables.

Roy Martell, Mira, and H. A. Moffatt had the second and third prize collections of garden vegetables.

J. G. Davison, Baddock, showed the best collection of vegetables grown in Victoria County.

In fruits, the first, second and third prize collections of six varieties apples were exhibited by C. A. Munn. W. P. Meloney, North Sydney and M. D. Curry, Grand Mira South..

C. A. Munn had the best collection of fruit grown on one farm.

M. D. Curry and Jno. McMullin captured the second and third prizes in the latter section.

E. J. Johnson, Georges River, showed the best box of apples packed for market. John McMillan and D. Ferguson came in for the second and third prizes. C. A. Munn also had the best collection of plums. P. S. Lewis showed the second prize plum collection and that was shown by Roy third.

There was only one natural history collection andthat was shown by Roy S. Munn, Leitches Creek.

Mrs. Ira Hughes captured the red on the best collection of preserved fruit while Margaret F. Lewis, Point Edward, and Mrs, C. A. Munn, North Sydney, followed with second and third prize collections.

Mrs. C. A. Munn, Mrs. H. A. Moffatt and Mrs. F. T. Stewart showed the prize collections of jellies.

Mrs. E. J. Johnson had the only entry in the honey section.

The Cross Fertilizer Co. and the Nova Scotia Agricultural College had educational exhibits in the main builf ding.

The display made at Sydney of fancy and domestic work was simply grand, and no where could the work of Cape Breton women be excelled. In needle work as well as in the prbducts of the loom a high order of mechanical inginuity and artistic skill was in evidence.

The butter section in both the crocks or tubs sections and the rolls or prints sections were well filled and the quality tfhroughout was pronounced good by the judge, Mr. Harvey Mitchell, who recommended to the exhibitors that they use a better brand of butter parchment than they are now using. Prizes were awarded in the butter section as follows:—

BUTTER AND CHEESE.

Best Crock or Tub Butter—32 entries—1, Mrs. D. R. Nicholson, Coxheath ; 2, 7, N. Beaton, Coxheath; 3, Capt. J. C. McDonald, Baddeck; 4, E. J. Johnson, Geirges River; 5, Mrs. R. J. Gray, West Bay; 6, Robt. Grant, Pt. Edward. ...

Best Butter in prints— 45 entries—1. Mrs. R. D. Nicholson; 2, Jno. M. Guthro, McLeanville; 3, Mrs. John Harvey, Georges River; 4, Miss E. McMullin; 5, N. Beaton; 6, Miss Sarah McDougall, Xmas Island; 7, Miss C. Ferguson, Caribou Marsh.

Best Dairy Cheese—4 entries—1, Ira Hughes, Sydney River; 2, E. W. Andrews, Coxheath; 3, Rod McLeod, Glen Farm.

HORSES.

The two commodious horse barns were filled to overflowing and the overflow was housed in a large tent adjoining the barns.

J. Rufus Starr, Wolfville, N. S., placed the awards in the majority of the sections but as he had to get away to judge at Guysboro fair, Mr. S. A. Logan completed the task.

The draft classes are beginning to show up nicely at Sydney. Thanks to enterprising citizens who have imported and keep for service good, useful pure-bred sires, the young stock is particularly promising.

H. A. Moffatt's Baron Majestic by Baron Primrose carried off the sweepstakes awasd for the best pure bred draft stallion in Cape Breton following in second place by Matheson's Royal Everett by Flash Favorite, the winner of the Victoria County sweepstakes award. Baron Majestic was first with three of his get and his foals throughout the younger sections of the class were a credit to their owners as well as to their sire.

GENERAL PURPOBE HORSES.

were out in strong numbers and there was an abundance of quality. In some sections there were upwards of twenty entries and it was no easy task to place the awards. Baron and farmers' Pride foals were the principal money winners in the younger sections of the general purpose class.

John H. Ross, Marjorie Harbor, had the best general purpose horse owned in Inverness county. M. E. McNeil, Irish Cove, captured the Richmond county prize in the same se.tion while the Cape Breton county prize went to John Morley, Sydney.

CARRIAGE HORSES

were also out in strong numbers. Leland F., exhibited by Frank Redding, Sydney, Alice Snell, exhibited by G. V. Purvis and a Hackney stallion exhibited by Alex Jamieson, Sydney were the first, second and third prize winners in the aged stallion section. Leland F. was awarded the Cape Breton County sweepstakes prize for best carriage stallion, any age.

ROADSTER HORSES.

The aged stallion section of the roadster class had five entries. The Standard bred stallions, Directum B. and Royal Seal came in for the first and second monies and the Thoroughbred stallion, Dixiline, captured the third. The other two stallions could not show any proof of their breeding and they were ruled out of the Pure bred class. Dixiline captured the award for best Roadster stallion in Richmond county while the Cape Breton county award in the same class went to Directum B. The mares and geldings shown in the roadster class were a good, classy lot and outside the prizes were found horses that would be creditable winners at shows claiming greater pretentions than Sydney.

BEEF CATTLE.

There were no pure bred beef cattle at Sydney but there were a few grade beef cattle, none of which were very well fitted for the show. S. A. Logan placed the awards.

DAIRY CATTLE.

S. A. Logan, Amherst Point, N. S., placed the awards in the dairy cattle section and he was kept busy every minute.

There was a big showing of Holsteins. Some of the champions at the provincial fairs during the last three seasons were there in the hands of the most progressive farmers. Cape Breton, Richmond and Victoria counties were represented by exhibits in black and white.

As will be seen by the winnings elsewhere in this issue, D. R. Nicholson captured the lions share of the prizes. His Bob Dorindo captured the male championship, all breeds competing, and Cape Breton county award for best Holstein bull, any age.

The Richmond county award for best bull went to W. C. McLeod & Sons, Loch Lomond West, on Vale Imperial 2nd, shown in the senior calf class. John A. McDonald, Middle River, captured the Victoria county award in the same section.

C. A. Munn, A. K. Jackson & Son, The Cross Fertilizer Experimental Farm, W. Drysdale, The North Sydney Agricultural Society and R. T. McDonald were the other prize winners in the Holstein class.

AYRSHIRES.

Four counties were represented by Ayrshies, as follows:—

Inverness county, John H. Ross, Margaree Harbor; Victoria county, H. C. Rose, Baddeck; Richmond county, Wm. Chisholm, Loch Lomond and Cape Breton eounty, South Bar Agricultural Society, H. C. Musgrove, North Sydney, M. W. Ross & Son, Centerville; Chas. Barrett, Mira Rd.; The Cross Fertilizer Experimental Farm; Alex Boutilier; Blackett's Lake; Georges River Agricultural Society; East Bay Agricultural Society and Xmas Island Agricultural Society.

The class showed a great improvement since last year. In it we saw some imported stock and also a lot of good individuals from some of the large herds on the Mainland.

The honors for best bulls from the respective counties were won by the first mentioned names in the above list. The championship went to the two-year-old, South Bar bull, Tariff.

JERSEYS.

Cape Breton was the only county represented by Jerseys. Nevertheless, the representaion was good and to this breed belongs the honor of producing the sweepstakes cow, any age or breed....This honor was captured by by J. Webster Allen's aged row, Lady. Mr. Allen's Sensation was first with two of her progeny. H. A. Moffatt's Sydney Fox captured the male championship.

Donald Johnson, Leitches Creek, D. R. Nicholson, A. K. Jackson & Son and M. W. Ross & Son were the other exhibitors in the Jersey class. As in the other breeds, Cape Breton farmers have improved their herds very materially during the past year or two and ere long we expect to see large herds of this popular breed in the Cape Breton counties.

GUERNSEYS.

Cape Breton county farmers, particularly those residing in the vicinity of North Sydney and Coxheath have long been admirers of the Guernsey cow, and for years they have been keeping pure bred Guernsey sires they have also started in with a few pure bred females and in the course of a few more seasons we expect to see the Guernsey herds very much increased in numbers as well as in the size of the herd. Murdo McKenzie, Coxheath, R. M. Jackson, North Sydney and E. J. Johnston, Georges River have all made a good start in the breeding of pure bred Guernseys. Mr. McKenzie captured the male championship on his two-year-old bull as well as the female championship on his three-year-old dry cow.

A. W. McDonald, South Cove, showed the Victoria county sweepstakes bull.

GRADE CATTLE.

We belieue that never before in the history of Maritime Exhibitions, provincial or otherwise, was there a better showing made in the grade dairy classes than was made at Sydney. Some sections had upwards of a quarter of a hundred entries and there was quality to burn .

S. A. Munn had the best grade cow, any age, the winner of the first prize in the grade section of the 1912 dairy test at Amherst Winter Fair. We also saw the second and third prize winners in the same test. When it comes to get a good dairy cow the Cape Breton farmers are not afraid to invest their money in individuals that have been tried and found not wanting.

THE SHEEP CLASSES

were also judged by S. A. Logan. There were a few Leicester rams, a small exhibit of Cheviots, some good Southdowns and a good display of Shropshires and Oxfords.

E. J. Johnson's Oxfords captured the Cape Breton county sweepstakes award for best pen of pure bred sheep. This flock also captured the C. P. Moore special prize, a cabinet of first-class carpenter's tools.

Mr. Johnston also captured the Kirk and Torey special prizes for best ewe and best ewe lamb. Cape Breton is a good sheep raising county and the Sydney exhibition is bound to stimulate an active inteeest in better stock.

SWINE.

S. A. Logan judged the swine classes at Sydney.

There were some good Berks, Yorks and Chesters. The Cape Breton county sweepstakes for best pure bred herd was won by Ira Hughes' Chesters.

All the swine at the fair were exhibited by Cape Breton county farmers with the exception of a nice quartet of Berkshires shown by A. D. McCuish, Loch Side, Richmond cgunty.

See the list of prize winners in the respective sections elsewhere.

(Continued on page 10.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

OCTOBER 14, 1913.

DATES OF ISSUE.

October 14-28
November 11-25

THE MODERN TORMENTOR.

"Frequently we meet breeders of live stock who protest against the work that is imposed upon them in answering letters of enquiry for stock. The most earnest of these protests come from men who, after answering enquiries, have not been successful in making sales. Some breeders who have advertised widely and who have answered scores of letters without making a sale are convinced that there is a large class of people who answer advertisements as a means of killing time. Down south, the darkies give a man his social rating on the basis of the amount of mail he gets, and as a consequence the south is celebrated for the number of enquiries it can produce for a catalogue proposition. That the south's standard of social importance is held by some people in the north seems to be a conclusive fact.

But what can we do about it? A suspension of advertising would mean an army of unemployed publishers, editors, printers, mail carriers, etc., who no doubt would be useful in the harvest fields this time of the year, but who would have to find other employment later on, and who would literia
would literally be forced into the publishing business when the long nights overtake us, in order to save the populace from mental atrophy.

"It would seem that this practice of answering advertisements witnout any intention of buying is a new form of expression of an old inherent trait. In barbaric days such a trait would find expression by puncturing a neighbor's skin with a bramble switch or a wreath of thorns. Later verbal taunts, backed by physical prowess, became a popular form of torture or amusement, depending upon the relative positions of the parties engaged. And now in these depraved decrept days we see the same old trait finding its expression by the use of the pen and His Majesty's mails. So the remedy is by no means simple. But we appeal to the man who is tempted to write in answer to an advertisement simply out of curiosity, to consider the trouble he may be giving some one and to curb the inclination. And by the same token, we urge upon anyone who feels the impulse to buy as a result of reading an advertisement to immediately write the advertiser, sending the money if possible, but in any event mentioning this paper."

The foregoing from the columns of an exchange is passed along to our readers and if the cap fits any of them we trust theywill take the hint and govern themselves accordingly. Don't bother the advertiser unless you mean business when he quotes a satisfactory proposition.

KEEP EVERYTHING WORKING.

It has been recognized by business men that everything must be kept at work if an enterprise is to prosper. Loafers will kill any business in the long run. The business of farmers is no exception. Unfortunately, definite rules are not as easily worked out for farm operations as for many other kinds of work, but as knowledge accumulates it becomes easier and easier to establish general principles of this kind. One farmer called attention to the fact that about the first of September a great many hens in a poultry plant either cease laying or do not lay enough eggs to pay for their feed. He advises immediate sale unless there is some especial reason for keeping them for the remainder of the season, for so far as these hens are concerned failure to sell will result in loss. Dairymen recognize that unless a cow produces during the season more than enough salable product to pay for her keep, which includes interest on the investment, she should be disposed of. Any animal which ceases to be profitable ought to be sold immediately, unless for some sentimental reason or other it is to be retained. This failure to keep everything working is a terrible handicap for agriculture. It will never be possible, of course, to determine just what animals are profitable until comparatively accurate records are kept. The up-to-date farmer is doing this and he must do it more and more. A field which does not produce enough grain to pay the interest on theinvestment, the cost of production and then some, must be so treated that it will show this profit. All these things require thought and study. It makes it necessary for the farmer himself to do less manual labor and work harder with his brain. In the long run, it will be found that brain work is much more profitable than manual labor. It will also be found that it is more wearing, but the combination of the two works very nicely.

A LONG COURSE IN AGRICULTURE FOR PRINCE EDWARD ISLAND.

The P. E. I. Provincial Department of Agriculture is arranging for a long course in agriculture this winter to be held in Charlottetown. It will begin about the middle of November and will be concluded early in April. The subjects included in the course will be Animal Husbandry, Horticulture, Dairying, Poultry, Agronomy, English, Mathematics, Book-keeping, Chemistry and Economics. The practical work will be given in the Agricultural Building, and provision is being made for live stock of all the different classes and breeds, etc. The lectures will be given in Prince of Wales College. A competent staff is already in the Province, and the course will be quite equal to any First Year's Course in Agriculture given at any of the Agricultural Colleges. A limited number of students only can be taken for the first year, not more than forty-six, as some of the rooms are built and equipped to accomodate just this number. To assist and encourage students to attend this course a small scholarship will be granted each pupil upon recommendation of the Principal of the School of Agriculture, stating that the pupils have attended their classes regularly and have completed their work in a satisfactory manner. It is intended to accept applicants in the order in which they are received, but no applications will be received from boys under 18 years of age. Further information can be had from the Department of Agriculture, Charlottetown.

FARMERS' UNIONS NOT TRUSTS.

The difference is very clear between illegal trust and associated effort which is morally and legally right. If certain farmers unite to ship their produce in an endeavor to secure a fair union prevents other farmers from selling their produce unless they join it or pay a tax to it, that is an illegal restraint in trade. Labor may associate in a union to secure fair wages by proper means—that is co-operation; but if the labor union stops non union men from work, it commits the crime of restraining trade.

SHOW HIM THE OTHER SIDE.

At the Rural Improvement Conference held in Indianapolis and promoted by the Indianna State Bankers' Association, a new angle was put on the much discussed problem of keeping the boy on the farm. "Show the country boy the other side of city life," said A. B. Graham, of the College of Agriculture, Ohio State University. "All he sees is the side which seems to him attractive —the good clothes, the change, the excitement," continued Mr. Graham. "If he saw the meaner side of the city life—the hard work, the heat, the poverty—he would realiIe more fully the fact that every occupation has its hardships and no one kind of work is all pleasure." The speaker said that too long we have described life on the farm in glowing terms when the boy knew better. He advised taking the boy on trips to the city, so that he may become familiar with the every day unpleasant side of city life which corresponds to the side of farm life with which he is so familiar.

SYSTEM IN BREEDING.

One great trouble with the people who are raising poultry today is the lack of system in breeding. Careful breeding and selection is necessary if one hopes to ever make a success in poultry raising. Select and breed from the individuals which come up to a certain standard of egg production or size, rather than from the entire flock, as most people who are raising chickens are inclined to do at the present time. The application of the laws of breeding is essential to success with any kind of live stock. This important matter is too often overlooked, and as a result many failures are recorded that otherwise would have been listed under the head of success.

A poultry farm, rightly conducted, operated by a man or woman with a reasonable amount of experience, common sense and judgement, will pay as well as most any other business for the actual amount invested. There are thousands and thousands of people in this country making a comfortable living raising poultry.

THE OLD-FASHIONED FATHER.

What has become of the old-fashioned father, with a hand like a sugar-cured ham, who used to spank a wayward son until he had to stand up at his meals for a week? Owing to the degenerate trend of these effeminate times, spanking has become a lost art. It has been succeeded by moral suasion and the power of love. Well, moral suasion is a good thing to have about the house, like an assortment of pink pills, but there are times when nothing will reach the spot with so much force and earnestness as a sound, six-ply spanking, applied in a cool, calculating spirit. For instance, when a boy gets in the habit of staying out all night trying to fill an inside straight or seeing who can lap up the most beer in passing a given point, moral suasion will do him about as much good as reading the 36th chapter of Genesis to him.—Kimball's Dairy Farmer.

ADVERTISING APPLES.

The essentials of success in an apple advertising campaign are: First, quality; second, uniformity of pack; third, a conspicuons and attractive identification label; fourth, advertising which makes a special point of the quality and the label. If an association would move along those lines, it would do more to increase the consumption of apples, and at the same time educate orchardists in proper and necessary methods, than is possible by indiscriminate advertising.

STOP THE SMALL LEAKS.

The farmers today is wise who watches all the corners for losses and the small leaks. This man is always looking to see that every foot of ground on the farmstead is producing something. He is always glad if someone can offer a new suggestion. The farmer who watches the little things usually has money in the bank, and has nothing to complain of except the low rate of interest paid. The man who does not watch the small leaks is not willing or ready to learn. He is still worrying over the mortgage and the high rate of interest he has to pay.

Chatham Exhibition was the Best Ever

The Miramichi Exhibition, held from the 23rd to the 26th of September eclipsed all previous records. It was the best that Manager Fisher has yet given to the public and that is saying a lot. The show went along without a single discordant note and those who attended as exhibitors and spectators had nothing hut good words to say.

The exhibits were numerous and the quality was good. The stock classes were well filled and there was keen competition for the honors.

In the agricultural sections the display was attractively arranged and was much admired. The horticultural show was also good. On the manufacturers side of the fair there was a fine representation of many of Canada's leading makes of agricultural implements and other wares.

The judging was, on the whole, satisfactory and few complaints were heard. Manager Fisher made things pleasant for the big crowds and for those who were showing. While he was highly praised on all sides for the smoothness that marked the exhibition, the stock men added to their spoken gratitude by presenting the genial head of the Miramichi fair with a heautiful walking stick. The gift will serve to remind Mr. Fisher of one of the pleasant incidents in connection with the many hours of hard work he has done to hring the Chatham exhibition to its present high standard.

The prize winners at the fair were as follows:—

HORSES

THOROUGHBREDS.

Stallion, 4 years and up—1, Wm. Jamieson, Sussex.

Stallion, any age—1, Frank Myers, Sussex.

HACKNEY.

Stallion, 1 years old—1, R. A. Snowhal,, Chatham, N. B.

Stallion, 3 years old—1, Randolph Cox, Loggieville, N. B.

Stallion, 2 years old—1, R. L. Hawks, Bartibouge Bridge.

Stallion, 1 year old—1, M. Woods, Reynolds, N. B.

Stallion, any age—R. A. Snowball.

Filly or Gelding, 3 years old—1, R. A. Snowhall.

Foal of 1913.—1, R. A. Snowhall; 2, Wm. M. Johnson, Chatham Head; 3, Micheal Woods.

Brood Mare—1, Wm. M. Johnson; 2, R. A. Snowball; 3, Micheal Woods.

STANDARD BREDS.

Stallion, 3 years old—1, George Hudson, Rexton, N. B.

SPECIAL PRIZES.

Silver Medal for best Stallion, hackney, won hy R. A. Snowhall.

Silver Medal for best mare, hackney, won hy Wm. M. Johnson.

MEDIUM DRAFT HORSES.

Brood Mare—1, W. D. Main, Rexton, N. B.; 2, Keating Bros., Chatham; 3, George J. Dickson.

Mare or Gelding, any age—1, Creighton Bros., Chatham; 2, Donald Walting, Block River, N. B.

Mare or Gelding, 3 years old—1, Keating Bros., Chatham, N. B.

Mare or Gelding, 2 years old—1, J. Mac. O'Brien, Nelson, N. B.; 2, A. G. Dickson, Chatham, N. B.

Yearling Gelding or Stallion—1, Geo. E. Fisher.

Foal of 1913—1, Geo. J. Dickson, Chatham; 2, Hotel Dieu, Chatham.

Brood Mare with Foal—1, Geo. J. Dickson, Chatham; 2, Keating Bros., Dickson, Chatham; 2, Keating Bros.; 3, Hotel Dieu.

Matched team—1, R. A. Snowhall.

HEAVY DRAFT HORSES.

Brood Mare—1, R. A. Snowhall.

Mare or Gelding, any age—1, R. A. Snowball.

Mare or Gelding, 3 years old—1, Rf A. Snowhall.

Mare or Gelding, 2 years old—1, Donald Walting;2, W. S. Loggie & Co., Chatham.

Yearling Filly—1, R. A. Snowhall.

Foal of 1913—1, R. A. Snowball; 2, Hotel Dieu.

Brood Mare—1, R. A. Snowhall; 2, Hotel Dieu.

Matched team—1, R. A. Snowball.

SADDLE HORSES.

Mare or Gelding—1, Fred Corwell, Chatham, N. B.;2, W. W. Doherty, Rexton.

Military Saddle Horse—1, John Hamilton, Chatham.

CARRIAGE HORSES TO HALTER.

Brood Mare—1, Micheal Woods.

Filly or Gelding, 3 years old—1, H. S. Pipes & Son, Amherst.

Filly or Gelding, 2 years old—1, Arch Cameron, Black River, N. B.; 2, M. Leorle, Chatham; 6, Frank Jardine, Chatham.

Filly ar Gelding, 1 year old—1,William Irving, Chatham; 2, Frank Jardine; 3, M. F. Noonae, Chatham.

Foal of 1913—1, A. P. Harrieman, Chatham; 2, Micheal Woods; 3, W. D. Main.

Brood Mare—1, Wm. M. Johnson; 2, Micheal Woods.

Gelding or Mare—1, W. W. Doherty, Chatham; 2, Fred Corwell; 3, Jas. Lomont, Chatham.

Matched team—1, Mrs. David Smith, Chatham.

Under 1000 each—1, Fred Corwell.

Mare or Gelding, driven hy a lady —1, W. W. Doherty; 2, Fred Corwell.

CLYDESDALES.

Stallion, 4 years and up—1, R. A. Snowhall; 2, H. R. McMonagle, Sussex.

Stallion, 3 years and up—1, Wm. O'Brien & Son; 2, Geo. E. Fisher.

Stallion 2 years old—1, J. Mac O'Brien:

Stallion, diploma—R. A. Snowhall.

Filly or Gelding, 3 years and up—1, R. A. Snowhall; 2, Wm. O'Brien & Son; 3, Wm: Johnson.

Filly or Gelding, 2 years old—1, H. S. Pipes & Son; 2 and 3, R. A. Snowball.

Filly or Gelding, 1 year old—1, R. A. Snowhall; 2, H. S. Pipes & Son; 3, Wm. O'Brien & Sons.

Foal of 1913—1, R. A. Snowhall.

Brood mare—1, R. A. Snowball.

PERCHERONS.

Stallion, 4 years and up—1, Wm. Jamieson; 2, P. S. Bremmer, Chatham.

Stallion, 3 years old—1, Chas. Symes.

Stallion, 2 years old—1i W. D. Main.

Stallion, any age—1, Wm. Jamieson.

Filly or Gelding, 3 years—1, W. D. Main.

Filly or Gelding, 2 years—1, Chas. Symes.

Foal of 1913—1, Chas. Symes.

Brood Mare—1, Chas. Symes.

The special prizes donated hy Dominion Clydesdale Association for hest Stallion, best Mare and hest Filly or Gelding were all won hy R. A. Snowball.

P. S. Bremmer silver medal for hest foal of 1913, for mare sired hy his stallion "Couquet" was won by George Dickson.

Special prize donated hy R. A. Snowball for progeny of Baron Balgreggan, for Mare or Gelding foal 1911 was won by A. G. Dickson, and Mare or Gelding foal of 1912 won hy Geo. E. Fisher.

CATTLE

AYRSHIRES.

Bull, 3 years old—1, McIntyre Bros, Sussex, N. B.; 2, Black River Agr. Society.

Bull, 2years old—1, A. McRae & Sons;2, McIntyre Bros.; 3, Harold McKendy, Bhatham.

Bull, senior yearling—1, AMcRae & Sons; 2, McIntyre Bros.; 3, Millon Galloway, Chatham.

Bull, junior yearling—1, McIntyre Bros.; 2, Chas. Symes; 3, Donald Walting.

Bull calf, senior—1 and 2, McIntyre Bros.; 3, A. McRae & Sons.

Bull calf, junior—1, McIntyre Bros.

Bull, diploma—McIntyre Bros.

Cow, 4years and up—1, 3 and 4, McIntyre Bros.; 2, A. McRae & Sons.

Cow, dry, 4 years and up—1, McIntyre Bros.; 2 and 3, A. McRae & Sons.

Cow, 3 years old—1 and 3, McIntyre Bros.; 2, A. McRae & Sons.

Cow, dry, 3 years old—1, A. McRae & Sons.

Cow, 2 years old—1 and 2, A. McRae & Sons; 3, McIntyre Bros.

Heifer, 2 years old—1, McIntyre Bros.; 2, Hotel Dieu.

Heifer, senior yearling—1 and 3, A. McRae & Sons; 2, McIntyre Bros.

Heifer, junior yearling—1 and 2, McIntyre Bros.

Heifer calf, senior—1 and 3, A. McRae & Sons; 2, McIntyre Bros.

Heifer calf, junior—1, McIntyre Bros.

Champion female—1, McIntyre Bros.

Aged herd—1 and 3, McIntyre Bros; 2, A. McRae & Sons.

Breeders' young herd—1, A. McRae & Sons; 2 and 3, McIntyre Bros.

Bull and 3 of his get—McIntyre Bros.

Cow and 2 of her progeny—McIntyre Bros.

SPECIAL PRIZES.

4 animals, get of one sire—1, A. McRae & Sons; 2, McIntyre Bros.

4 animals, produce of one cow—1, A. McRae & Sons; 2, McIntyre Bros.

HOLSTEINS.

Bull, 3 years old—1, Harding Bros., Welsford, N. B.; 2, A. L. Hinton, Bathurst, N. B.

Bull, 2 years old— 1, W. S. Harding, Welsford.

Bull, senior yearling—1, Harding Bros.

Bull, junior yearling—1, Harding Bros.

Bull calf, 12 months—1, Harding Bros.

Bull calf, under 6 months—1, Harding Bros.; 2, W. S. Harding.

Bull, any age—Harding Bros.

Cow, 4 years and up—1, Harding Bros.; 2, W. S. Harding.

Cow, 3 years o,d—1, Harding Bros.; 2, W. S. Harding.

Cow, 2 years old—1, Harding Bros.; 2, W. S. Harding.

Heifer, 2 years o,d—1, Harding Bros.; 2, W. S. Harding.

Heifer, senior yearling—1, Harding Bros.; 2, W. S. Harding.

Heifer, junior yearling—1, Harding Brso.; 2, W. S. Harding..

Heifer calf, senior—1, Harding Bros.; 2, W. S. Harding.

Heifer calf, junior—1 and 2, Harding Bros.; 3, W. S. Harding.

Champion female—Harding Bros.

Aged herd—1, Harding Bros.; 2, W. S. Harding.

Breeders' young herd—1, Harding Bros.; 2, W. S. Harding.

Bull and 3 of his get— Harding Bros.

Cow and 2 of her offspring—Harding Bros.

GUERNSEYS.

Howard Corning, Cheggogin, N. S., won all in this class, R. R. Black winning second prize on junior hull calf.

JERSEYS.

H. S. Pipes & Son won all the prizes here with the exception of a 2-year-old bull, which was one by R. A. Snowhall, who also won second in dry cow section.

SHORTHORNS.

Bull, 2 years old—1, J. B. Snowball; 2, I. M. Lovitt.

Bull, junior—1, Jno. T. Burchill; 2, J. B. Snowball.

Bull calf, senior—R. A. Snowball.

Bull calf, junior—I. M. Lovitt; 2, J. B. Snowball.

Bull, any age—R. A. Snowball.

Cow, 4 years and up—1, 2 and 4, I. M. Lovitt; 3, R. A. Snowball.

Cow, 3 years old—R. A. Snowball.

Cow, 2 years old—1, I. M. Lovitt; 2, R. A. Snowhall.

Heifer, senior yearling—1, R. A. Snowball; 2, I. M. Lovitt.

Heifer, junior yearling—1, I. M. Lovitt; 2, R. A. Snowball.

Heifer calf, senior—1 and 2, Snowball.

Heifer calf, junior—1 and 2, I. M. Lovitt.

Champion female—R. A. Snowhall.

Aged herd—1, R. A. Snowball; 2, I. M. Lovitt.

Young herd—1, I. M. Lovitt; 2, R. A. Snowball.

Bull and 3 of his get—I. M. Lovitt.

Cow and 2 of her offspring—1, M. Lovitt.

HEREFORDS.

Bull, 3 years old—1, A. Bradshaw, Amherst; 2, Wm. O'Brien, Windsor Forks.

Bull, 2 years old—1, Wm. O'Brien.

Bull, senior yearling—1, Wm. O'Brien.

Bull, junior yearling—1, A. Bradshaw.

Bull calf, senior—1, A. Bradshaw.

Bull calf, junior—1, A. Bradshaw; 2, Wm. R. White, Fort Lawrence.

Bull, any age—A. Bradshaw.

Cow, 4 years and up—1 and 4, A. Bradshaw; 2, Wm. O'Brien; 3, Wm. R. White.

Cow, 3years old—1, 2 and 3, A. Bradshaw; 4, Wm. O'Brien.

Cow, 2 years ald—1, A. Bradshaw; 2, Wm. O'Brien.

Heifer, senior—1, A. Bradshaw; 2, Wm. R. White; 3, Wm. O'Brien.

Heifer, junior—1, A. Bradshaw; 2, Wm. O'Brien; 3, Wm. R. White.

Heifer calf, senior—1, Wm. O'Brien; 2, A. Bradshaw; 3, Wm. R. White.

Heifer calf, junior—1, Wm. O'Brien; 2 and 3, A. Bradshaw.

Champion female—A. Bradshaw.

Aged herd—1, A. Bradshaw; 2, Wm. O'Brien.

Young herd—1, A. Bradshaw; 2, Wm. O'Brien.

SHEEP

COTSWOLDS.

Ram, 2 shears and over—1, A. C. Servant, Overton; 2, A. G. Dickson, Chatham.

Ram, shearling—1, Chas. Symes.

Ram, lamb—1, A. C. Servant; 2 and 3, A. G. Dickson.

Ewe, 2 shears and over—1 and 2, A. C. Servant; 3, A. G. Dickson.

Ewe, shearling—1 and 2, A. C. Servant.

Ewe, lamb—1 and 2, A. C. Servant; 3, A. G. Dickson.

Pen, Ram and 4 Ewes—1, A. C. Servant; 2, A. G. Dickson.

Pen, Ram Lamb and 3 Ewes—1, A. Servant.

(Continued on page 24)

The Cape Breton Island Exhibition.

(Continued from page 7.)

POULTRY.

J. P. Landry, Truro, placed the prize tickets in the poultry classes, the showing in which was very creditable. In the American and Mediterranean breeds there were big entries of quality stock.

President Young, S. P. Calhoun and R. M. Jackson, the Secretaries of the fair, were untiring in their efforts in making matters run as smoothly as possible and their efforts were crowned with success. They had a capable corps of Superintendents and good order prevailed.

Young Cape Bretonians who are employed away from home or who are contemplating going away from home to earn their living in other countries would find enough at the Sydney exhibition to stimulate in them a healthy respect for the farming possibilities of the Island of Cape Breton and we have no doubt that many prodigals will ere long return and that the products of their farms will help to make the Sydney exhibition bigger and better in future years.

Prize Winners at the Cape Breton Island Exhibition.

HORSES

DRAFT HORSES.

Stallion, any pure breed, 3 years old and over—1, H. A. Moffatt, North Sydney.

Stallion, any pure breed, 2 years old—1, L. G. Matheson, Hunter's Mt.

Mare or Gelding, any breed or grade 4 years and over—1, J. S. McLellan, Sydney; 2, D. R. Nicholson, Coxheath; 3, D. R. Nicholson.

Mare or Gelding, any breed or grade 3 years old—1, E. J. Johnston, George's River.

Mare or Gelding any breed or grade 1 year old—1 and 2, D. R. Nicholson; 3, A. C. Thompson, North Sydney.

Mare or Gelding, any breed or grade under 1 year—1, Fred J. McLeod, Sydney Mines; 2, E. J. Johnston; 3, A. C. Thompson.

Brood Mare, with foal by her side—1, A. C. Thompson; 2, Fred J. McLeod; 3, E. J. Johnston.

Matched pair shown in harness, open to farmers only—1, Cross Fertilizer Co. Farm.

Best Stallion, any breed or Grade—Diploma—H. A. Moffatt.

Stallion and 3 of his get—Diploma—H. A. Moffatt.

COUNTY SWEEPSTAKES

Victoria County—1, L. G. Matheson

Cape Breton County—1, H. A. Moffatt.

GENERAL PURPOSE HORSES

Any Breed or Grade.

Mare or Gelding, 4 years and over 1, John Morley, Sydney; 2, M. J. Johnston, Sydney; 3, John McMullin.

Mare or Gelding, 3 years old—1, J. Fraser, McKenzie Reserve; 2, G. J. Ross, Sydney.

Mare or Gelding, 2 years old—1, Murdo McDonald, Hillside; 2, A. J. McLeod, South Bar; 3, F. C. Andrews Coxheath.

Mare or Gelding, 1 year old—1, Murdo McKenzie; 2, R. M. Jackson; 3, M. McKenzie.

Mare or Gelding, under 1 year—1, J. Webster Allen; 2, Archie Matheson, Caribou; 3, G. D. Alward.

Brood Mare, with foal by side—1, G. D. Oland; 2, Wm. Crowdis, Millville; 3, C. A. Munn.

Matched pair, shown in harness, open to farmers only—McCallum Special—1, Fertilizer Exp. Farm.

COUNTY SWEEPSTAKES.

Best Mare or Gelding, any Breed, Grade, any age

Inverness Co.—1, John H. Ross.

Richmond Co.—1, M. E. McNeil, Irish Cove.

Cape Breton Co.—1, John Morley.

CARRIAGE HORSES.

Stallion, pure bred, 3 years old and over.—1, Frank Redding, North Sydney; 2, G. V. Purvis, North Sydney; 3, Alex. Jamieson, Sydney.

Mare or Gelding any breed or grade 4 years old and over—1, Rev. R. W. McIsaac, East Bay; 2, John H. Ross; 3, John McQueen.

Mare or Gelding, 3 years old—1, Alex. Campbell; 2, A. P. Shaw.

Mare or Gelding, 2 years old—1, Ira Hughes; 2, Chas. Thompson.

Mare or Gelding, 1 year old—1, Robert Johnston, N. Sydney; 2, Thos Hart, Lesters Creek.

Matched Pair, shown in Harness—1, Thos. Hart.

COUNTY SWEEPSTAKES.

Cape Breton Co.—1, Frank Redding

ROADSTER HORSES.

Stallion, pure bred, 3 year old, or over—1, G. G. Purvis; 2, McKenzie Bros.; 3, A. D. McCuish, Lochside.

Stallion, pure bred, 2 years old—1, Dr. McGarry, Florence.

Mare or Gelding ant breed or grade 4 years old and over—1, Charles Thompson; 2, M. D. McPhee; 3, W. Drysdale, Sydney.

Mare or Gelding 3 years old—1, Thos. Wilson; 2, L. P. Christie; 3, A. N. Morrison, Sydney.

Mare or Gelding, 2 years old—1, Charles Thompson; 2, Wm. Condon; 3 A. W. McKenzie, Sydney.

Mare or Gelding, 1 year old—1, Rev R. W. McKenzie; 2, Percy Hill, P. E. Edward; 3, E. W. Adams.

Mare or Gelding, under 1 year—1, Frank Lewis; 2, A. L. McDonald, Sydney Forks.

Brood Mare with foal by side—1, A. L. McDonald.

Marched Pair, shown in Harness—1, Thos. Hart.

Brood Mare and 2 of her progeny—Diploma—Thos Wilson.

COUNTY SWEEPSTAKES

Richmond Co—1, A. D. McCush.

Cape Bretan Co.—1, G. G. Purvis.

PONIES, 12½ hands and under.

McKenzie & Griffin's "The Toggery" Sydney, prize for best mare or gelding, any breed or grade, 4 years old or over—Gentleman's Suit, made to measure—Chas. Thompson.

CATTLE

WORKING OXEN.

Best Yoke Working Oxen, any age—1, G. V. Vail, Sydney.

DAIRY CATTLE

HOLSTEINS

Bull, 3 years or over—1, D. R. Nicholson; 2, North Sydney Agricultural Society.

Bull, 2 years old—1, R. T. McDonald, Leitches Creek; 2, John A. McDonald, Middle River.

Bull, 1 year old—1, Cross Fertilizer Co. Farm; 2, D. R. Nicholson; 3, W. Drysdale, Sydney.

Bull, senior calf—1, W. C. MacLeod & Sons, Loch Lomond West.

Bull, junior calf—1 O. R. Nicholson

Cow, in milk, 4 years old or over—1 and 3, D. R. Nicholson; 2, Cross Fertilizer Farm.

Dry Cow, 4 years old or over—1, D. R. Nicholson; 2, A. K. Jackson & Son, North Sydney.

Cow, in milk, 3 years old—1, D. R. Nicholson.

Dry Cow, 3 years old—1, D. R. Nicholson.

Heifer, 2 years old—1 and 2, Cross Fertilizer Farm.

Heifer, 1 year old—1, D. R. Nicholson.

Heifer, senior calf—1, Cross Fertilizer Farm; 2, D. R. Nicholson; 3, A. K. Jackson & Son.

Heifer, junior calf—1, Cross Fertilizer Farm; 2, C. A. Munn, N. Sydney.

Best Bull, any age—Diploma— D. R. Nicholson.

Bull, and 3 of his get—Diploma— D. R. Nicholson.

Cow, and 2 of her progeny—Diploma—D. R. Nicholson.

Herd—1, D. R. Nicholson; 2, Cross Fertilizer Farm.

COUETY SWEEPSTAKES.

Victoria Co.—John A. MacDonald.

Richmond Co.—W. C. MacLeod & Sons.

Cape Breton Co.—D. R. Nicholson.

AYRSHIRES.

Bull, 3 years old or over—1, John H. Ross, Margaree.

Bull, 2 years old—1, South Bar Agricultural Society; 2, Wm. Chisholm, Loch Lomond; 3, Xmas. Island Agricultural Society.

Bull, 1 year—1, Alex. Boutilier, Blacketts Lake; 2, George's River Agricultural Society; 3, East Bay Agricultural Society.

Bull, senior calf—1, M. W. Ross & Son, Centreville.

Bull, junior calf—1, Cross Fertilizer Co. Farm.

Cow, in milk, 4 years old or over—1, M. W. Ross & Son; 2 and 3, H. C. Rose, Baddeck.

Dry Cow, 4 years old—1, H. C. Rose 2 and 3, M. W. Ross & Son.

Heifer, 2 years old—1, Chas. Barret, Mira Road; 2, Cross Fertilizer Co. Farm; 3, M. W. Ross & Son.

Heifer, 1 year old—1, Chas. Barret; 2, M. W. Ross & Son.

Heifer, junior calf—1, H. C. Musgrave, North Sydney; 2, M. W. Ross & Son.

Best Bull, any age—Diploma—South Bar Agricultural Society.

Herd—1, H. C. Rose.

COUNTY SWEEPSTAKES

Best Pure Bred Bull, any age.

Inverness Co.—John H. Ross.

Victoria Co.—H. C. Rose.

Richmond Co.—Wm. Chisholm.

Cape Breton Co.—South Bar Agri-Society.

JERSEYS.

Bull, 3 years or over—1, H. A. Moffatt, Jacksonville.

Bull, over 1 year old—1, J. Webster Allen, Eorth Sydney; 2, Donald Johnston, Leitches Creek.

Bull, junior calf—1, Donald Johnston.

Cow in milk 4 years old—1, J. Webster Allen; 2, D. R. Nicholson; 3, A. K. Jackson & Son.

Dry Cow, 4 years old—1, A. K. Jackson & Son.

Cow, 3 years old—1 and 2, H. A. Moffatt; 3, Donald Johnston.

Dry Cow, 3 years old—1, Donald Johnston.

Heifer, 2 years old—1, Donald Johnston.

Heifer, 1 year old—1 and 2, H. A. Moffatt; 3, D. R. Nicholson.

Heifer, senior calf—1 Donald Johnston; 2, M. W. Ross & Son.

Heifer, junior calf—1 and 2, J. Webster Allen.

Best Bull, any age—Diploma— H. A. Moffatt.

Cow and 2 of her progeny—Diploma—J. Webster Allen.

Herd—1, H. A. Moffatt; 2, J. Webster Allen; 3, Donald Johnston.

COUNTY SWEEPSTAKES

Cape Breton Co.—H. A. Moffatt.

GUERNSEYS.

Bull, 3 years old aud over—1, Little Bras D'Or Agri. Society; 2, G. O. Purvis.

Bull, 2 years old—1, Murdo McKenzie; 2, A. W. McDonald, South Cove.

Bull, 1 year old—1, R. M. Jackson, Jacksonville.

Bull, junior Calf—1, Chas. Johnston, Little Bras D'Or.

Cow, 4 years old—1, Murdo McKenzie; 2, R. M. Jackson.

Cow, 3 years old—1, E. J. Johnston, George's River.

Dry Cow, 3 years old—1, Murdo McKenzie.

Heifer, 2 years old—1, R. M. Jackson.

Heifer, 1 year old—1, E. J. Johnston.

Heifer, senior calf—1, Murdo McKenzie.

Best Bull, any age—Diploma—Murdo McKenzie.

Herd—1, Murdo McKenzie.

CLUNTY SWEEPSTAKES

Best Bull, pure bred, any age

Victoria Co.—A. W. McDonald.

Cape Breton Co.— Murdo McKenzie

GRADE JERSEYS and GUERNSEYS

Cow, 4 years and upwards—1, D. R. Nicholson; 2, John McQueen; 3, W. Drysdale; 4, H. A. Moffatt; 5, W. Drysdale; 6, T. C. Munn; 7, J. W. Allen; 8, G. Hilton; 9, John McQueen.

Dry Cow, 4 years old—1, D. R. Nicholson; 2, E. J. Johnston; 3, Ira Hughes; 4, C. A. Munn; 5 and 6, Mrs. J. Calver.

Cow, 3 years old—W, Ira Hughes; 2 and 3, Albert Ferguson; 4, Murdo McKenzie; 5, M. P. Gillis.

Dry Cow, 3 years old—1, R. M. Jackson; 2, Murdo McKenzie.

Cow, 2 years old—1, W. Maigoraw; 2, H. A. Moffatt; 3, M. P. Gillis; 4, T. C. Munn; 5, John P. Harvey.

Heifer, 2 years old—1, G. D. Oland.

Heifer, senior yearling—1, Murdo McKenzie; 2, M. J. Ingraham; 3, A. N. Morrison; 4, G. D. Oland; 5, C. C. Collier.

Heifer, junior yearling—1 and 2, Murdo McKenzie; 3 and 5, E. J. Johnston; 4, A. N. Morrison.

Heifer, senior calf—1, Ira Hughes; 2 and 4, Murdo McKenzie; 3, C. A. Munn; 5, J. P. Harvey.

Heifer, junior calf—1, Fertilizer Co.; 2, D. McKay; 3 and 5, Murdo McKenzie; 4, A. L. McDonald.

GRADE AYRSHIRES AND HOLSTEINS.

Cow, 4 years old—1, C. A. Munn; 2 and 6, T. C. Munn; 3, J. McQueen; 4 and 5, H. A, Moffatt; 7, A. Jamieson 8, D. R. Nicholson.

Dry Cow, 4 years old—1, C. A. Munn; 2, R. M. Jackson; 3, T. C. Munn; 4, D. R. Nicholson; 5, H. A. Moffat; 6 and 8, G. D. Oland; 7, M. Morehead.

Cow, 3 years old—1, Ira Hughes; 2, T. C. Munn; 3, H. C, Musgrave; 4, M. P. Gillis; 5, D. R. Nicholson.

Dry Cow, 3 years old—1, Mrs. Jas. Marvell.

Cow, 2 years old—1, John A. McNeil; 2 and 4, D. R. Nicholson; 3, A. K. Jackson & Son; 5, M. W. Ross & Son.

Heifer, 2 years old—1 and 2, D. R. Nicholson; 3, Fertilizer Co. Farm; 4, C. A. Munn.

Heifer, senior yearling—1, E. Doncaster; 2, Murdo McKenzie; 3, T. C. Munn; 4, Angus J. McLeod; 5, R. M. Jackson.

Heifer, junior yearling—1, Murdo McKenzie; 2, D. R. Nicholson; 3 and 5, Geo. D. Oland; 4, T. C. Munn.

Heifer, senior calf—1, R. M. Jackson; 2, C. A. Munn; 3, J. McQueen; 4, G. D. Oland.

Heifer, junior calf—1, C. A. Munn; 2, J. McQueen; 3, T. C. Munn; 4, R. M. Jackson; 5, Fertilizer Co.

SYDNEY PRIZE LIST GALLEY 2

Cow, and 2 of her progeny—Diploma—T. C. Munn.

HERDS.

Pure Bred Bull and 3 heifers under 3 years—1, Fertilizer Co. Farm; 2, D. R. Nicholson; 3, M. W. Ross & Son.

Best Herd of five Grade Cows, three of which must be over 2 years—1, C. A. Munn; 2, Fertilizer Co. Farm; 3, D R. Nicholson.

Best Herd four Grade heifers under 3 years, bred and owned by exhibitor—1, D. R. Nicholson; 2, G. D. Oland; 3, T. C. Munn.

COUNTY CONTEST GRADE HERDS

Best Herd of 5 cows, three of which must be over 2 years old—
Cape Breton Co—C. A. Munn.
Best Herd of four heifers, under 3 years, bred and owned by exhibitor
Cape Breton Co—D. R. Nicholson.
Best Bull, any age or breed—D. R. Nicholson.
Best Cow, any age or breed—J. W. Allen.
Grade Cow, any age—C. A. Munn.

SHEEP

LEICESTERS—Pure Bred.

Ram, 2 years old—1, Nelsie Beaton, Coxheath; 2, E. Hill, Pt. Edward; 3, John McKiegan, Mineral Rock.

CHEVIOTS.

Ram, 2 years old—1, Wilson Gillis, George's River; 2, Donald McFarlane, Coxheath.
Ewe, 1 year old—1, Wilson Gillis.

SOUTHDOWNS.

Ram, 2 years old—1, W. M. Hill, Pt Edward.
Ram Lamb—1, Mrs. A. Clarke, Coxheath.
Ewe, 2 years old—1, Mrs. A. Clarke 2, W. M. Hill.
Ewe Lamb—1, John McMullin.
Pen—1, John McMullin.

SHROPSHIRES.

Ram, 2 years old—1, John P. Harvey, George's River; 2, A. B. McPhee, George's River; 3, Neil McDonald, Big Beach.
Ram, 1 year old—1, Neil McDonald.
Ram Lamb—1, John P. Harvey; 2, Neil McDonald; 3, Angus McIntyre, Rear of Ball's Creek.
Ewe, 2 years old—1, John P. Harvey; 2 and 3, Neil McDonald.
Ewe Lamb—1 and 3, Neil McDonald 2, Angus McIntyre.
Pen—1, Neil McDonald.

OXFORDS.

Ram, 2 years old—2, E. J. Johnson; 2, M, P. Gillis; 3, D. J. McKenzie.
Ewe, 2 years old—1, 2 and 3, E. J. Johnston.
Ewe, 1 year old—1, E. J. Johnson.
Ewe Lamb—1, 2 and 3, E. J. Johnson.
Pen—1, E. J. Johnson.

ANY OTHER PURE BREED.

All prizes in this section were won by H. C. Rose.

COUNTY SWEEPSTAKES.

Cape Breton Co.—E. J. Johnson.
GRADES AND CROSSES—Long Wool
Ewe, 2 years old—1, Nelsie Beaton.
Ewe, 1 year old—1, Albert Ferguson; 2, N. Beaton; 3, John McKeigan.
Ewe Lamb—1, Wilson Gillis; 2, John McKeigan; 3, N. Beaton.
Pen—1, N. Beaton.

GRADES AND CROSSES—Medium Wool.

Ewe, 2 years old—1, A. B. McPhee; 2, E. J. Johnson; 3, John P. Harvey.
Ewe, 1 year old—1, John P. Harvey; 2, A. B. McPhee; 3, D. J. McDougall, Xmas. Island.
Ewe Lamb—1 and 3, E. J. Johnston; 2, D. R. McIsaac & Son.
Pens—1, E. J. Johnson; 2, John P. Harvey.

COMMON SHEEP.

Ewe, 2 years old—1, A. B. McPhee 2, Cohn McMullin; 3, M. P. Gillis; 4, W. M. Hill; 5, N. Beaton.
Ewe, 1 year old—1, E. M. Clarke; 2 McPhee; 3, N. Beaton; 4, Mrs. Mary McKinnon; 5, Norman McDonald.
Ewe Lamb—1, M. P. Gillis; 2, Norman McDonald.

FAT SHEEP.

Fat Ewe—1, Albert Ferguson; 2, John McMullin; 3, Murdo McKenzie.
Fat Ewe Lamb—1, Albert Ferguson; 2, Nelson Beaton; 3, Murdo McKenzie
Fat Wether Lamb—1 and 2, E. J. Johnston.

SWINE

BERKSHIRES.

Boar, 1 year old—1, J. S. McLellab, Sydney
Boar, under 1 year—1, A. D. McCuish; 2, D. R. Nicholson; 3, R. M. Jackson.
Sow, 1 year old—1, J. S. McLellan; 2, R. M. Jackson.
Sow, over 6 mos.—1 and 2, D. R. Nicholson; 3, A. D. McCuish.
Sow, under 6 mos.—1, R. M. Jackson.
Sow, with litter—1, J. S. McLellan

YORKSHIRE.

Boar, under 1 year—1, Fertilizer Exp. Farm; 2, D. R. Nicholson.
Sow, over 1 year—1, D. R. Nicholson; 2, John McQueen; 3, M. P. Gillis.
Sow, over 6 mos.—1, M. P. Gillis; 2 and 3, D. R. Nicholson.
Sow, under 6 mos.—1 and 2, John McQueen; 3, D. R. Nicholson.
Sow and litter—1, D. R. Nicholson.
Herd—1, D. R. Nicholson.

CHESTER WHITES.

Boar, 1 year old—1, Ira Hughes.
Boar, under 1 year—1, D. R. Nicholson; 2, Ira Hughes.
Sow, over 1 year—1 and 2, Ira Hughes; 3, D. R. Nicholson.
Sow, over 6 mos.—1 and 2, D. R. Nicholson; 3, Ira Hughes.
Sow, under 6 mos.—1, E. J. Johnson; 2, Murdo McKenzie; 3, D. R. Nicholson.
Sow, with litter—1 and 3, Ira Hughes.
Herd—1 and 3, Ira Hughes.

COUNTY SWEEPSTAKES

Cape Breton Co.—Ira Hughes.

GRADES AND CROSSGS.

Sow, 1 year old—1 and 2, D. R. Nicholson.
Sow, 6 mos. old—1, H. C. Musgrave; 2, N. Beaton.
Sow, under 6 mos.—1, Ira Hughes; 2, H. C. Musgrave.
Sow and litter—1, R. M. Jackson.
Fat Hog, 1 year old—1 and 2, D. R. Nicholson; 3, A. N. Morrison.
Fat Hog, under 1 year—1, Ira Hughes.

POULTRY

Brahmas— Laurie Wilson, 1 and 2 Cockerel and 1 and 2 pullet.
Barred Rocks—M. W. Ross & Son 1c, 2r; T. C. Munn, 2c, 1h, 3 and 4p; Cross Fertilizer Co. Farm, 3c, 3h, 1 and 5h, 1p; Hans Holm, 2h; Jas. A. McNeil; 3r; F. E. Jackson, 2p.
White Rocks—H. Boutilier, 1c, 1h, 3r, 5p; A. H. Whitman, 2c, 1 and 2r, 1 and 2p; E. Concaster, 3c, 2h; Cross Fertilizer Farm, 3p.
Buff Rocks—All prizes to W. R. Twiner.
Golden Wyandottes—All prizes to T. C. Munn.
Silver Wyandottes—All prizes to F. H. Rudderham.
Columbia Wyandottes—All prizes to T. C. Munn.
White Wyandottes—G. R. Musgrave, 1c; A. K. Jackson & Son, 2c, 1h, 2r, 5p; A. J. McLeod, 3c; M. W. Ross & Son, 2 and 3h; 4r; F. E. Jackson, 1 and 3r, 1, 2 and 3p.
Partridge Wyandotte—T. C. Munn, 1c, 1h, 2r, 1 and 2p; F. E. Jackson, 1r, 3p; G. E. Musgrave, 3r.
S. C. Rhode Island Reds— T. C. Munn, 1c, 2 and 3r, 1p; H. W. Lovett 2c, 3h, 2p; C. W. Lovett, 3c, 2h, 1r, 3p; Chas. Thompson, 1h.
R. C. Rhode Island Reds— G. R. Musgrave, 1c, 1 and 2r; Chas. Johnston, 2 and 3c, 1, 2 and 3h; 3r, 1, 2 and 3 p.; H. W. Lovett, 1h.
S. C. White Leghorns—Chas. Johnston, 1, 2 and 3c, 4 and 5h; A. J. McLeod, 4c, 3h, 1and 3r, 1, 2, 3 and 4p; Clifford Lewis, 5c, 4h; Cross Fertilizer Co. Farm, 1 and 2h; M. McDonald, 2r, 5p.
R. C. White Leghorns—All prizes to 604.
S. C. Brown Leghorns—A. K. Jackson & Son, 1c, 3h, 1r, 1, 4 and 5p; H. J. Hunt, 2c, 2 and 3r, 3p; H. W. Lovett, 3c, 2h, 5r, 2p; G. R. Musgrave, 4c,
R. C. Brown Leghorns—Chas. Johnson, 1 and 2c, 1 and 2h; 2 and 3r, 1, 2 and 3p; J. D. Fraser, 1r.
S. C. Buff Leghorns—F. E. Jackson, 1c, 1h, 2r, 1p; Chas. Johnson, 1r, 2p.
S. C. Black Minorcas—G. Wilson, 1c 1h, 3p; M. W. Ross & Son, 2c, 2 and 3h, 3r; Cross Fertilizer Co. Farm, 1r; Hans Holm, 2r, 1p; Rev. D. McLeod, 3p.
S. C. White Minorcas—All prizes to M. W. Ross & Son.
White Orpingtons—All prizes to A. Matheson.
Buff Orpingtons—All prizes to H. Boutilier.
Hamburgs—All prizes to M. W. Ross & Son.
Houdans—All prizes to H. J. Hunt.
Polands—All prizes to F. E. Jackson.
Anconas—M. W. Ross, 1c, 3r, 3p.; H. W. Lovitt, 2 and 3c, 1 and 2h, 1 and 2r, 1 and 2p.
Game—Jno. McLean, 1c, 1h; H. Marr, 2c, 2h; L. Fielbirg, 1r, 1p.; R. L. Gillis, 2r, 2p; C. Morrison, 3r, 3p.
Any Other Variety—D. K. McConald—1c, 2h, 3r, 3p; Thos Hart, 1h; F. H. Rudderham, 1r, 1p.; J. D. Fraser, 3r, 3p.
Game Bantams—Cross Fertilizer Co. Farm, 1 and 3c, 1 and 3h; M. W. Ross & Son, 2c, 2h, 1 and 2r, 1 and 2p.
Sea Bright Bantams—All prizes to F. E. Jackson.
Buff Cochin Bantams—H. W. Lovitt 1c, 1h, 1r, 1p; C. W. Lovitt, 2c, 2h.
Buff Cochin Bantams—H. W. Lovett 1c, 1h; C. W. Lovitt, 2c, 2h, 1r, 1 and 2p.

BREEDING PENS.

Plymouth Rocks—1 and 3, B. Hughes; 2, D. R. McIsaac & Son.
Wyandotte—1, M. W. Ross & Son; 2, A. J. McLeod; 3, A. K. Jackson & Son.
Rhode Island Reds—1, C. W. Lovitt; 2, H. W. Lovitt.
Any Other Variety—1, H. R. Richardson; 2, A. J. McLeod; 3, A. K. Jackson.

TURKEYS.

Bronze—All prizes to Wm. Crowdis.

GEESE.

Male, sr.—1, H. Brody; 2, Hans Holm; 3, Mrs. H. A. Moffatt.
Male, jr—1, Hans Holm.
Female Sr.—1, H. Brody; 2, Hans Holm; 3, Mrs. H. A. Moffatt.
Female, jr—1, Hans Holm.

DUCKS.

PEKIN.

Male sr.—1, Hans Holm; 2, H. W. Lovitt; 3, F. J. McLeod.
Male, jr—1, Hans Holm; 2, Wm. Condon; 3, H. W. Lovitt.
Female sr—1, Hans Holm; 2, Miss Dora Haggerty; 3, John McMullin.
Female jr—1, Hans Holm; 2, H. W. Lovett; 3, J. W. Allen.
Rouens—All prizes to A. W. Wambolt.
Pair Guinea Fowls—1, Wm. Crowdis

DRESSED POULTRY

Pair Fat Fowls—1, E. J. Johnson; 2, Mrs. H. A. Moffatt.
Pair Fat Chickens—1, Jas. A. McNeil; 2, T. C. Munn; 3, Mrs. Ira Hughes.

LUNENBURG COUNTY EXHIBITION

Prof. M. Cumming, Secretary for Agriculture, in Nova Scotia, formally opened the Lunenburg County exhibition, Thursday afternoon, at Bridgewater. The exhibition has been one of the best ever held in the county, the display of live stock was very good, the outstanding feature being the great showing of oxen.

On Wednesday afternoon, Mayor Kinlay, of Lunenburg town gave a short address. He said he thought the arrangement of the exhibition better than that at Halifax, since the people had a better chance to get some real educational values from the exhibits. Mayor Dawson, of Bridgewater, then gave a short summary of the growth of agriculture in the Province, and of agricultural societies in Lunenburg county. Prof. Cumming then declared the exhibition formally open. Mr. Cumming congratalated the management on their success in getting up such an excellent fair. He then drew attention to the movement which has been started in Bridgewater towards the establishment of a co-operative dairy, giving the advantages which would come from such a movement, to the people of the county.

LIVE STOCK.

The display of live stock is good, oxen being the outstanding feature, it is doubtful if a better display of oxen could be given in any part of the Dominion. There was over twenty entries. There was a good showing of dairy cattle, but the county has quite a little room for improvement in their dairy cattle.

Sheep and swine were well up to the average.

Poultry was fair, with quite a large number of exhibits. The poultry building has been considerably improved since last year by the addition of proper pens.

Standard bred horses are gaining a good foothold in the county, if one can judge by the number and quality of those exhibited. Marshall M. owned by G. A. Mader, Mahone Bay, was on exhibition and he certainly is a good example of the breed. His gets seem to be larger than he so that the fault of his smallness does not seem to do him any damage. As the work in the county is done largely with oxen, the show in heavy horses was very small, but without doubt with the advance of agriculture, draft horses will be more extensively bred.

The horse races on Wednesday afternoon interested a large number of people. General Wood, owned by Henry Mitchell, of Chester, won first place.

On Thursday, the second day there was a record attendance, the weather was perfect, and the Lunenburg county people are deeply interested in the success of their fair. The parade of cattle and oxen and the parade of carriage horses with lady drivers were some of the features in the afternoon. Music was supplied by the 75th regiment band, and Hebb's orchestra.

The exhibition buildings are probably the best of any in the Province, where county exhibitions are held, and a new, educational building is now being constructed for the purpose of agricultural education. Next year the agricultural college at Truro will pue on a course somewhat similar to the short course given at Truro in January. Certainly the Lunenburg county exhibition has been a success.

DAIRYING.

Feed Giving for Great and Economical Results.

All are aware that a good dairy cow provides the most dependable and most profitable market for the grains and grasses grown upon the farm. Of all farm animals she is the most economical and profitable producer of human food. The evidence of this fact is specifically cited through an experiment carried on many years ago by Law & Gilbert. It was this experiment which demonstrated that the cow yielding 10 quarts of 4 per cent milk daily was producing as much fat and fat equivalent in seven days as the steer that was gaining 15 pounds in the same time. In addition to this the cow's production contained six times as much nitrogenous material, with concentrates or expensive food and a small amount of roughage.

The market for dairy products does not fluctuate in the uncertain manner that markets for other farm products do and therefore provides a more certain source of profit without a risk of loss. The feed given the cow today is returned to her owner tomorrow, and can be marketed at once.

The certainty of dairying has been made impressive by the fact that once a month, once a week or every day, if he so chooses, the dairyman may have a check for the work his cows did the month, or week, or day before, insuring permanent and steady prosperity.

The demand for productive cows has provided a most profitable business for breeders of dairy cattle. The farmer in all parts of America is rapidly becoming convinced that there is a vast difference between the profits yielded by a common cow and a cow whose ancestors have been bred for economical and profitable production for hundreds of years.

Although since 1875 the number of milk cows have doubled, prices for dairy products have steadily advanced and the price of good cows has increased by leaps anh bounds. During this period the population of this country has more than doubled showing that rapid as has been the increase of the number of cows they have not kept abreast of the growing demand. Judging statistics from reliable sources the population is to again double during the next 35 years and in order to maintain the present price of dairy products the cow population must also double or their average production be greatly increased. The breeders, who furnish the blood for the improvement that is necessary as well as for increasing the number of cows from 22,000,000 to 44,000,000, are assured of great prosperity in their business during a lifetime.

Those who have traveled through districts where grain farming almost solely prevails have no doubt been favorably impressed with the place the cow fills in American agriculture as a home builder. Nothing adds to the dignity of farm life like a good home; and American agriculture, no matter how profitable, will never reach the plane of dignity on which it belongs until the farm home is made attractive enough so that the one farm is owned in one family for generation after generation. This is never the case in grain farming districts where the farmer takes from the soil and markets the fertility with the consideration of immediate gain only. He works his farm during the crop growing season, markets his grain and has little of interest in the farm until another season and nothing to either render it possible or desirous for him to provide a home on the farm. His one purpose is to accumulate immediate wealth at the expense of future generations that he may retire and move to town.

The dairy farmer, on the other hand, is kept on the farm and in remunerative business the whole year. The interest and pride that the progressive farmer of today takes in building up his herds and his farm leads him to make there a home for himself and his children and his children's children that follow him.

These facts need not be dwelt upon for, unlike farmers in other countries, Americans have learned through experience the results accruing from association with the cow that daily consumes what is raised on the farm and twice daily returns to her owner a product of increased value.

In too many instances, however, the producer of milk and butter-fat has overlooked the importance of reducing his operations to a strictly business basis. This is demonstrated by the fact that so often he refuses to apply business principles and even holds them up to scorn as being theoretical, scientific and impractical. He has refused fundamentals which have made millionaires and leaders of men in other lines of industry. The truth of this is evidenced by the fact that of the millions of cows now being milked in the United States only one out of three on the average returns real profit.

As a matter of fact the farms of the United States are her greatest factories. Every cow is kept there as a machine of certain capacity and efficiency for the purpose of converting the raw materials—the grains and grasses which grow in the fields—into a finished commodity of commerce.—Kimball's Dairy Farmer.

Rich Milk as a Factor in Cheese Making.

In various discussions with cheesemaking farmers in earlier days I was invariably told that in their experience rich milk was not desirable in the manufacture of pressed cheese, and so universally true did this appear to them that in some cases the milk was partially deprived of its cream before it was set for curd. Although this supposition is not entirely eradicated, there is an indisposition to believe that good milk makes better cheese than milk of poorer quality. It was not, however, until the great cheesemaking competition in Chicago in 1893 that I was impressed with the fact that really rich milk was a much more economical material for cheesemaking than average milk, to say nothing of milk which is poor. In that competition the cattle competing were Jerseys, Guernseys and Shorthorns, twenty-five head of each. It is well-known that the quality of cheese made by the rich-milking cattle was considerably greater than that made by the Shorthorns. To take a fortnight's work, for example, it was found that each pound of cheese made from the Jersey milk required only 8.1 lbs. of milk, whereas from the Shorthorn it required 11.3 lbs. This was one of the most important experimental tests which has ever been made, but it can now be supplemented by many others, although one only was conducted upon an equally extensive scale. Of all the recorded cases there is no instance in which rich milk failed to produce so small a quantity of cheese as average milk or in which the cheese made was not of superior quality.

HOW IT AFFECTS THE WEIGHT OF CHEESE.

There are three questions to consider in relation to this subject. With the increase of fat in milk there is an increase in the weight of water retained in the cheese made from it. Thus, the quantity of water may vary from 3 to 6¼ per cent., and, indeed, slightly more. Why this is the case no one has yet discovered so far as I know, but it follows that if milk rich in fat produces cheese which contains more water than cheese made from average or poor milk, the weight of cheese made day by day or month by month is increased from two sources; it is increased because there is an increase in the quantity of water which is conveyed into the cheese, and the greater the quantity of water retained in the cheese.

I remember one series of experiments in cheese-making with rich milk in which the solid matter reached 14 per cent., where 12 1-3 lb. pf cheese was produced from over 100 lb. of milk, or very nearly 1¼ lb. per gallon. During a portion of the season the quantity of cheese made nearly reached 1½ lb. per gallon—exceeding, indeed, 14 lb. per 100 lb. of milk, while during another portion of the season it fell as low as 9¾ lb., or slightly less than a pound to the gallon. On one occasion when paying a visit to Mr. Ralston, a famous cheese maker in Scotland, I learned from his experience that the curd when ready for grinding was below the standard in April in each of four year but above it in May in three out of the same four years, that standard being equivalent to one pound of cheese to one gallon of milk. In June the curd was above the standard in two out of the four years only, while in July it reached the same position only in one out of four years. Coming to August, there was very little difference, the curd being just upon the right side in each year, but in September there was a marked increase in the weight of curd and that increase was also marked on the average of the six months in two out of the four years, while in the other two it just about reached the standard.

THE INFLUENCE OF SEASON.

There is evidently a good deal to be learned about cheesemaking and the influence of season upon the weight of curd produced. Here we have a good herd of cows all Ayrshires, and all well fed, and a dairy in which the work was well performed, but in one season, which was a dry one, there was a deficit as compared with other seasons of from 6,000 to 8,000 lbs. of

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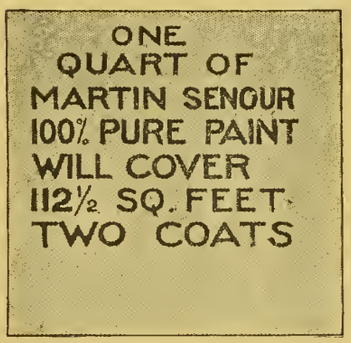

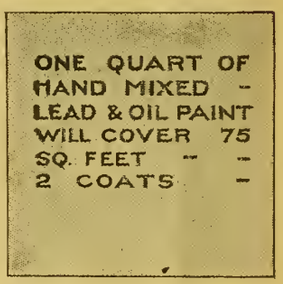

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Windsor Dairy Salt

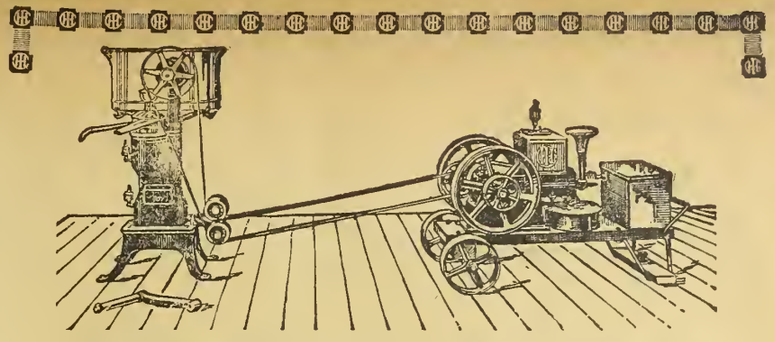
116

curd, while in one of the four years the total weight of curd produced was much superior per 100 lb. of milk to that produced in either of the other three years.

I take the results of another lot of good work in which the milk was divided into five qualities—that containing from 3 to 3½ per cent. of fat, from 3½ to 4 per cent, and so on to the last lot, which contained from 5 to 5¼ per cent. It is remarkable but consistent with what is now known that the fat lost in cheesemaking and found in the whey was reduced as the quality of the milk increased. Thus, in the poorest milk the actual loss of fat was 9.5 per cent., while in the richest it was only 6 per cent. While the poorest milk made 9.1 lb. of cheese per 10 gallons of milk, the richest made 13.6 lb. and there was a gradual increase in the quantity as the quality of the milk increased in value. If the fat percentage of milk is known it is possible to ascertain the approximate weight of the cheese which it will produce per 100 lb. or 10 gallons by multiplying by 2.7, for in all these cases the result gravitated towards this figure.

INFLUENCE ON QUALITY.

Now with regard to the quality of the cheese produced from milk rich in fat, for if quality and quantity are combined as the result of using it it would seem that every effort should be made to increase the quality of the milk of a cheese-making cow, and to once for all abandon the assumption that the Jersey and the Guernsey are mere buttermaking cows and not adapted for cheese making. In making Stilton cheese no cream is added to the milk, as is popularly supposed, but where rich milk is used the cheese made is not only heavier, but more mellow, salvy and agreeable to the palate; that fact I have proved over and over again. The pressed cheese made from poor milk is never mellow enough, and it will not compare wich the best type of cheese which is exhibited at the London Dairy Show. The cheese dealer is not guided solely by his palate and his nose, but by his finger and thumb, and if he finds the consistence of a cheese is salvy he is very nearly satisfied, his palate doing the rest. The presence of a high percentage of fat in cheese accounts for this extra salviness, and adds a decided gout to the tongue of the connoisseur. For this reason I believe there can be nothing more unwise than to remove cream from the milk, while, on the other hand, I am convinced that it will pay the cheesemaker handsomely to increase the quality of the milk supplied by his herd.—James Long.



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When you have a bad cold you want the best medicine obtainable so as to cure it with as little delay as possible. Here is a druggist's opinion: "I have sold Chamberlain's Cough Remedy for fifteen years," says Enos Lollar, of Saratoga, Ind., "and consider it the best on the market." For sale by all dealers.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

When Dairying Does not Increase Soil Fertility.

Far too few farmers raise enough cows or other live stock on their farms to supply enough manure to keep up the fertility of the large acerages. There should be an increase in the number of head of cattle kept and a decrease in the number of acres necessary to supply food for these cattle. In other words, we should resort to more intensive methods. What farmer is there who has sufficient manure to cover the per cent of his farm that he would like to each year? The man with a 160-acre farm who keeps 40 to 50 cows and 20 to 30 young stock besides hogs and horses is going to see results in the increased productiveness of his fields from the manure derived from these animals.

Some may believe this to be impossible. And it is, if everything that goes to feed the animals comes from the farm. But this should not be the case. If the animals receive no feed other than that grown 'on the farm, the fertility of the soil would be decreasing, for it has been calculated that only four-fifths of any crop fed to animals is returned to the soil in the form of manure. That is, one-fifth goes to make milk, beef or pork. Hence it is easily seen that if nothing is obtained from outside the farm there is an actual lessening of the plant food. The remedy for this state of affairs is to grow all the roughage on the farm necessary to feed the animals and what concentrates are possible, but in the main the concentrates will have to be purchased from outside in the form of cottonseed meal, linseed, gluten or corn meal, the kind to be determined upon by the price and fertilizing value as well as the food value.—O. V. T.

Dairy Thoughts.

The droppings from the cattle will benefit the pasture more if they are spread or broken up with a spike-tooth harrow. This prevents the grass from being killed out and weeds coming in where the droppings have lain.

The most important business of the dairyman is to increase the amount of manurial substances and apply them where they will do the mo(t good to the growing crops.

He is in no wise a public benefactor who keeps two cows to do the work of one.

A poor milker is one of the surest means of diminishing a milk flow.

Too many dairymen are conducting their business as a side issde when they should be making it the leading feature of their farming.

The new cow has an individuality of her own and the feeder should become acquainted with her as soon as possible after she is brought into the herd.

Go your limit on a good bull. If your cows are deficient in the flow of milk, buy a sire that will make up the quality. If their milk is deficient in butter fat, breed from a sire whose tendency is to build up along that line.

Feed records are just as essential as milk records. It is the profits we want rather than the phenomenal milk yields that are made by feeding large quantities of expensive concentrates.

Strong, thrifty calves cannot be expected from cows that have been fed starvation rations for a few months before calving.

Proper feeding determines the amount of gain in the dairy buziness

Milk records and feed records mave knowledge definite.

If we are to make a success of the dairy business we must put thought behind and into our everyday work.

A cow will never do her best unless she has perfect confidence in you.

The modern dairy cow must be hand.ed with understanding and her owner must nave a knowledge of her wants and make every effort to supply them.

A good cow in the hands of a poor dairyman is a poorer proposition than a poor cow in the hands of a good dairyman. Both are very poor combinations: however, a good dairyman will not keep a poor cow more than one season.

Good pasture lands are the basis of successful dairying.

To make dairying a success we must make it of interest to the boys.

Good cows are not developed by chance, but are the product of good judgment, skilful feeding and proper foods.

Sick headache is caused by a disordered stomach. Take Chamberlain's Tablets and correct that and the headaches will disappear. For sale by all dealers.

LIVE STOCK.

Have Heifers Predominate.

By taking up the subject of influencing or controlling the sex of calves, The New Engalnd Homestead has entered a field for investigation that is bristling with opportunities. With uncertainty as to sex of offspring eliminated, the breeding of pedigreed dairy stock should take on the aspects of a genuine get-rich-quick proposition. I know from experience, observation and extended inquiry, that any dairyman with a proper understanding of the biological processes involved, can have his best cows drop heifers, at least much oftener than is now the case.

Observing poultrymen have long bemoaned the fact that cockerels predominate among their early hatched chicks. The accepted explanation of this is that the sex of the more vigorous parent predominates among the offspring. At the beginning of the breeding season, while the male is active and at his best physically, the excess of cockerels will ofter run ewo to one. Toward the end of the season, when his condition has materially changed, pullets frequently predominate by the same ratio. Nearly all large dairymen compalin of an excessive number of bull calves, so it is evident that under ordinary circumstances the sex is already influenced. The difficulty lies in the fact that the influence is in the wrong disection. To appreciate the way out, it is essential to understand something of what takes place beyond the range of immediate observation.

At the moment of service, the seminal fluid from the male is discharged into the upper end of the vagina, some little distance from the place where the actual impregnation occurs. This seminal fluid is filled with a host of minute organisms which the biologists call spermatozoa, or "sperm animals." Only one of these little "animals" is required to fertilize the female cell known as the ovum, and in reaching his coveted goal the winner of the race is obliged to make his journey without assistance. Now while the ovum lies practically dormant, the spermatozoa are exceedingly active. Furthermore, they are not provided with any food supply. Hence, if this final journey is drawn out and impregnation delayed, they become tired. Relatively, the ovum is then the more vigorous member of the uniting pair and the resulting offspring is reasonably sure to be female. The problem for the practical breeder then is to delay actual impregnation after service by the male as long as may be necessary to let the spermatozoa get properly tired.

It is a common knowledge among poultrymen that a hen will lay several fertile eggs after being entirely separated from the male. With this fact in mind I reasoned it out that all the fertile eggs thus laid after the final "treading", except the first, would have a delayed impregnation, and should, therefore, produce pullets. To test this idea I took five leg-banded hens in March and put them into a colony house equipped with trap nests. The cockerel I put into a second colony house alongside the first. Then with the aid of a tally sheet tacked on the wall I saw to it that each hen was mated once for every three eggs. I set 76 eggs from this pen; 75 of them were fertile and 73 actually hatched. I lost about the usual percentage, but when they were old enough to distinguish the sexes, I had 21 cockerels and 39 pullets. Subsequent experiments have given corresponding results, and now I am trying to develop some less laborious method of control.

As for the dairy phase of the problem, it seems possible to delay the actual impregnation only by exercising the cow for a time immediately after service. A neighbor of mine had a small herd of registered Jerseys, the best cow in which had dropped him five bull calves in as many years. She had always been taken away to a very valuable bull, and as the distance was some five miles, it had been the custom to load her into the two-horse wagon, drive up there with her and bring her back. This neighbor was lamenting his excess of bull calves to me one day, and I told him of the experiments I had been conducting. I further expressed the opinion that under the method he had pursued, the impregnation had taken place too soon, on account of the quiet condition of the cow while riding home in the wagon. I suggested that next time he take the cow up, leave her overnight, and then walk her home immediately after service in the morning. He followed my advice, got a heifer calf, has had two others from the same cow since, and what is more, has never had but one bull dropped by a cow in his herd from that day to this.

By extended inquiry I have found that the average dairyman who keeps a bull brings his herd up to the barn at sundown, notes a cow in heat, has her promptly served and then puts her into stall for the night. The conditions are then ideal to induce a quick impregnation and insure a bull calf. On the other hand, the small dairyman who does not keep a bull, is much more likely to let the service go until morning, when he takes the cow away, and generally brings her back. By the exercise which thus follows the service impregnation is delayed and a heifer calf generally results. With very few exceptions, I have found that the sex of a calf could be accurately predicted from a knowledge of the facts above indicated. While, of course, this is not a mechanical proposition, I know that any dairyman who will take the trouble to have his cows served only in the morning, and then exercised moderately for a few hours afterward, will be rewarded by having his calves come heifers by a large majority.—C. M. Gallup, Connecticut.

The Ewe Flock.

If it has not been sooner done it is time to separate the lambs from their mothers. First let us move all the flock to a bit of choice pasture, some bit reserved for this occasion. Let ewes and lambs run there until they become wonted to the place. Then quietly remove the ewes, leaving the lambs where they are. If the lambs are destined for the market it is well to set out troughs and tempt them with oats. No matter how good is the pasturage, a bit of dry grain seems to adhere to the ribs of a lamb. Herein can one distinguish the real shepherd. He remembers his little flock, he goes gladly to feed it, he sees that each lamb comes to eat and all at one time, so that none gets more than its share.

The ewe flock one studies with real interest. He culls some perhaps, but let him beware how he culls out the thinnest ones; possibly they are his best mothers and richest milkers. He carefully trims their feet, he puts the ram with them and marks the date. He puts them on rich pasture because that leads to twin-bearing.

A bite of grain will not hurt the ewe on poor pasture at the breeding season, only beware that it be not too large a bite. Green things are what make the ewe flock happy, and to conceive in multiples.—Breeders' Gazette.

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We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE. Berkeley Ont.

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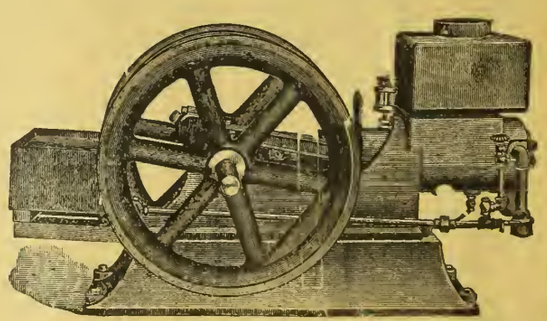

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Ringing the Bull.

Despite the oft repeated statement that the gentlest bull can never be trusted, there is no reason why a bull cannot be as well behaved as a stallion provided he has had the proper handling and training while young. It pays to take pains with the future herd-header so that he is easily handled in service or in the show ring.

The bull calf should be taught early to lead at the halter and should be tied up a short time each day, preferably when eating his grain. A light weight ring should be inserted in his nose when he is from nine to 12 months old but under no circumstances should he be led by the ring until three or four months after sothat the nose can heal up well.

Inserting the nose ring is a simple and short operation when properly done. First tie the bull securely to a post by the head and horns, then take a common trocar and cannula, well sterilized, and push it through the thinnest part of the membrane that separates the nostrils, withdraw the trocar, leaving the cannuta in the opening. Put one end of the opened ring in the pointed end of the cannula and then carefully withdraw cannula, which brings the ring into the opening, and after closing ring by putting in the screw, the job is done. Before the operation, the ring should be examined and all rough edges carefully filed down so there is nothing to irritate the nose and keep it raw and bleeding.

When the animal is about two or two and a half years old, the light ring should be removed and a good heavy ring inserted. Iron rings should not be used as they rust and keep the bull's nose raw and sore. The best are made of brass or bronze composition metal and do not rust.

In tying up the bull by the nose, one should be careful to avoid frightening him, causing him to jump back and slit the ring out of his nose. It is safest to pass the tie chain through the nose ring and then up and around his horns and when he jerks back most of the strain comes on the horns and not at the nose.—A. Herdsman.

As announced early in the season, the Dominion Live Stock Branch has this year undertaken a distribution of pure bred male animals throughout Canada on a somewhat extensive scale. In inaugurating this policy the aim has been to aid sections where pure bred sires were lacking and to encourage new communities in following an intelligent system in breeding. This form of assistance has proven very popular and during the past few months a large number of bulls and several stallions have been placed in various parts of the country in the hands of local associations formed specially for the purpose of handling and maintaining them. All animals placed remain the property of the Department of Agriculture, the local associations assuming the responsibility of their maintenance and management under the general supervision of officers of the Live Stock Branch.

The distribution of bulls and stallions having been brought to a close for this year the opportunity is now open to deal with applicants for boars and rams. Full information regarding the rules governing the distribution and the procedure to be followed in forming the necessary organization may be had upon application to the Live Stock Commissioner, Ottawa.

As it is the intention to consider only such requests as are forwarded before October 20th, it will be necessary for districts desiring to eake advantage of this offer to act promptly.

John Bright,
Live Stock Commissioner, Ottawa.

Sheep Shots.

Sheep eradicate weeds.

Send to the Department of Agriculture, Ottawa, for literature on sheep.

Sheep pick up dollars from the stubble fields.

Sheep chores are the lightest chores about the farm.

It costs little to start in sheep, and there is always something to be realized out of them quickly.

Start the sheep flock with whatever stock is available and grade up with the down bucks until you have a first class farm stock.

The Merino-Shrop grade of sheep make a hardy, early maturing type, well adapted to the country, fine in the wool and well covered with flesh.

Organize your neighbors and buy a carload of sheep to put on your stubble.

Sheep will bring you dollars every month of the year.

There are two revenues from a flock of sheep—wool is going up in price, and mutton keeps down the meat bill.

Feeding Steers.

This is the season of the year when those who intend to finish a few steers during the winter should keep their eyes open for good animals to work with. Many cattle are forced to pick their living from scanty pastures that contain very little nutriment after the frosts and sun has has parched and browned the grass. If left to rustle until snow flies they will lose a good deal of the flesh laid on during the summer, and it requires considtrable unprofitable feeding to bring them back to a thrifty condition.

Get them early, and when picking out your feeders look for beef type. Low-set, blocky animals with straight top and bottom lines, good spring of rin and strong heart girth will invariably make the best use of their food. A short, broad head, with prominent lustrous eyes and big muzzle with open nostrils are always evidences of a profitable beef raising conformation. Once you have them never allow cattle to go back. Give them a little help until the time comes to start them toward full feed.

To Prevent Cows Sucking Themselves.

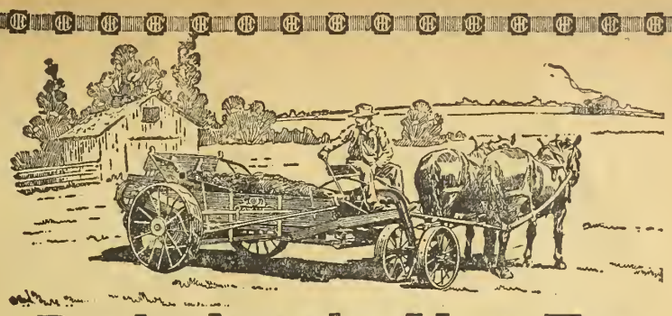
Cows can be prevented from sucking themselves by compelling them to wear a halter through the nose band on which well sharpened ten-penny nails have been securely placed in such a manner that when the attempt is made the nail points come in contact with the udder before the tongue can reach the teats.

Another method is to ring the cow with a large size bull ring.

There is a special muzzle on the market that fits into the nose and acts as a preventive. This can be secured through hardward stores in most communities.

A Good Manger.

The principal requisites of mangers in the cow stables are: 1. They should be large enough to hold the feed so that the cows cannot easily throw it out in front or under their feet. 2. They should be sanitary and easy to clean. 3. They should be arranged so that the cows cannot get their feet in them. 4. They should be divided to prevent cows from stealing feed from each other. 5. They should be convenient for feeding, mixing feed in the manger and removing refuse hay from the front. Most types of mangers, especially when built of wood, are hard to keep sweet and clean, although they may fulfill all other requirements.



Ranked at the Very Top

DAVID Rankin was a big farmer and he knew his business. He owned the largest corn farm in the world, about 35,000 acres down in Missouri. He devoted his life to the pleasant study and practice of right farming, and he succeeded mightily, for he made $4,000,000 in the business of farming. This is what David Rankin said about the manure spreader: "It is the most efficient money-maker on the place."

It's warm praise to be ranked above all other farm machines, but it is in keeping with what all the agricultural world has been recognizing. Soils rebel when crop after crop is taken from them, without return of fertilizer. Witness the abandoned, worn-out farms of New England. Return every bit of manure to the soil by the spreader method. The I H C manure spreader will save you much disagreeable, hard labor, will spread evenly, and will make one ton of manure go as far as two tons spread by hand.

I H C Manure Spreaders

Deering and McCormick

are built to suit you, to do best work for the buyer in every case, to convince him that he has made the wisest purchase. Every detail in the construction has a purpose for which it was made after thorough tests and experiment. They have the maximum of strength and endurance, and their construction bristles with advantages.

You will find all styles and sizes in the I H C spreader line. They will cover the ground with a light or heavy coat, as you choose, but always evenly, up hill or down. There are high and low machines, with steel frames, endless or reverse aprons, but always giving best possible service. Tractive power is assured by position of the rear wheels well under the box, carrying nearly three-fourths of the load, and by wide rimmed wheels with Z-shaped lugs.

These and many other things will interest and convince you if you look the I H C spreader line over at the local agent's. There is one for your exact needs. Read the catalogues that the agent has for you.

International Harvester Company of Canada, Ltd

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REMINGTON UMC

REPEATING RIFLES Pump Action

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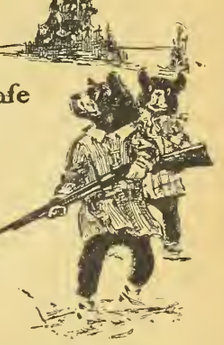

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.22 Repeating Rifles—easy take-down—straight line feed. .25, .30, .32 Remington high power rifles.

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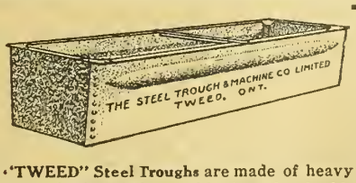

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Are strong, rigid, clean and sanitary. Will last a lifetime. Never rust, never leak, and are frost-proof. Infinitely superior to wooden troughs, which rot, become slimy, and are disease breeders. "TWEED" Steel Troughs are provided with an outlet for drainage.

"TWEED" Steel Troughs are made of heavy galvanized steel, thoroughly riveted and soldered. Finished round the top with heavy angle steel, so making them very strong and rigid. Reinforced along the sides as shown.

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STEEL TROUGH MACHINE CO., Limited

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THE HORSE.

Weaning of the Foal.

The weaning of foals takes place towards or during the autumn, but no particular rule is observed in regard to the age, as they may be taken off the dam at any time between four and six months old. Indeed, sometimes they are actually weaned before they reach the former age, more particularly foals born late in the season; but that is not to be recommended. Generally speaking, it is always desirable to postpone the weaning for as long as is feasible, since the more forward and better grown foals are at weaning time the more easily will they get over this critical stage. The exact time will depend upon circumstances, and on the farm these oftentimes necessitate its being done at a comparatively early age, for farmers who breed from working mares are not usually able to study the special interests of foals to the same extent as can be done on stud farms.

When the mare remains lying out in idleness at grass all through the autumn, the most suitable course usually is to allow the foal to run with her until some time in October, or even to the end of that month, although quite possibly—and this applies especially in the case of old mares—her milk may give out earlier. When left with its dam late in the autumn the foal will often practically wean itself, in which case the process is got over without any trouble; and even when the mare no longer suckles it, the two may very suitably continue to run together on the same pasture field, if only for the sake of companionship. In the case of mares required for work, whether they are of the carting or the light-legged class, weaning will necessarily be accomplished earlier. A working mare cannot be expected to continue supporting her foal for as long a period as an idle mare, as that would tax her strength and pull down her condition too much. Moreover, earlier weaning is frequently necessitated owing to the mare having no milk, for constant work has the tendency to dry up the milk flow at a comparatvely early stage. Some regard must be had to the condition of the foal, and early weaning is only advisable in the case of foals that are in a forward and nicely thriving condition.

HAND FEEDING.

It is strongly advised to push foals on well by feeding them on manger food—crushed oats and bran—for some little time before they are to be weaned, so as to have them in as thriving a condition as may be when the separation from the dam takes place. When they have been hand-fed in this way, the weaning is all the more readily accomplished, as they will feel the loss of the milk less, and be thoroughly accustomed to eating a little corn, etc. If it is properly fed and cared for before and immediately after weaning a foal should not lose any flesh. Besides oats and bran, the staple manger foods—oatmeal and ground linseed cake—are most useful as a stand-by at weaning time. The oatmeal may be given both in a dry state and in the form of gruel. Weakly animals might also suitably have some skim milk, or even buttermilk, every day for a month or so, which they will quickly learn to drink greedily, and which are most effective foods for promoting a thriving condition. Other foals and strong ones will not require these special attentions, a fair allowance of crushed oats and bran—together with some good hay, if it late in the autumn or grass keep is short—being all they need, though one cannot easily do foals too well at this stage. The average farmer, at any rate, is not likely even to err on the side of feeding his foals too liberally; and overfeeding, causing foals to go wrong in their joints and to suffer ill-effects through being forced along too rapidly and over-growing themselves, is heard of, as a rule, only in breeding studs where showing of the young stock is gone in for.

It having been determined to wean the foal, the best plan is straightway to separate it from its dam for good. Some breeders are in favor of accomplishing the weaning process by degrees, separating the two only temporarily at first and continuing for some days to allow the foal to have access to the mare and suck her at gradually lengthening intervals the object being to accustom the youngster to do without its mother in a gradual manner, but this mode of weaning unnecessarily frets both mare and foal, and does neither any good. Far from making things easier, it does just the reverse, and these repeated separations and visits are most liable to make the foal cease thriving for the time being, owing to the constant fretting it gives rise to. An experienced old breeder once remarked that this gradual system, though intended to be a kindness to the foal and to facilitate matters for it, put him in mind of the owner of a young puppy, who, wishing to dock its tail, could not bring himself to cut the entire surplus length off all at once, but thought he was acting more kindly by cutting off an inch each day, until it was sufficiently short. An important detail to observe when the foal is taken away from the dam is to accommodate them far away enough from each other that they cannot hear one another's neighing.—Argus.

The Detection of Lameness.

While it is easy enough as a rule to detect lameness in a horse, it is often difficult to locate its exact seat when there are no external symptoms; and as regards the forelegs, the not very experienced are frequently prone to fix upon the wrong leg as being the unsound one. This is quite excuseable for it requires considerable practice to determine offhand which limb it is that the lame horse is saving. The rule to bear in mind is that the animal when moving dwells longest upon the sound leg, while it throws up its head when the lame one comes to the ground and treads quite lightly getting the leg off the ground again as quickly as possible at each stride. Often the lameness only reveals itself when the animal trots, and it becomes especially marked on hard ground. Hence, when a horse is brought out to see whether it is lame one should have it trotted up and down on hard ground. It is also important to have it led on quite a loose rein, so that its head may be free. It is a well-known trick of dealers and others to take a horse short by the head, when showing an animal off, in order to conceal the fact of its being lame in front. Frequently, lameness manifests itself plainly when the horse is standing in the stable by its placing the lame foot slightly in advance of the other, and resting it instead of bearing a proper share of weight upon it. A horse doing this is said to "point" with its foot or leg, and is a suspicious sign if the pointing is persistent, while it is an almost certain indication of actual or incipient lameness. It is usual for all horses very frequently to rest one of their hind-legs and to support themselves only on the other one while in the stable, and that should not be regarded as anything abnormal.

LOCATING THE MISCHIEF.

There is an old saying among horse men to the effect that "though you believe the horse to be lame in the head, always first look at the foot." The meaning of this is that cases where the seat of lameness is not revealed by any definite indication, such as a swelling, abnormal heat, or tenderness, the probability is that the trouble is in the foot, as far as the forelegs are concerned, so that its cause should first of all be looked for here, no matter how strongly inclined one may be to think it is somewhere else. Laymen not having much experience are generally inclined to fix upon the shoulder as the seat of the lameness when its cause cannot be for certain assigned, but shoulder-lameness is rarely met with in ordinary circumstances, and one will as a general rule be pretty safe in ruling out the shoulder straightaway as a probable seat of the mischief. Foot-lameness is of rare occurrence in the hind limbs, and if a horse goes lame behind the most usual seat of the trouble is the hock joint, while

ABSORBINE ***STOPS LAMENESS*** from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. **Does not blister or remove the hair** and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.00 a bottle delivered. Horse Book 9 K free.

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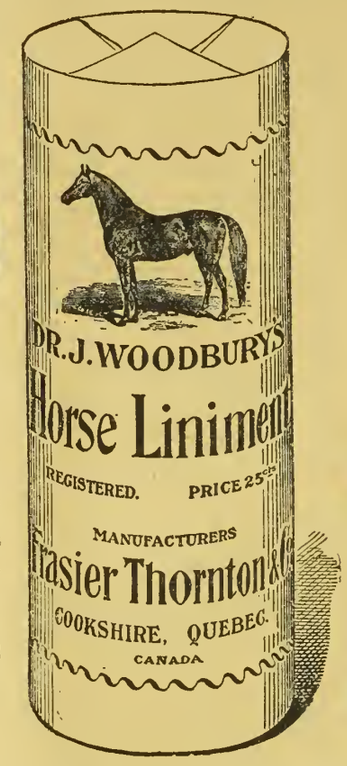

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Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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Save money by using this black paint wherever the color is no objection. Elastic, heat-proof, durable. Use it for "rubber" roofings and all exposed iron and wood.

The Carritte-Paterson Mfg. Co., Limited,

St. John, N. B. Halifax, N. S. Sydney, N. S.

sometimes it may be the stifle. In examining the feet for lameness, one should feel whether there is any abnormal heat present, which is the case in fever of the feet (laminitis). The presence of pain in them may be ascertained by tapping lightly on the wall, or sole with a hammer, which will cause flinching, while a pair of hoof-forceps are found very useful for detecting tenderness resulting from corns, etc. Sprains of the backsinews and of the various ligaments of the leg, which kind of injury ranks as one of the most common causes of lameness, especially so in light horses used for fast work, generally manifest themselves very plainly by the fact becoming more or less swollen and the presence of heat; and the pain incidental to sprains is most easily detected by picking up the foot and pressing the sinews between the fingers, when the horse will flinch as soon as the injured part is touched. In some cases, however, it happens that, excepting for the animal going lame, no external symptoms are noticed in the incipient stage of a sprain (though probably some heat could be felt if a sufficiently careful examination were made, and in these circumstances a wrong diagnosis is very easily made by the inexperienced. A useful clue as to the nature of the lameness is often afforded by noting whether it becomes less marked or wears off altogether after the animal has got warmed up to its work or whether it remains the same or gets worse. The former, for instance, is characteristic of the dreaded navicular disease. In the case of this unsoundness the lameness is also often of an intermittent nature in the earlier stages. Grogginess of the legs due to excessive wear, or the stiffness resulting from old age, which is not really a form of lameness, but merely causes a horse to go more or less stiff or short, also tends to wear off after the animal has been out for a little while. Upon the other hand in cases of chronic laminitis one mostly finds the horse will go increasingly unsound when at work, and the same may frequently be observed when a horse is suffering from corns. In the case of sprains or incipient sprains, too, the lameness usually becomes worse with exercise or work.

Sometimes horses suddenly fall lame when being driven or ridden, owing to their hitting a leg with the foot of another, but this is not ordinarily a matter which signifies much, for the lameness will disappear as soon as the pain caused by the blow subsides. It is only when a horse habitually hits itself in this manner, as the result of faulty action, that this trouble is liable to assume a serious aspect. In these circumstances a suitable kind of cloth or leather boot, to protect the part exposed to injury, should be worn. Sudden lameness, when a horse is out may also be caused through a stone lodging in the sole, it having got wedged in between the shoe. Very occasionally an intermittent form of lameness may result from an attack of rheumatism. Stable attendants and insufficiently experienced horsemen are very fond of attributing cases of obscure lameness, the cause of which is not readily detected, to this ailment, but in reality it is quite exceptional for a horse to go lame on that account.

Curb and its Treatment.

This is an enlargement of the ligament on the back part of the hock, or of those structures which hold the bones of the hock in a proper position; upon certain occasions extraordinary stress is put upon them; thus causing a sprain, an enlargement, and lameness. Severe galloping on heavy ground, high or wide jumping with a heavy weight in the saddle, injudicious backing, such as foolish riders or drivers sometimes have recourse to when an animal, from ill-temper or otherwise, objects to go in the desired direction, are among the more common causes of the disease. It is also noteworthy that curb is one of the hereditary complaints the horse is subject to, therefore a mare suffering or having suffered therefrom should not be chosen as a breeder. The best method to detect this defect is to stand close to the hindquarters of the animal, and look down the limb affected, from the cap of the hock, when a slight enlargement will be observed, about 3 in. from the point of the hock. It is also easily detected by taking a glance at the leg sideways. To treat this the object should be to reduce the inflammation, and for this purpose a continual application of cold spring water will be the chief thing. Arnica lotion is also advisable. Equal parts of spirits of wine, water, and vinegar also form a good application in the first stage of the complaint. After such treatment for a week or ten days, the inflammation should have abated, or have entirely left the part, and the next thing to be done will depend upon the state of the disease. Under most circumstances, the best agent probably will be a blister, consisting of biniodide of mercury; but before it is applied the hair should be carefully clipped off the part close to the skin. In bad cases the hot iron even has to be resorted to, but before either blistering or firing it would be prudent to call in a veterinary surgeon as he would be more competent to advise what blister would be best in order to avoid a permanent blemish, or whether a more drastic remedy ought to be employed. The shoeing is the next matter to attend to. The heel of the shoe should be raised so as to take the stress off the back tendons of the limb affected, and this precaution should be taken for a considerable time after the curb has subsided and the animal has resumed work. Rest, however, is absolutely necessary for a considerable time after the swelling has gone down to prevent a recurrence of the inflammation.—Warwick.

Backing Up the Purchaser

IF we didn't have an eye to the future, and if we didn't care what you or anybody else was going to think of us, we could sell engines and other machines for much less money, but we could not put I H C quality into them. The kicks would start coming in right away, and soon there would be no market for I H C engines.

I H C engines stand for everything that is opposed to such a policy. The I H C way is to build always for the respect and good will of the Canadian farmer, and to that end it has been successfully working for many years. The agent who sells you an I H C engine expects on its merits to do business with you again. The purchaser of an

I H C Oil and Gas Engine

buys security and safety with it. He banks on the many years of square dealing and the reputation back of all I H C machines. He knows it is the best engine bargain because it gives him efficient service in all kinds of farm work—pumping, sawing wood, spraying, running repair shop, grindstone, cream separator, etc. He knows that I H C responsibility is always back of the engine.

I H C oil and gas engines operate on gas, gasoline, naphtha, kerosene, distillate, and alcohol. Sizes range from 1 to 50-horse power. They are built vertical, horizontal, portable, stationary, skidded, air-cooled and water-cooled. I H C oil tractors range in size from 6-12 to 30-60-horse power for plowing, threshing, etc.

Look over an I H C engine at the local agent's. Learn from him what it will do for you, or write for catalogues to

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See that the next pr. of Shoes you buy have the name TAYLOR stamped on the Sole.

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If you want to increase your Trade keep a stock of the TAYLOR solid leather Shoes.

The Red T Brand of Boots and Shoes that we have put on the market are made of **Solid Leather** and on the **latest style** of **Lasts.** Ask your dealer for the

RED T BRAND made by

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Halifax, N. S.

POULTRY.

Chat on the Work in General.

Each year the poulterer better understands the care of poultry, knows their wants, and has discovered how to keep them comfortable. Comfortable hens are the ones that do the laying.

About thirty years ago, when poultry farming first began to grow as a business, a cry arose that it would not be long before there would be such a surplus of stock that prices would go tumbling, but, notwithstanding that there are ten successful plants today to every one there was thirty years ago, the demand is not half reached. With the increase of the supply came the increase of demand, and today we are no nearer meeting the demand than we were ever before.

But there is a change in the market that must be lost sight of. Almost anything in the poultry line sells, but the choicest prices alone are given for the "fancy" goods. That word "fancy" implies more than appearance. It means, also, quality. Poultry and egg buyers are becoming particular, but they are willing to pay for their goods. If they want brown eggs, they will not take white; and if they prefer white, brown ones are no temptation. If they want yellow-skinned fowls, there is no use trying to sell them white-skinned birds. The market today demand choice, plump, fresh stock. Have you got it? If so, the market is waiting for you.

We have today quite a number of breeds, and all, to a certain extent, are practical. But they will not fill all purposes. Therefore it is necessary for a man to select only such breeds as will best serve his customers.

Of the entire list of breeds, none meet the demands of the Americans so much as do our American varieties, and in this class the most popular are the Wyandottes, the Plymouth Rocks, with the Rhode Island Reds closely following. Also our American strains of Light Brahmas and the Leghorns. The Brahmas belong to the Asiatic class as a breed, but the Light Brahma as bred by our people is so different from that bred in England, that one would hardly suppose them to be of the same family. It is also so of the White Leghorns. The Leghorns belong to the Mediterranean class but there is such a change in the present day Leghorn to the bird introduced years ago, that we feel we own the breed.

It is important to keep the poultry houses scrupulously clean. Untidy and filthy houses soon show the results in scaly-legged fowls. Many otherwise good birds are sacrificed on account of the appearance of their legs. A man's methods are always judged by the appearance of his fowls, and scaly legs is one of the results. This unsightly ailment can readily be spread in a flock. A single afflicted bird on the roost is apt to transmit the trouble to the others. It can also be carried to the yound, in the spring of the year, by using such hens as sitters.

Overcrowding the flocks of young has also its dangerous results, chief among which is feather-pulling. The careful poulterer avoids large families, and keeps his birds busy. It is the crowded, idle birds that are ever ready to get into some mischief.

Green ducks are shipped to market undrawn, and with heads on. They are picked down one-half of the neck, and to the first wing joint.

The Muscovey duck has to be from two to four weeks older than the Pekin before it can be dressed, and it is sometimes four months old when killed.

In the East, the lowest prices in the duck market are from the first of July to the first of September, and from September to November the price always goes up from two to five cents a pound.

There is considerable demand in the large cities for live ducksf The Jews will not buy dressed poultry of any kind. Their religion teaches them that the rabbi should do the killing. Marketmen claim that this ruling makes a good market for many birds that would otherwise be worthless. Quite a lot of poultry is also sold to the Chinese, and at good prices. It is estimated that they consume as many as do the Jews.

The origin of the Indian Runner duck is unknown. It is claimed that they were introduced into England about thirty years ago. It is said that they will lay nearly 200 eggs in a year. One breeder gives food comparison with Pekin average about as follows; Food needed for 100 Pekin ducks for one month, amounts to about 2,250 pounds; food for 100 Indian Runner ducks, same period, 1,500 pounds. Time required to reach marketable size is given as ten weeks for each breed named. Time to reach maturity, Pekins, six to nine months; Indians, four to five months. The Pekins are the larger ducks.

Common field peas are an excellent egg-producing food, owing to the large amount of nitrogenous substances contained in them.

The effect of meat rations was tested at the West Virginia Experiment Station, where one pen fowls received a ration largely of corn and other starchy grains, while another pen was fed partly on meat and fresh bone. The mead-fed fowls laid 7,555 eggs, while the grain-fed birds laid 3,531 or less than one half as many as those receiving the nitrogenous ration. The eggs from the meat-fed fowls were larger, much firmer, rather better and produced far more vigorous chickens than those of the others. Both lots of fowls remained in a healthy, vigorous condition.

The Hebrews use goose oil instead of lard, and we don't blame them one bit. The writer raisers a few geese each year for his own use, and the Queen of the kitchen the other day fried some white potatoes with the geese, and a finer flavor we never had.

The Embden is a uniformly pure white goose, with prominent blue eyes, flesh colored beak, bright orange legs, remarkably strong neck, and its feathers incline to curl from the shoulders to the head. they are very hardy, and well adapted to our climate. When not allowed to become too heavy, they are good layers, and their flesh is tender and juicy when properly cooked.

A traveller says that in China eggs can be purchased all the year round at from two to three cents per dozen. The bulk of the supply is sent to Australia. Packing labor in Hong Kong costs about four dollars per month, and freight to Sydney is six dollars per ton. These eggs are sold at six cents per dozen, which allows a good profit.

A very good block for decapitating fowls is made by driving two spikes or nails along one side of a heavy block of wood, far enough apart to allow the fowls neck to slip between them. This holds it in place and makes it easy to complete the work at one blow.

An expert says that the one great mistake in raising capons is in marketing them too early and not having them fat enough. After caponizing keep them growing until they reach full size, which will take from ten to twelve months. Then fat them. This can be done in two weeks by shutting them in a dark coop and feeding three times a day all they will eat of cornmeal and middlings

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3700 Rods	640	40 ins.	22	6-7-8-9-10	20c rod	12c
3250 Rods	348	48 ins.	16½	4-4½-5½-7-8-9-10	29c rod	18c

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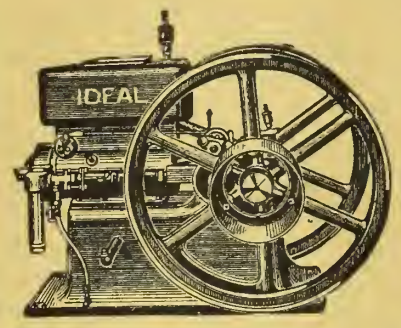

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Move your Surplus Stock before the cold weather comes by advertising in the columns of The Maritime Farmer.

mixed up with milk.

The French are naturally an economical people, and after their fowls are killed and dressed are by no means through with the treatment of the subject. The waste products are scrupulously saved. The feathers are carefully collected and sorted, and when well dried are sold to dealers. The intestines are boiled, the fat skimmed off, minced as food to poultry, and the liquid fed to pigs. The combs and kidneys are sold to pastry cooks, the first for decorating purposes, and, the latter for pies. The head, neck and feet are sold to hotels and restaurants for flavoring sauces or are boiled down to make chicken jelly.

The French poulterer kills his fowls by dislocating the neck with a swift back chuck, given close to the head. At once dressing begins so that it may be completed before the body cools. The legs and wings are tucked close to the body, which is placed breast downwards against a board. A moist cloth is spread on the back to impart a fine grain appearance to the flesh. A weight is next applied thereon to secure the required market flatness and when thoroughly cold the birds are removed, packed carefully and closely, in crates or cases, as they are intended for the home or foreign market.

For fattening poultry, the French poulterer favors the opinette plan. This consists of rows of cages, with a separate compartment for each bird These cages measure twenty inches square and open at the top, no place being allowed for movement. The bottom of the cage is in open work, and below a moveable board strewn with ashes or sawdust to receive the droppings. In front is placed a trough fot food and an earthen vessel for water. The cellar or fattening house is kept warm, and the light gradually diminished till total darkness is secured on the fifth day. Only when being fed is daylight readmitted, and many prefer to employ a lamp.

While bumble foot is generally caused by fowls jumping from some high point to the ground and striking a stone or some other obstacle, it can also come from a fowl treading heavily on such an object.

Stale Ground.

Stale ground is often responsible for keeping young stock in a backward condition, and frequently this is an unexpected cause, unsuspected for the simple reason that the land is not actually foul, and as no direct disease is traceable to it, some other reason is looked for. Now and again there are outbreaks of disease that affect the poultry yards in whole districts. The origin of this contagion, more often than otherwise, is germ-laden soil. Happily such cases are few and far between, since these matters are becoming more and more understood, and consequently adequately guarded against. It is not, however, this advanced stage of land "sickness" which is the most common cause of flagging chickens, since the result would be much more drastic than just a temporary check to their progress. By stale ground is meant merely that the freshness has departed. Several batches of chickens in all probability have successfully run thereon. At this time of year, when herbage is growing, a very few weeks' rest, especiaffy when assisted by rain, will have a wonderful effect in restoring the freshness of the land. On many farms it is the custom to allow ducks, geese, and turkeys to cluster together in one flock. This is decidedly wrong, for waterfowl are different in all their habits from the other members of the poultry yard. What might be admirable conditions for one would, in all probability, be the anthithesis of what is best for remainder. In addition to this, the danger of impure ground is intensified; in fact, under these conditions it would be a difficult matter to avoid it. A change to another part of the farm will prove of the greatest value to the growing stock; it will keep them growing, which should be the chief aim until they attain their maturity. Where a run on meadow land can be given, it is advisable for them to have the full benefit accruing from so doing. This plan is not commonly adopted to the same extent as that of allowing them the run of the stubbles after harvest, although it is quite as beneficial to the birds, if not quite as economical so far as the saving in food is concerned.—E. T. Brown.

More Eggs for Nothing.

Most farmers keep fowls. Most farmers, too, do not get as many eggs as they should do, and in most cases this could be remedied, not by more expense (for farmyard fowls must not cost much to keep), but a little more trouble and common sense. For instance, on many farms, the fowls are fed twice a day—in the morning and the early afternoon—generally after the farmer has finished his breakfast and dinner, This means that the unlucky creatures go without food, (except such as they pick) from mid-day, or soon after, till the next morning, sometimes for nearly twenty hours. Further, if a hen happens to be laying at feeding time, and does not come off the nest, she has to go wishout a meal for twenty-four hours, and most people know that laying hens require more food than others. How can one expect hens to lay well under such circumstances? And yet I know from personal experience, that these conditions obtain on many farms.

Again, if a change of diet were more frequently given farmyard fowls would lay much better. A change now and again would cost no more, but the poor fowls have to have whatever is handy, and often are fed on one kind of grain for months. How would the farmer like to have, say, bread-and-butter, without a change, for a few days even?

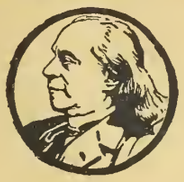
If farmers would feed their fowls a little oftener, say three times a day (before they have their own breakfast, at mid-day, and just before dark), and if they would change the food more frequently, and provide some fresh clean water for the fowls to drink, I can assure them that the increase in eggs would be remarkable. The cost is nothing; on,y a little more time and trouble are required.—Reader.

Sale is Good for Poultry.

Fowls require salt in their ration the same as al, other animals. Says a writer in the Farmers' Review:

The mineral elements in the salt are desired by the fowls and their systems crave them.

But only a little salt is needed—not more than a handful a week to the average sized farm stock. Too much is more harmful, perhaps, than too little. And since fowls often do not know when they have had enough of it, we dare not place the salt before them and let them eat all they want, as can be done with most other farm animals. So the best way is to mix a handful occasionally with the soft food or mash. This seasons the food as well as benefiting the fowls.



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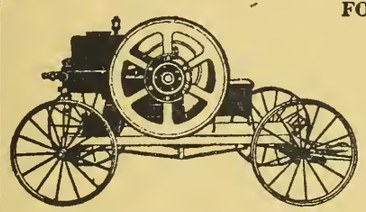

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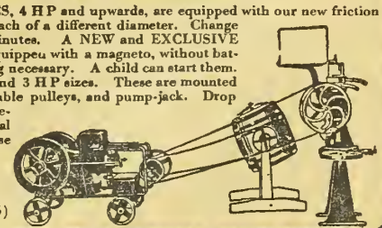

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Head Lice Menace to Young Chickens.

Head lice kill many late hatched baby chicks, according to Professor J. G. Halpin, of the College of Agriculture of the University of Wisconsin. Many persons attribute the losses to all sorts of diseases, when a careful scrutiny would reveal the head swarming with lice. A small magnifying glass will help distinguish the vermin. There are no particular symptoms which indicate infestation, other than a general lack of thrift.

A good remedy is four parts of vaseline or lard mixed with one part of blue ointment. The top of the head should be well greased at intervals of a week. It is better, however, not to wait for the lice but to cost the farmer far more in time and grease every chick when hatched.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

Janet looked a little surprised to see lying on the sofa (I was afraid to move lest it should be displeasing to my aunt), but went on her errand. My aunt, with her hands behind her, walked up and down the room, until the gentleman who had squinted at me from the upper window came in laughing.

"Mr. Dick," said my aunt, "don't be a fool, because nobody can be more discreet than you can, when you choose. We all know that. So don't be a fool, whatever you are."

The gentleman was serious immediately, and looked at me, I thought, as if he would entreat me to say nothing about the window.

"Mr. Dick," said my aunt, "you have heard me mention David Copperfield. Now don't pretend not to have a memory, because you and I know better."

"David Copperfield," said Mr. Dick, who did not appear to me to remember much about it. "David Copperfield? Oh yes, to be sure. David, certainly."

"Well," said my aunt, "this is his boy, his son. He would be as like his father as it's possible to be, if he was not so like his mother, too."

"His son?" said Mr. Dick. "David's son? Indeed!"

"Yes," pursued my aunt, "and he has done a pretty piece of business He has run away. Ah! His sister, Betsey Trotwood, never would have run away." My aunt shook her head firmly, confident in the character and behavior of the girl who never was born.

"Oh! you think she wouldn't have run away?" said Mr. Dick.

"Bless and save the man," exclaimed my aunt, sharply, "how he talks! Don't I know she wouldn't? She would have lived with her godmother, and we should have been devoted to one another. Where, in the name of wonder, should his sister, Betsey Trotwood, have run from, or to?"

"Nowhere," said Mr. Dick.

"Well then," returned my aunt, softened by the reply, "how can you pretend to be wool-gathering, Dick, when you are as sharp as a surgeon's lancet? Now, here you see young David Copperfield, and the question I put to you is, what shall I do with him?"

"What shall you do with him?" said Mr. Dick feebly, scratching his head. "Oh!—do with him?"

"Yes," said my aunt, with a grave look and her forefinger held up. "Now come,! I want some very sound advice."

"Why, if I was you," sgid Mr. Dick considering, and looking vacantly at me, "I should—" The contemplation of me seemed to inspire him with a sudden idea, and he added, briskly, "—I should wash him!"

"Janet," said my aunt, turning round with a quiet triumph, which I did not then understand, "Mr. Dick sets us all right. Heat the bath?"

Although I was deeply interested in this dialogue, I could not help observing my aunt, Mr. Dick and Janet, while it was in progress, and completing a survey I had already been engaged in making of the room.

My aunt was a tall, hard-featured lady, but by no means ill-looking. There was an inflexibility in her face in her voice, in her gait and carriage, amply sufficient to account for the effect she had made upon a gentle creature like my mother; but her features were rather handsome than otherwise, though unbending and austere. I particularly noticed that she had a very quick, bright eye. Her hair, which was grey, was fastened in two plain divisions, under what I believe would be called a mob-cap; I mean a cap, much more common then than now, with side-pieces fastening under the chin. Her dress was of a lavender color, and perfectly neat, but scantily made, as if she desired to be as little encumbered as possible. I remember that I thought it, in form, more like a riding-habit with the superfluous skirt cut off, than anything else. She wore at her side, a gentlemen's gold watch, if I might judge from its size and make, with an appropriate chain and seals; she had some linen at her throat not unlike a shirt-collar, and things at her wrists like little shirt-wristbands.

Mr. Dick, as I have already said, was grey-headed and florid; I should have said all about him, in saying so had not his head been curiously bowed—not by age; it reminded me of one of Mr. Creakle's boys' heads after a beating—and his grey eyes prominent and large, with a strange kind of watery brightness in them that made me, in combination with his vacant manner, his submission to my aunt, and his childish delight when she praised him, suspect him of being a little mad; though, if he were mad, how came to be there, puzzled me extremely. He was dressed like any other ordinary gentleman, in a loose grey morning coat and waistcoat, and white trousers; and had his watch in his fob, and his money in his pockets; which he rattled as if he were very proud of it.

Janet was a pretty blooming girl of about nineteen or twenty, and a perfect picture of neatness. Though I made no further observation of her at the moment, I may mention here what I did not discover until afterwards, namely, that she was one of a series of protegees whom my aunt had taken into her service expressly to educate in a renouncement of mankind, and who had generally completed their abjuration by marrying the baker.

The room was as neat as Janey or my aunt. As I laid down my pen, a moment since, to think of it, the air from the sea came blowing in again, mixed with the perfume yf the flowers and I saw the old-fashioned furniture brightly rubbed and polished, my aunt's inviolable chair and table by the round green fan in the bow window, the dugget-covered carpet, the cat, the kettle-holder, the two canaries, the old china, the punch-bowl full of dried rose-leaves, the tall press guarding all sorts of bottles and pots and, wonderfully out of keeping with the rest, my dusty self upon the sofa taking note of everything.

Janet had gone away to get the bath ready, when my aunt, to my great alarm, became in one moment rigid with indignation, and had hardly voice to cry out "Janet! Donkeys!"

Upon which, Janet came running up the stairs as if the house were in flames, darted out on a little piece of green in front, and warned off two saddle-donkeys lady-ridden, that had presumed to set hoof upon it; while my aunt, rushing out of the house, seized the bridle of a third animal laden with a bestriding child, turned him, led him forth from those sacred precincts, and boxed the ears of the unlucky urchin in attendance who had dared to profane that hallowed ground.

To this hour I don't know whether my aunt had any lawful right of way over that patch of green; but she had settled it in her own mind that she had, and it was all the same to her. The one great outrage of her life, demanding to be constantly avenged, was the passage of a donkey over that immaculate spot. In whatever occupation she was engaged, however interesting to her the conversation in which she was taking part, a donkey turned the current of her ideas in a moment, and she was upon him straight. Jugs of water, and watering pots, were kept in secret places ready to be discharged on the offending boys; sticks were laid in ambush behind the door; sallies were made at all hours; and incessany war prevailed. Perhaps this was an agreeable excitement to the donkey-boys; or perhaps the more sagacious of the donkeys, understanding how the case stood, delighted with constitutional obstinacy in coming that way. I only know that there were three alarms before the bath was ready; and that on the occasion of the last and most desperate of all, I saw my aunt engage, single-handed, with a sandy-headed lad of fifteen, and bump his sandy head against her own gate, before he seemed to comprehend what was the matter. These interruptions were the more ridiculous to me, because she was giving me broth out of a tablespoon at the time (having firmly persuaded herself that I was actually starving, and must receive nourishment at first in very small quantities), and, while my mouth was yet open to receive the spoon, she would put it back in the basin, cry "Janet Donkeys!" and go out to the assault.

The bath was a great comfort. For I begam to be sensible to acute pains in my limbs from lying out in the fields, and was now so tired and low that I could hardly keep myself awake for five minutes together. When I had bathed, they (I mean my aunt and Janet) enrobed me in a shirt and pair of trousers belonging to Mr. Dick, and tied me up in two or three great shawls. What sort of bundle I looked like, I don't know, but I felt a very hot one. Feeling also very faint and drowsy, I soon lay down an the sofa again and fell asleep.

It might have been a dream, originating in the fancy which had occupied my mind so long, but I awoke with the impression that my aunt had come and bent over me, and had put my hair away from my face, and laid my head more comfortably, and had then stood looking at me. The words "Pretty fellow," or "poor fellow," seemed to be in my ears too; but certainly there was nothing else when I awoke, to lead me to believe that they had been uttered by my aunt, who sat in the biw-window gazing at the sea from behind the green fan, which was mounted on a kind of swivel, anh turned any way.

We dined soon after I awoke, off a roast fowl and a pudding; I sitting at table not unlike a trussed bird myself, and moving my arms with considerable difficulty. But as my aunt had swathed me up, I made no complaint of beidg inconvenienced. All this time, I was deeply anxious to know what she was going to do with me; but she took her dinner in profound silence, except when she occasionally fixed her eyes on me sitting opposite, and said, "Mercy upon us!" which did not by any means receive my anxiety.

The cloth being drawn, and some sherry put upon the table (of which I had a glass), my aunt sent up for Mr. Dirk again, who jained us, and looked as wise as he could when she requested him to attend to my story, which she elicited from me, gradually by a course of questions. During my recital, she kept her eyes on Mr. Dick, who I thought would have gone to sleep but for that, and who, whensoever he lapsed into a smile, was checked by a frown from my aunt.

"Whatever possessed that poor unfortunate Baby, that she must go and be married again," said my aunt, when I had finished, "I can't conceive."

"Perhaps she fell in love with her second husband," Mr. Dick suggested.

"Fell in love!" repeated my aunt,

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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"After I had taken Lydia E. Pinkham's Vegetable Compound a week I began to improve. My backache was less and that heavy feeling in my side went away. I continued to take the Compound and am cured.

"You may publish this if you wish."—Miss CLARA L. GAUWITZ, R.R. No. 4, Box 62, Peoria, Ill.

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"What do you mean? What business had she to do it?"

"Perhaps," Mr. Dick simpered, after thinking a little, "she did it for pleasure."

"Pleasure, indeed!" replied my aunt "A mighty pleasure for the poor Baby to fix her simple faith upon any dog of a fellow, certain to illuse her in some way or other. What did she propose to herself I should like to know! She had had one husband. She had seen David Copperfield out of the world, who was afways running after wax dolls from his cradle. She had got a baby—oh, there were a pair of babies when she gave birth to this child sitting here, that Friday night—and what more did she want?"

Mr. Dick secretly shook his head at me, as if he thought there was no getting over this.

"She couldn't even have a baby like anybody else," said my aunt. 'Where was this child's sister, Betsey Trotwood? Not forthcoming. Don't tell me!"

Mr. Dick seemed quite frightened.

"That little man of a doctor, with his head on one side," said my aunt, "Jellips, or whatever his name was, what was he about? All he could do was to say to me, like a robin redbreast—as he is—'It's a boy.' A boy! Yah, the imbecility of the whole set of them!"

The heartiness of the ejaculation startled Mr. Dick exceedingly; and me too, if I am to tell the truth.

"And then, as if this was not enough, and she had not stood sufficiently in the light of this child's sister, Betsey Trotwood," said my aunt "she marries a second time—goes-and marries a Murderer—or a man with a name like it—and stands in this child's light! And the natural consequences is, as anybody but a baby might have foreseen, that he prowls and wanders. He's as like Cain before he was grown up, as can be.

Mr. Dick looked hard at me, as if to identify me in this character.

"And then there's that woman with the Pagan name," said my aunt, "that Peggotty, she goes and gets married next. Because she has not seen enough of the evil attending such things, she goes and gets married next, as the child relates. I only hope," said my aunt, shaking her head, "that her husband is one of those Poker husbands who abound in the newspapers, and will beat her well with one."

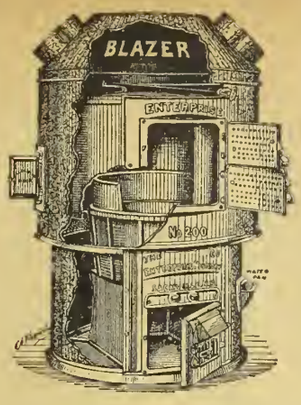
I could not bear to hear my old nurse so described, and made the subject of such a wish. I told my aunt that indeed she was mistaken. That, Peggotty was the best, the truest, the most faithful, most devoted, and most self-denying friend and servant in the world; who had ever loved me dearly, who had ever loved my mother dearly; who had held my mother's dying head upon her arm, on whose face my mother had imprinted her last grateful kiss. And my remembrance of them both, choking me, I broke down as I was trying to say that her home was my home, and that all she had was mine, and that I would have gone to her for shelter but for her humble station, which made me fear that I might bring some trouble on her—I broke down, I say, as I was trying to say so, and laid my face in my hands upon the table.

"Well, well!" said my aunt, "the child is right to stand by those who have stood by him—Janet! Donkeys!'

I thoroughly believe that but for those unfortunate donkeys, we should have come to a good understanding; for my aunt had laid her hand on my shoulder, and the impulse was upon me, thus emboldened, to embrace her and beseech her protection. But the interruption, and the disorder she was thrown into by the struggl? outside, put an end to all softer ideas for the present, and kept my aunt indignantly declaiming to Mr. Dick about her determination to appeal for redress to the laws of her country, and to bring actions for trespass against the whole donkey proprietorship of Dover, until tea-time.

After tea, we sat at the window—and on the look-out, as I imagined, from my aant's sharp expression of face, for more invaders—until dusk, when Janet set candles, anh a back-gammon-board, on the table, and pulled down the blinds.

"Now, Mr. Dick," said my aunt, with her grave look, and her forefin-



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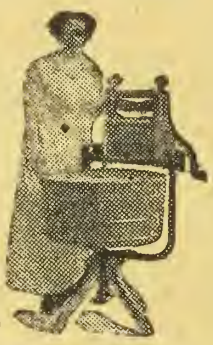
MR. DAVID BERRIDGE, Claremont, N.S., writes:—"I have had indigestion for some years, and could hardly eat. It then turned into a sour stomach, and the doctors said I could not get cured. I used a lot of medicine until at last one of my friends told me to use MILBURN'S LAXA-LIVER PILLS, and after I had used three vials, I was completely cured, and I always keep them in the house now."

MILBURN'S LAXA-LIVER PILLS are a wonderful remedy for all diseases or disorders of the liver, and have been universally used during the twenty odd years they have been on the market.

Price 25 cents a vial, or 5 for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.



So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking,

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address Me Personally

G. E. Morris, Mgr. 1900 Washer Co.

357 Yonge Street, Toronto.

ger up as before, "I am going to ask you another question. Look at this child."

"David's son?" said Mr. Dick, with an attentive puzzled face.

"Exactly so," returned my aunt. "What would you do with him, now?"

"Do with David's son?" said Mr. Dick.

"Ay," replied my aunt, "with David's son."

"Oh!" said Mr. Dick. "Yes. Do with—I should put him to bed."

"Janet!" cried my aunt, with the same complacent triumph that I had remarked before. "Mr. Dick sets us all right. If the bed is ready, we'll take him up to it."

Janet reported it to be quite ready, I was taken up to it; kindly, but in going in front, and Janet bringing up some sort like a prisoner; my aunt the rear. The only circumstances which gave me any new hope, was my aunt's stopping on the stairs to inquire about a smell of fire that was prevalent there; and Janet's replying that she had been making tinder down in the kitchen of my old shirt. But there were no other clothes in my room than the odd heap of things I wore; and when I was left there, with a little taper which my aunt forewarned me would burn exactly five minutes, I heard them lock my door on the outside. Turning these things over in my mind, I deemed it possible that my aunt, who could know nothing of me, might suspect I had a habit of running away, and took precautions, on that account, to have me in safe keeping.

The room was a pleasant one, at the top of the house, overlooking the sea, on which the moon was shining brilliantly. After I had said my prayers, and the candle had burnt out, I remembet how I still sat looking at the moonlight on the water, as if I could hope to read my fortune in it, as in the bright brook; or to see my mother with her child, coming from Heaven, along that shining path, to look upon me as she had looked when I last saw her sweet face. I remember how the solemn feeling with which at length I turned my eyes away, yielded to the sensation of gratitude and rest which the sight of the white-curtained-bed—and how much more the lying soft,y down upon it, nestling in the snow-white sheets!—inspired me. I remember how I though of all the solitary places under the night sky where I had slept, and how I prayed that I never might be houseless any more, and never might forgetthe houseless. I remember how I seemed to float, then, down the glory of that track upon thes ea, sea, away into the world of dreams. m

CHAPTER XIV.

MY AUNT MAKES UP HER MIND ABOUT ME.

On going down in the morning, I found my aunt musing so profoundly over the breakfast-table, with her elbow on the tray, that the contents of the urn had overflowed the teapot and were laying the whole table-cloth under water, when my entrance put her meditations to flight. I felt sure that I had been the subject of her reflections, and was more than ever anxious to know her intentions towards me. Yet I dared not express my anxiety, lest it should give her offence.

My eyes, however, not being so much under control as my tongue, were attracted towards my aunt very often during breakfast. I never could look at her for a few moments together but I found her looking at me—in an odd thoughtful manner, as if I were an immense way off, instead of being on the other side of the small round table. When she had finished her breakfast, my aunt very deliberately leaned back in her chair, knit-

FRESH FRAGRANT FLAVORFUL

You'll Like the Flavor

35¢-40¢-50¢ Per Pound.

A Very Handsome Elevated Oven Cook Stove is the Record

Empire Cook

In Two Styles No. 2 and No. 8

Can be fitted to burn either Wood or Coal.

No. 2 Empire Cook has six holes and is shipped fitted to burn wood unless otherwise instructed. It is also supplied with our patent oven scraper by which the oven can be cleaned without removing it from the stove. Has Polished edges, nickeled oven panels and knobs, six eight inch pot holes and large boiler hole.

No. 8 Empire Cook is a reliable Soft Coal Burner, giving all the satisfaction with Coal that can be obtained with Wood. It throws the heat on the floor and above, equal to the Elevated Oven Wood Burning Stoves. A first-class baker, easily operated and clean in burning Soft Coal.

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Minard's Liniment Co., Limited

For Diarrhoea, Dysentery, Cholera, Cholera Morbus

AND ALL

Pains and Cramps, Children or Adults

There is Nothing Just as good as——

Gates' Certain Check

MESSRS C. GATES, SON & CO.

Dear Sirs:

I have been thinking for some time that I should write and let you know what your "Certain Check" has done for my son. He had such a bad case of Cholora that he was reduced to a skeleton. We tried doctors, drugs and many other remedies but without avail. Finally we tried your Certain Check and we believe it saved our boy's life, as it cured atter everything else had failed.

Your Life of Man Bitters and Invigorating Syrup also cured me of lung trouble, I consider your medicines superior.

W. I. CURTIS, Newcastle, N. B.

Certain Check never fails and it is sold everywhere at only 25c per bottle.

J. W. Copeland, of Dayton, Ohio, purchased a bottle of Chamberlain's Cough Remedy for his boy who had a cold, and before the bottle was all used the boy's cold was gone. Is that not better than to pay a five dollar doctor's bill? For sale by all dealers

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

ted her brows, folded her arms, and contemplated me at her leisure, with such a fixedness of attention, that I was quite overpowered with embarrassment. Not having as yet finished my own breakfast, I attempted to hide my conlusion by proceeding with it; but my knife tumbled over my fork, my fork tripped up my knife, I chipped bits of bacon a surprising height into the air, instead of cutting them for my own eating, and choked myself with my tea, which persisted in going the wrong way instead of the right one, until I gave in altogether, and sat blushing under my aunt's close scruntiny.

"Hallo!" said my aunt, after a long time.

I looked up, and met her sharp glance respectfully.

"I have written to him," said my aunt.

"To—?"

"To your father-in-law," said my aunt. "I have sent him a letter that I'll trouble him to attend to, or he and I will fall out, I can tell him!"

"Does he know where I am, aunt?" I inquired, alarmed.

"I have told him," said my aunt, with a nod.

"Shall I—be—given up to him?" I faltered.

"I don't know," said my aunt. "We shall see."

"Oh! I can't think what I shall do," I exclaimed, "if I have to go back to Mr. Murdstone!"

"I don't know anything about it," can't say, I am sure. We shall see." said my aunt, shaking her head. "I

My spirits sank under these words, and I became very downcast and heavy of heart. My aunt, without appearing to take much heed of me, put on a coarse apron with a bib, which she took out of the press; washed up the teacups with her own hands; and, when everything was washed and set in the tray again, and the cloth folded and put on the top of the whole, rang for Janet to remove it. She next swept up the crumbs with a little broom (putting on a pair of gloves!, until there did not appear to be one microscopic speck left on the carpet; next dusted and arranged the room, which was dusted and arranged to a hair's breadth already. When all these tasks were performed to her satisfaction, she took off the gloves and apron, folded them up, put them in the particular corner ol the press from which they had been taken, brought out her work-box to her own table in the open window, and sat down, with the green fan between her and

"I wish you'd go up-stairs," said my aunt, as she threaded her needle, "and give my compliments to Mr. Dick, and I'll be glad to know how he gets on with his Memorial."

I rose with all alacrity, to acquit myself of this commission.

"I suppose," said my aunt, eyeing me as narrowly as she had eyed the needle in threading it, "you think Mr. Dick is a short name, eh?"

"I thought it was rather a short name, yesterday," I confessed.

"You are not to suppose that he hasn't got a longer name, if he chose to use it," said my aunt, with a loftier air. "Babley—Mr. Richard Babley—that's the gentleman's true name."

I was going to suggest, with a modest sense of my youth and the familiarity I had been already guilty of that I had better give him the full benefit of that name, when my aunt went on to say:

"But don't you call him by it, whatever you do. He can't bear his name. That's a peculiarity of his. Though I don't know that it's much of a peculiartity, either; for he has been ill-used enough by some that bear it, to have a mortal antipathy for it, Heaven knows. Mr. Dick is his name here and everywhere else, now —if he ever went anywhere else, which he don't. So take care, child, you don't call him anything but Mr. Dick."

(To be continued in next issue.)

SPECIAL ADVICE FOR MEN Strength Restored By New Method

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The little book described below (which I gladly send free, sealed, by mail, to any young or elderly man anywhere) contains in its 85 beautifully illustrated pages everything a man need know with regard to certain strictly personal subjects, and as a guide through his entire life, from the delicate period of youth, when wholesome advice is most needed, on through early manhood to a ripe, vigorous, healthy old age. Over a million of these books have been thus distributed by me all over the world. Therefore, please use coupon below and get YOUR free copy by return mail. SANDEN CO., DISTRIBUTORS.

Do you know, my friend, that there is a wonderful new way to apply a certain, great, natural FORCE to your body, and by which you may, without effort, trouble or inconvenience, treat your own self in the privacy of your home for debility and lost vitality, without using a single drug or medicine? This great FORCE, as a restorer of vitality and as a means to overcome those weaknesses which result from indiscretion and unnatural practices, is to-day being used all over the civilized world, and I give it as my honest opinion, based upon a vast observation and study, that any man anywhere, who leads a decent, manly life and who applies this marvellous FORCE in a scientific and rational way, can, without employing a single drug, be restored again to a state of perfect, rugged health and vigor, without a remaining ache, pain or weakness.

As we all know, these debiliating weaknesses handicap a man in every condition of life, while, on the other hand, a perfect specimen of vigorous, robust, lusty manhood is ever admired by both women and men alike, while, of course, it is certainly only such a man who can attain the really great success of life. Therefore, I say to you, no matter what your size, whether your are small or large, no matter what your occupation, no matter whether you are a college graduate or working on the farm or in the factory, no matter whether you are young or elderly, it is all a question of your vigor and your vitality, and if I can give you a good, abundant supply of this same great power of VITAL FORCE, then it is easy to believe that I can completely restore your vigorous health, can overcome the evil of past indiscretions so you will be exactly the same in your influence over people, exactly the same in your manly bearing as other manly, strong-nerved, warm-blooded fellows of your acquaintance.

With an idea of attaining this all for you, I recommend you to investigate a simple little VITALIZING APPLIANCE of my invention, which I am now sending out in great numbers for use by men everywhere who need new manly strenyth. This little VITALIZER is very light, weighing only several ounces, and can be worn without any one suspecting that you are wearing it. You buckle it on your body upon going to bed and take it off mornings. Thus while you sleep it sends its wonderful power, which I call VITALITY or VITAL FORCE, into your blood, nerves and organs. Users say it takes pain and weakness out of the back from one application, and further say 60 to 90 days' time is sufficient to restore a state of health, strength and vigor. I am not offering this VITALIZER here for sale, but want you first to send for my book, that you may learn all about the whole wonderful subject, and why I get such quantities of testimonials from users everywhere telling of results after drugs completely and utterly fail.

NOTE:—With special attachments VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health. Please write for book to-day, or, if near by, I should like you to call. Hours—9 to 6.

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Remember, the little illustrated book which I send free, sealed, by mail, as per coupon below not only fully describes my VITALIZER, telling of a special offer by which you may get one on special terms for use in your own case, but contains a great fund of private advice for men, some good, wholesome cautions, and a lot of general information that might be of value to you to the end of your days. Therefore, please write or call.

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140 Yonge St., Toronto, Ont.

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Dear Mrs. Currah,—I am enjoying better health than I have for eight years, and I think I am entirely cured. I have none of the old symptoms. I am very grateful for my present health, and think Orange Lily is the greatest treatment for women the world knows. Its use in my case caused 12 tumors or growths of some sort to be expelled. Some were as large as a hen's egg, and others smaller, down to the size of a walnut. You may use my case in your advertisement, for it is the solid truth, and pen cannot describe all the good it has done for me. Mrs. Louise E. Boiteridge.

This letter gives an indication of the positive benefits that always follow the use of Orange Lily. It is an applied treatment and comes in direct contact with the suffering organs. It produces results from the start in all cases of women's disorders, including painful periods, falling of womb, irregularities, leucorrhoea, etc.

I will send a sample box containing 10 days' treatment absolutely free to any suffering woman who has not yet tried it if she will send me her address. Enclose 3 stamps and address MRS. FRANCES E. CURRAH, Windsor, Ont.

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(Continued from page 9)

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Ram, shearling—1, Albert Boswall, Pownal, Lot 9, P. E. I.

Ram, Lamb—1, S. L. Boswall, Pownal, Lot 49, P. E. I.; 2, Alhert Boswall.

Ewe, 2 shears—1, S. L. Boswall; 2 and 3, Alhert Boswall.

Ewe, shearling—1 and 2, S. L. Boswall; 3, Alhert Boswall.

Ewe, Lamh—1, S. L. Boswall; 2 and 3, Alhert Boswall.

Pen, Ram and 4 Ewes—1, S. L. Boswall; 2, Alhert Boswall.

Pen, Lamh and 3 ewes—1, S. L. Boswall; 2, Alhert Boswall.

LINCOLNS.

Ram—1, C. Pugsley, Barronsfield, N. S.; 2, Black River Agr. Society, Black River, N. B.

Ram, Lamb—1, John McCarty, Chatham, N. B.

Ewe, 2 shears—1 and 2, C. Pugsley; 3, J. E. Baker & Sons, Barronsfield.

Ewe, shearling—1, C. Pugsley; 2, J. E. Baker & Sons.

Ewe, Lamh—1, C. Pugsley; 2, J. E. Baker & Sons; 3, Alhert Boswall.

Pen, Ram and 4 Ewes—1, C. Pugsley.

Pen, Lamhs—1, C. Pugsley.

OXFORD DOWNS.

Ram, 2 shears and over—1, Burder Goodwin, Baie Verte, N. B.; 2, J. E. Baker & Sons; 3, Black River Agr. Society.

Ram, shearling—1, Burder Goodwin; 2 and 3, J. E. Baker &Sons.

Ram Lamh—1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.

Ewe, 2 shears and over—1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.

Ewe, shearling—1, Burder Goodwin; 2 and 3, J. E. Baker & Sons.

Ewe, Lamh—1, Burder Goodwin; 2 and 3, J. E. Baker & Sons.

Pen, Ram and 4 Ewes—1, J. E. Baker & Sons; 2, Burder Goodwin.

Pen, Lambs—1, J. E. Baker & Sons; 2, Burder Goodwin.

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Ram, 2 shears and over—1, Burder Goodwin; 2, Geo. L. Boswall; 3, Cephas Nunn.

Ram, shearling—1, Geo. L. Boswall; 2 and 3, Cephas Nunn.

Ram, Lamh—1 and 2, Geo. L. Boswall; 3, Cephas Nunn.

Ewe, 2 shears and over—1 and 2, Geo. L. Boswall; 3, Cephas Nunn.

Ewe, shearling—1 and 3, Geo. L. Boswall; 2, Burder Goodwin.

Ewe, Lamb—1, 2 and 3, Geo. L. Boswall.

Pen, Ram and 4 ewes—1, Geo. L. Boswall.

Pen, Ram Lamh and 3 Ewes—1, G. L. Boswall; 2, Cephas Nunn.

SOUTHDOWNS.

Ram, 2 shears and over—1, Cephas Nunn.

Ram, shearling—1, J. E. Baker & Sons; 2, Cephas Nunn.

Ram. Lamh—1, J. E. Baker & Sons; 2, Cephas Munn.

Ewe, 2 shears and over—1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.

Ewe, shearling—1 and 3, James E. Baker & Sons; 2, Cephas Nunn.

Ewe, Lamh—1 and 2, J. E. Baker & Sons; 3, CepharN unn.

Pen, Ram and 4 Ewes—1, J. E. Baker & Sons; 2, Cephas Nunn.

Pen, Lamhs—1, J. E. Baker & Sons; 2, Burder Goodwin.

HAMPSHIRE DOWNS.

Ram, 2 shears and over—1, Cephas Nunn.

Ram, shearling—1, Cephas Nunn.

Ram, Lamb—1, Cephas Nunn.

Ewe, 2 shears—1 and 2, Cephas Nunn.

Ewe, shearling—1, Cephas Nunn.

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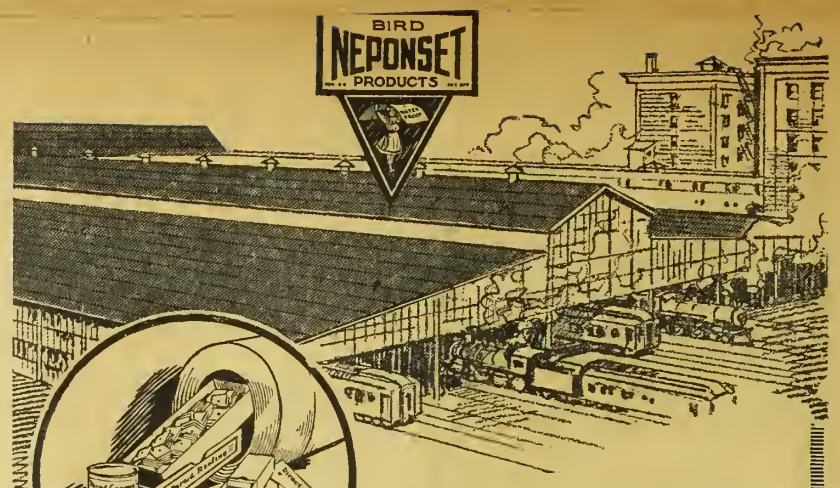

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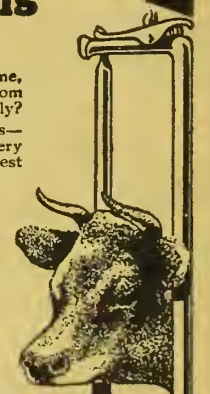

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Make the liver active.

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The Washer of the Present and the Future

Scientists tell us that some day no person will do hard manual labor—machines will do it all. The first great step has already been accomplished, as far as household work is concerned. The New-Century Washer, not only takes all the hard manual labor away from washing, but it washes clothes better than such work has ever been done before. The water tap furnishes the power, the New Century does nearly all the rest.

Washing machines are not new but the New Century is. The other kinds did *some* of the work, the New Century does almost *all* the work. The others gave trouble, the New Century saves trouble. The difference is in the patented and exclusive features of the New Century. Ask your dealer about them or send to us for full information.

CUMMER-DOWSWELL, LIMITED
HAMILTON, ONTARIO

Ewe, Lamb—1, 2 and 3, Cephas Nunn.
Pen—1, Cephas Nunn.
Pen Lambs—1, Cephas Nunn.

CHEVIOTS.

Ram, 2 shears—1, Cephas Nunn; 2, Chas. Symes, Minudie.
Ram, Shearling—1, Cephus Nunn; 2, Chas. Symes; 3, Geo. Symes, Minudie.
Ram, Lamb—1 and 3, Chas. Symes; 2, Cephas Nunn.
Ewe, 2 shears—1 and 3, Chas. Symes; 2, Cephas Nunn.
Ewe, shearling—1, Cephas Nunn; 2 and 3, Chas. Symes.
Ewe, Lamb—1, Cephas Nunn; 2 and 3, Chas. Symes.
Pen—1, Cephas Nunn; 2, Chas. Symes.
Pen, Lambs—1, Chas. Symes; 2, G. Symes.

DORSET HORNS.

Ram, 2 shears—1, A. Servant; 2, G. L. Boswall.
Ram, shearling—1, Geo. L. Boswall.
Ram, Lamb—1 and 3, Geo. L. Boswall; 2, A. Servant.
Ewe, 2 shears—1 and 2, Geo. L. Boswall; 3, A. Servant.
Ewe, shearling—1 and 2, Geo. L. Boswall; 3, S. L. Boswall.
Ewe, Lamb—1 and 2, Geo. L. Boswall; 3, A. Servant.
Ewe, shearling—1 and 2, Geo. L. Boswall; 3, S. L. Boswall.
Ewe, Lamb—1 and 2, A. Servant; 3, Geo. L. Boswall.
Pen—1, Geo. L. Boswall; 2, A. Servant.
Pen, Lambs—1, Geo. L. Boswall; 2, A. Servant.

GRADES (Long Wool.)

Pair Lambs—1, A. G. Dickson.

GRADES (Medium Wool.)

Pair Ewes, 2 shears—1, Burder Goodwin; 2, Millin Galloway, Chatham; 3, Donald Walting.
Pair Ewes, shearling—1, Burder Goodwin; 2, Milton Galloway; 3, W. C. Galloway.
Pair Lambs—1, Burder Goodwin; 2, A. G. Dickson; 3, W. C. Galloway.
Pen, 2 Ewes, 1 shear and 2 Lambs—1, Burder Goodwin; 2, A. G. Dickson; 3, W. C. Galloway.

FAT SHEEP.

Ewe, over 1 year—1, Cephas Nunn; 2, Geo. L. Boswall; 3, Burder Goodwin.
Ewe Lamb—1 and 3, J. E. Baker & Sons; 2, Burder Goodwin.
Wether, over 1 year—1, J. E. Baker & Sons; 2, Cephas Nunn; 3, Geo. L. Boswall.
Wether Lamb—1, Cephas Nunn; 2, C. Pugslay.
Best pure bred ram and 3 of his get—A. G. Dickson.
Henry Birk &Sons' Special for best pure bred ram and 3 of his get from grade ewes—A. G. Dickson.

SWINE

A very small show of pigs.

A. C. Servant, Overton, N. S., won all the first prizes in Poland Chinas, with Chas. Symes coming in for the seconds.

J. E. Baker & Sons had everything their own way in the Durcoc Jersey section.

The largest and best fat hog was won by A. G. Dickson, Chatham. Best spring pig won by Geo. J. Dickson, with Rodger Flanagan winning 2, 3 and 4 prizes.

Grade Sow, over 1 year—1, Keating Bros., Chatham; 2, Creighton Bros., Chatham.

Sow, 6 months and under 1 year—1, 2 and 3, A. G. Dickson.

Sow with litter—1, Fred Corwell, Chatham; 2, Hotel Dieu; 3, A. G. Dickson.

Special prize donated by M. Murray for best spring pig, won by A. G. Dickson.

The toast door is so roomy and well arranged that a rich, juicy steak or nice toast can be done to a turn without the usual tiring stooping necessary with common ranges. This and many other similarly convenient features increase the pleasures of kitchen work and should be fully looked into before you buy your range.
385
Pandora Ranges are sold everywhere by good dealers who back up our guarantee on this splendid range—
McClary's
PANDORA
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Pandora
Range
London Toronto Montreal Winnipeg Vancouver
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BIG CARTAGE COMPANY RECOMMENDS

MOLASSINE MEAL

Made in England

THIS IS WHAT THEY SAY:

THE SHEDDEN FORWARDING CO. LIMITED
Cartage Agents for
THE GRAND TRUNK RY. SYSTEM, THE INTERCOLONIAL RY. SYSTEM, Etc.

Messrs. The MOLASSINE Co. of Canada, Limited Montreal, June 9th, 1913
402 Board of Trade Building, Montreal.

Dear Sirs—I have much pleasure in recommending your "MOLASSINE MEAL" which has been used by this Company for several years with good results.

Yours truly, (Signed) G. E. BELCOURT, General Manager

ROYAL WARRANT

After supplying the Royal Stables for several years, His Majesty King George V has granted a Royal Warrant to the makers of MOLASSINE MEAL

This Company owns and uses such a large number of Horses that the feeding becomes a very important feature with them. "MOLASSINE MEAL" will do as much for your horses—try it.

Put up in bags containing 100 lbs. Get it at your Dealers or write us directly.

Look for this Trade Mark

on every bag

MOLASSINE Co. OF CANADA, LIMITED
ST. JOHN, N.B.
MONTREAL
TORONTO
930

BERKSHIRES.

Sow, over 2 years—1, H. W. Corning. ...

Sow, under 6 months—1, Keating Bros.

YORKSHIRES.

Boar, over 2 years—1, Peter Archer, 2, Hotel Dieu.

Boar, over 1 year—1, Hotel Dieu; 2, A. G. Dickson.

Boar, under 6 months—1, A. G. Dickson; 2, Rodger F'Longon.

Sow, uoder 2 years—1, A. G. Dickson; 2, Geo. E. Fisher.

Sow, over 1 year—1, Henry White; 2, A. G. Dickson; 3, A. L. Hinton, Bathurst.

Sow, over 6 months—1 and 2, A. G. Dickson.

Sow, under 6 months—1, A. G. Dickson; 2 and 3, Rodger F'langon.

Breeding Sow with litter—1, A. G. Dickson; 2, Geo. E. Fisher.

TAMSWORTHS.

Boar, over 6 months—1, W. J. Gibson, P. E. I.; 2, A. McRae & Sons.

Boar, under 6 months—1, A. McRae & Sons; 2, W. J. Gibson.

Sow, over 1 year—1, A. McRae & Sons.

Sow, under 1 year—1, A. McRae & Sons; 2, W. J. Gibson.

POULTRY

Andalusian Cock—1, Thos. Aylward, Falmouth, N. S.

Andalusian Hen—1, Thos. Aylward.

Brahma Light Cock—Chas. H. Symth, Moncton; 2, Gordon Bros., Chatham.

Light Brahma Hen—1, Gordon Bros; 2, Chas. H. Symth.

N. G. Dorking Cock—1, R. R. Black

N. G. Dorking Hen—1, R. R. Black.

Brown Leghorn Cock—1, Frank Sproule, Chatham; 2, Maritime Poultry & Supply Co., Moncton.

Brown Leghorn Hen—1, Frank Sproule; 2 and 3, Maritime Poultry & Supply Co.

White Leghorn Cock—1 and 2, Maritime Poultry Supply Co.

White Leghorn Hen—1 and 2, Maritime Poultry Supply Co.

A. O. V. Hen—Maritime Poultry Supply Co.

S. C. B. Minorca Cock—1 and 2, R. B. Stewart, Moncton; 3, Maritime Poultry Supply Co.

S. C. B. Minorca Hen—1, 2 and 3, R. B. Stewart.

White Minorca Cock—1 and 2, A. G. Dickson.

Buff Orpington Cock—1, R. R. Black, Amherst.

Buff Orpington Hen—1, R. R. Black.

A. O. V. Orpington Hen—1, Maritime Poultry Supply Co.

Barred Plymouth Rock Cock—1, Thos. Kyle, Sussex; 2, Chas. H. Smyth; 3, Burder Goodwin.

Barred Plymouth Rock Hen—1, 3, Thos. Kyle; 2, Chas. M. Smyth.

Rhode Island Red, single comb Cock—1, Thos. Kyle; 2, Geo. E. Fisher, Chatham.

Rhode Island Red, single comb hen—1, 2 and 3, Thos. Ky,e.

Rhode Island, rose comb, Cock—1, Maritime Poultry Supply Co.

Rhode Island, rose comb, Hen—1, Maritime Poultry Supply Co.

White Wyandotte Cock—1, R. R. Black; 2, Maritime Poultry Supply Co.; 3, R. A. Snowball.

White Wyandotte Hen—1, R. A. Snowball; 2 and 3, R. R. Black.

A. O. V. Wyandotte Cock—1, Thos. Kyle; 2, Maritime Poultry Supply Co.

A. O. V. Wyandotte Han—1, 2 and 3, Thos. Kyle.

Black Langshan Cock—Chas. H. Smyth; 2, L. Grassman, Chatham.

Black Langshan Hen—1, L. Grossman; 2, Chas. H. Smyth.

White Crested Polish Cock—1, Maritime Poultry Supply Cof

White Crested Polish Hen—Maritime Poultry Supply Co.

Golden Polish Cock—1, Maritime Poultry Supply Co.

Golden Polish Hen—1, Maritime Poultry Supply Co.

Indian Game Cock—1 and 2, Maritime Poultry Supply Co.

Indian Game Hen—Maritime Poultry Supply Co.

Buff Cochin Bantam Cock—Maritime Poultry Supply Co.

Buff Coching Bantam Hen—Maritime Poultry Supply Co.

Japanese Bantam Cock—1, Maritime Poultry Supply Co.

Japanese Bantam Hen—1, 2 and 3, Maritime Poultry Supply Co.

A. O. V. Bantam Cock—1, Chas. H. Smyth.

A. O. V. Bantam Hen—1, Chas. H. Smyth.

Rhode Island Red Cockerel—1, Thos. Kyle; 2, Bertrand Goodspeed, Penian, N. B.

Rhode Island Red Pullet—1 and 2, Thos. Kyle; 3, Bertrand Goodspeed.

White Wyandotte Cockerel—1, R. R. Black.

White Wyandotte Pullet—2, R. R. Black.

Silver Wyandotte Cockerel—1, Thos. Kyle.

Silver Wyandotte Pullet—1 and 2, Thos. Kyle.

Black Langshang Cockerel—1, Chas. H. Smyth.

Black Langshang Pullet—1, Chas. H. Smyth.

Lincoln Buttercup Cockerel—1, R. R. Black.

Lincoln Buttercup Pullet—1, R. R. Black.

S. G. Dorking Cockerel—1, R. R. Blgck.

S. G. Dorking Pullet—1, R. R. Black.

Brown Leghorn Cockerel—1, Burder

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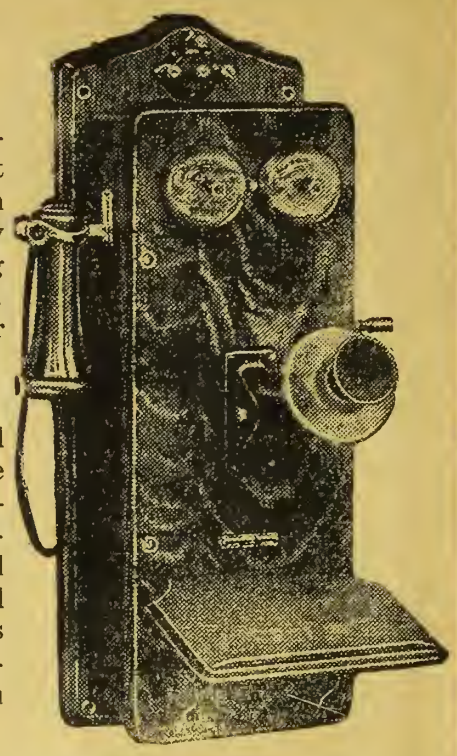

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Ask for our No. 3 Bulletin—containing the latest information about building telephone lines. —Also No. 4, describing our magneto telephones is free on request.

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1820 Duncan Street, - - - Toronto.

"Also manufacturing agents for the Magnaphone Co., under Mr. George R. Webbs' Canadian Patents No. 123363, No. 124537, No. 131145."

RU-BER-OID

TRADE MARK REGISTERED

Lessens Fire Risks—Cuts Down Insurance

Fire Insurance Companies rate RU-BER-OID Roofing as "First-Class", and insure at the "base" or lowest rate buildings covered with it. RU-BER-OID will not catch fire from flying cinders or burning brands, and the one-piece, air-tight, fire-resisting RU-BER-OID Roof helps to smother a fire starting within.

KA-LOR-OID (Colored RU-BER-OID) has the same fire-resisting qualities, and in its soft, permanent shades of Red and Green it makes most attractive roofs. 109

ROOFING

Goodwin.
Brown Leghorn Pullet—1, Burder Goodwin.
White Leghorn Cockerel—1, Maritime Poultry Supply Co.
White Leghorn Pullet—1, Bertram Goodspeed.
Buff Leghorn Cockerel—1, Michea, Murray, Chatham.
Buff Leghorn Pullet—1, Micheal Murray.
Black Minorca Cockerel—1, A. G. Dickson; 2, R. B. Stewart.
Black Minorca Pullet—1 and 2, R. B. Stewart; 3, A. G. Dickson.
Buff Orpington Cockerel—1, R. R. Black.
Buff Orpington Pullet—1, R. R. Black.
Black Orpington Cockerel—1, Chas. M. Smyth.
Black Orpington Pullet—1, Chas. M. Smyth.
Plymouth Rock Barred Cockerel—1, Burder Goodwin; 2, Bertrand Goodspeed; 3, Hotel Dieu.
Plymouth Rock Barred Pullet—1, and 3, Burder Goodwin; 2, Hotel Dieu.
Best pen Barred Plymouth Rocks—1, Hotel Dieu.
Best pen White Wyandotte Chickens—1, R. A. Snowball; 2, R. R. Black.
Best pen Buff Orpingtons—1, R. R. Black.
Best pen Rhode Island Reds—1, Joseph Bijou, Chatham.
Trio Plymouth Rocks, any variety—1, Bertrand Goodspeed; 2, Hotel Dieu; 3, Keating Bros.
Trio Wyandottes, any variety—1, Henry White, Chatham; 2, Keating Bros.; 3, R. R. Black.
Trio Orpingtons—1, R. R. Black.
Pair Bronze Turkeys—1, Hotel Dieu; 2, Thos. Alyward; 3, Geo. E. Fisher, Chatham.
White Holland Turkey—1, Geo. E. Fisher.
Pair Bronze Turkeys, hatched 1913—1, Hotel Dieu; 2, Thos. Aylwarn; 3, Milton Galloway.
Pair White Holland Turkeys, hatched 1913—1, Thos. Alyward.
Pair Toulouse Geese, over 1 year—1, Thos. Alyward; 2, R. A. Snowball.
Pair White Embden Geese, over 1 year—1, R. A. Snowball; 2, L. Grassman.
Pair African Geese, over 1 year—1, Hotel Dieu; 2, Maritime Poultry Supply Co.
Pair Toulouse Geese, hatched 1913—1, R. A. Snowball; 2, Thos. Aylward.
Pair White Embden Geese, hatched 1913—1, R. A. Snowball.
Pair Rouen Ducks, over 1 year—1, Thos. Aylward.
Pair Indian Runner Ducks, aged—1, Maritime Poultry Supply Co.
Pair Pekin Ducks, aged—1, Maritime Poultry Supply Co.
Pair Rouen Ducks, hatched 1913—1, Thos. Aylward.
Pair Indian Runner Ducks hatched 1913—1, Maritime Poultry Supply Co.
Pair Pekin Ducks, hatched 1913—1, 2, Maritime Poultry Supply Co.

Notes From Nova Scotia Agricultural College.

Dr. Robert Matheson, M. S. A., Ph. D., who has held the position of Professor of Zoology at the Nova Scotia Agricultural College and Provincial Entomologist for the Province of Nova Scotia, has resigned to accept a position in Original Research at Cornell University. Dr. Matheson is a Pictou county boy who has made a splendid record for himself prior to joining the staff at Truro and who, during his connection with the Department of Agriculture, has done most efficient work. Dr. Matheson joined the staff of the Nova Scotia Department of Agriculture shortly after the presence of San Jose Scale in some of the orchards of Nova Scotia was discovered. Upon his advice, the Nova Scotia Government passed stringent laws regulating the trade in nursery stock shipped into the Province, the results of which have been very far reaching and have prevented any further importation of trees affected with this serious pest. He also carried on a most efficient inspection of all the orchards in Hants, Kings, Annapolis and Digby counties and had trees found to be infested with this scale destroyed. As a teacher and investigator at the College, Dr. Matheson's work has been of a very high order and he leaves for Cornell carrying with him the highest esteem of his colleagues and of the students at the Nova Scotia Agricultural College.

Mr. W. H. Brittain, B. S. A., at present Entomologist and Plant Pathologist for British Columbia, succeeds Dr. Matheson and expects to arrive in the Province about the 15th of Ortober. Mr. Brittain is a son of John Brittain, D. Sc., formerly of Fredericton, N. B. and later of Macdonald College, Quebec. Dr. Brittain's work for the advancement of Science, especially in the schools of the Maritime Provinces, is well recognized by all educationalists and his son, who will shortly join the staff of the Nova Scotia Department of Agriculture, has, ever since his early youth, been following the traditions of his father. Mr. Brittain's references are of the highest order, he having graduated with honors from the Macdonald College and having later held an important position in the Department of Agriculture at Ottawa and having for the past two years carried on most efficiently the duties connected with the position of Entomologist and plant Pathologist in British Columbia. When Prof. Cumming mentioned to Dr. Walter Murray, of Saskatchewan University, that he was thinking of securing Mr. Brittain for the position vacated by Dr. Matheson, Dr. Murray said: "Serure him at once. I regard him as one of the most capable young men in his line in Canada."

Professor J. M. Trueman, who now holds the position of Professor of Agriculture and Superintendent of the Agricultural College Farm at Truro, has just returned from Brockton, Mass., the most important exhibition in the Eastern States. At Brockton he judged the Ayrshire cattle. The selection of a man from the Nova Scotia Agricultural College to judge at this important exhibition indicates the high esteem in which the Nova Scotia Agricultural College and its staff are held in the New England States.

Prior to going to Brockton, Prof. Trueman visited Ontario and while there purchased a number of cows to be added to the herd at the Nova Scotia Agricultutal College. J. E. Brethour, one of the leading live stock men in Ontario, writing to Prof. Cumming, says: "I have seen all the cows purchased by Prof. Trueman. They are a grand lot and I doubt if there is a stable in Canada that has seven cows equal to what has been purchase."

The next session of the College opens on November 4th. A large number of students have already applied for entrance and it is expected that when the college finally opens that there will be enrolled the largest number of students in the history of the institution.

Dr. Morse's Indian Root Pills

are made according to a formula in use nearly a century ago among the Indians, and learned from them by Dr. Morse. Though repeated attempts have been made, by physicians and chemists, it has been found impossible to improve the formula or the pills. Dr. Morse's Indian Root Pills are a household remedy throughout the world for Constipation and all Kidney and Liver troubles. They act promptly and effectively, and 49

Cleanse the System

Better Than A Windmill For Pumping

A Windmill only pumps water when it pleases the WIND to blow. The Renfrew Standard pumps water whenever it pleases YOU to have it pumped.

Renfrew Standard
It starts without cranking

A Windmill costs a good deal of money, while a pump jack attachment for a Renfrew Standard engine costs only a few dollars.

Pumping water is only one of the many uses to which the Renfrew Standard gasoline engine may be put on the farm. Our booklet and circulars show many other ways in which you may use this engine to advantage.

The Renfrew Standard is the most talked about, and the most favorably known, gasoline engine in Canada today. The very fact that it starts without cranking in all kinds of weather would be cause enough to bring about widespread discussion. But there are other reasons, too, for making people talk. There is, for instance, the remarkable simplicity of construction. So simple, a young boy can understand and run the Renfrew Standard. Has no pipes or fittings to leak or freeze, no cooling pumps or fans to get out of order.

Then there is the governor of the fly-ball (steam engine) type that allows speed of engine to be varied at will, without stopping the engine. And a carburetor of wonderful simplicity. And valves so arranged that the gases explode as perfectly as a cartridge in a shotgun. Other features, too, which are fully described in our booklet. Write for a copy.

The Renfrew Machinery Co., Limited

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114

CENTERVILLE FAIR

A Great Show and a Big Attendance Marked This Fine Carleton County Exhibition

The two days exhibition held at Centreville, Carleton County, on September 24th and 25th was a success beyond the fondest dream of the management. The secretary of the show, A. A. Margeson, is desesving of every credit for the excellent arrangements which marked the life of the show. The exhibitors were numerous and the exhibits were of a high order. The splendid possibilities of Carleton county from an agricultural standpoint were well emphasized by the quality of the products grown on the magnificent farms of the district. The attendance was all that could be desired and a new record was established.

The prize winners in the different classes were as follows:—

HORSES

THOROUGHBREDS.

Brood Mare, with foal at side—1, Warren Bull.

STANDARD BRED.

Stallion, 4 years—1, Warren Bull.
Foal—1, Warren Bull.

PERCHERONS.

Stallion, 4 years old and over —1, E. Reid.
Stallion, 3 years old—1, Hadden Lunn.
Mare, with foal at side—1, John Wakem.
Mare, 3 years old—1, Ward Webb.
Foal,—1, John Wakem.

CLYDESDALES.

Stallion, 4 years old and over—1, H. Shaw.
Stallion, 1 year old—1, W. Tweedie.
Mare, 4 years and over—1, W. Tweedie.
Mare, with foal at side—1, W. Tweedie; 2, G. Lamoreau.
Foal—1, W. Tweedie; 2, G. A. Lamoreau.
Mare, 2 years old—1, H. Trafford

DRAFT HORSES.

Pair Draft Horses—1, Alex. Ritchie; 2, W. Page; 3, H. Weade.
Pair Draft Horses, 3 years old—1, E. W. McCleary; 2, Geo. Long.
Pair Draft Horses, 1 year old—1, Isaac Gallagher.
Brood Mare, with foal at side—1, E. M. Reid.
Mare or Gelding, 3 years old—1, W. P. White.
Mare or Gelding, 2 years old—1, H. Thomas; 2, W. Page.
Mare or Gelding, 1 year old—1, H. Weade.
Foal—1, W. Gilliland; 2, W. McDonald.

GENERAL PURPOSE.

Pair of Horses—1, E. A. Savage; 2, John Gillis; 3, G. L. London.
Brood Mare with foal—1 and 2, L. Nicholson.
Mare or Gelding, 4 years old—1, C. A. Long.
Mare or Gelding, 3 years old—1, J. Gillis; 2, G. Smith.
Mare or Gelding, 2 years old—1, E. A. Savage; 2, H. Trafford.
Foal—1, L. Nicholson.

DRIVING HORSES.

Mare or Gelding, 4 years old or over—1, G. L. London; 2, 3, A. A. H. Margison.
Mare or Gelding, 3 years old—1, A. A. H. Margison; 2, Simonson.
Mare or Gelding, 2 years old—1, Alex. Ritchie; 2, G. A. Lamers; 3, Ward Webb.
Mare or Gelding, 1 year old—1, A. Gregg; 2, R. Simonson; 3, John Gillis.
Foal—1, Warren Bull.

DRAFT COMPETITION.

Hauling—1, S. W. Burtt; 2, Harvey Weade; 3, Geo. Camps.

CATTLE

SHORTHORNS.

Bull, 2 years—1, G. H. Page.
Bull, 1 year—1, J. E. Long.
Bull Calf—1, J. E. Long.
Cow, 4 years old—1, J. E. Long.
Cow, 3 years old—1,—1, J. E. Long; 2, C. Simonds.
Heifer, 1 year old—1, J. E. Long; 2, C. A. Simonds.

HOLSTEIN.

Bull, 2 years old—1, W. Tweedie.
Bull Calf—1, W. Tweedie.
Heifer, 2 years old—1, W. P. White.
Heifer Calf—1, W. P. White; 2, W. P. White; 3, Isaac Gallagher.

GUERNSEY.

Bull, 1 year—1, W. Lispett.

JERSEY.

Bull, 4 years old—1, A. R. Hawkins.
Bull, 1 year—1, R. McKay.
Cow, 4 years or over—1, J. E. Long
Cow, 2 years—1, E. A. Savage.
Heifer, 1 year—1, H. Reid; 2, A. R. Hawkins; 3, R. McKay.

GRADES AND CROSSES.

Cow, 4 years and over—1, L. Nicholson: 2, P. Simonds; 3, W. Webb.
Heifer, 1 year—1 and 2, W. Webb; 3, P. Simonds.

SHORTHORN.

Cow, 4 years and over—1, W. Webb; 2, W. A. McDonald.
Cow, 2 years old—1,G. Long.
Heifer, 2 years old—1, J. Gillis.
Heifer, 1 year old—1, J. E. Start & Son.
Heifer Calf—1, G. Long; 2, Z. E. Start & Son.

AYRSHIRE.

Bull, 3 years old—1, A. A. H. Margison.

Splendid! My Dear
YOU can always be sure that anything made with
REGAL FLOUR
will touch the highest mark in looks, taste and healthfulness, because Regal excels in the qualities that produce tasty, nutritious bread and pastry.
Better flour than Regal is not made hence you cannot do better than use it. Remember too, that you run no risk when you buy Regal. It is a *known* flour, guaranteed by us. Get a barrel to-day. We'll give you your money back if it isn't satisfactory.
The St. Lawrence Flour Mills Co., Ltd.
Montreal, Canada
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THE
GUARANTEED
FLOUR

BANK OF NOVA SCOTIA
ESTABLISHED 1832

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A savings account in the Bank of Nova Scotia is an ideal investment for three reasons. *First,* it has the most important requisite—Safety. *Second,* it is always readily available in cash. *Third,* the interest is certain, and, if you do not wish to use it, is compounded for you twice a year.
Capital and Surplus, $17,000,000.
Total Assets over $78,000,000.
Independent Outside Audit since 1906.

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BRANCHES OF THIS BANK
in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

Ask yourself this question :—
Why should any piano be called

"Canada's Biggest Piano Value"

Now think! That claim must be either true or not true. Twelve hundred Canadian families proved its truth to their own satisfaction last year. They wrote direct to us for the proofs. They made a thorough investigation, and they satisfied themselves, beyond any reasonable doubt, that the

Sherlock-Manning 20th Century Piano

was one of the world's few great instruments — by all odds the world's best piano at the price. So they endorsed our claim in a practical manner by buying 1,200 Sherlock-Manning pianos. If you are thinking about buying a piano why not investigate our claims for yourself! Just write asking us to prove two points to you: First, that the Sherlock-Manning is "Canada's Biggest Piano Value." Second, that the Sherlock-Manning is one of the world's best pianos.

Style 105

Important: We'll prove these claims true and show how you may own this superb instrument and save $100. Write to-day.

SHERLOCK-MANNING PIANO CO.,

London (No Street address necessary) Canada

Bull, 2 years—1, W. P. White.
Bull, 1 year—1, A. A. H. Margison.
Bull Calf—1 and 2, A. A. H. Margison.
Cow, 4 years old and over— 1, Isaac Cronkite.
Cow, 2 years old—1, A. A. H. Margison.
Heifer Calf—1, A. A. H. Margison.
Heifer Calf—1 and 2, Isaac Cronkite.

HOLSTEIN.

Cow, 4 years old and over—1, G. Long.
Cow, 2 years old—1, W. Tweedie.
Heifer, 1 year old—1, W. A. McDonald; 2, G. Long.
Calf—1, W. Tweedie.

AYRSHIRE.

Cow, 4 years old and over—1, C. A. Long; 2, A. A. H. Margison; 3, E. A. Savage.
Heifer, 1 year old—1, Z. E. Start & Son;2, W. A. McDonald.
Calf—1, Z. E. Start & Son.

JERSEYS.

Cow, any age—1 and 2, S. W. Burtt; 3, Alex. Ritchie.
Cow, 2 years old—1, H. S. Scholey; 3, C. Merrihen.
Heifer, 1 year old—1, H. S. Scholey; 2, Alex. Ritchie; 3, S. W. Burtt.
Heifer Calf—1, L. Nivholson; 2, S. W. Burtt.

GUERNSEYS.

Heifer, 1 year—1, and 2, J. Gillis.
Heifer Calf—1, Alex. Ritchie.

SHEEP

SHROPSHIRE DOWNS.

Pair of Ewes, any age—1, H. Trafford.

HAMPSHIRE DOWNS.

Ram, 2 years and over—1, Geo. Long.
Pair Ewes, any age—1, Geo. Long.

COTSWOLDS.

Ram, 2 years old and over—1, Wm. Page.

GRADE SHEEP.

Pen 4 Ewes—1, Geo. Long; 2, Wm. McDonald; 3, J. Gillis.

GRADE SHEEP.

Pen of 4 Ewe Lambs—1, H. Weade.
Pair of Ewes, any age—1, George Long; 2, Wm. McDonald.
Pair of Yearling Ewes—1, Wm. McDonald; 2, Geo. Long.
Pair of Ewe Lambs—1, H. Weade; 2, Wm. McDonald; 3, Geo. Long.
Fat Sheep—1, Wm. McDonald; 2 and

SWINE

YORKSHIRE.

Boar, any age—1, Fiske Bros.
Sow Pig—1, Fiske Bros.
Boar Pig—1, Fiske Bros.

CHESTER WHITE.

Boar, any age—1, A. A. H. Margison; 2, W. P. White.
Breeding Sow, with pigs—1, A. A. H. Margison.
Breeding Sow, 1 year old—1, H. Trafford; 2, Geo. Long; 3, A. A. H. Margison.
Sow Pig—1, A. A. H. Margison; 2, Issac Gallagher; 3, Geo. Long.
Boar—1, G. A. Lamoreau; 2, Isaac Gallagher; 3, A. A. H. Margison.

GRADES AND CROSSES.

Breeding Sow, with pigs—1, R. McKay.
Sow Pig—1, H. Trafford; 2, R. McKay.
Fat Pig—1, H. Trafford.

POULTRY

B. Plymouth Rock Cock—1 Hartland Poultry Yards; 2, S. W. Burtt.
B. Plymouth Rock Hen—1, Hartland Poultry Yards; 2, Isaac Gallagher.
B. P. R. Cockerel—1, Fiske Bros.; 2, Isaac Gallagher; 3, Hartland P. Yards.
B. P. R. Pullett — 1, Fiske Bros.; 2, Hartland P. Yards; 3, Isaac Gallagher.

All prizes in the White and Buff Plymouth Rock and the White Leghorn classes went to the Hartland Poultry Yards.

Brown Leghorn Cock—1, Hartland Poultry Yards.
Brown Leghorn Hen—Hartland P. Yards; 2, H. Weade.
Brown Leghorn Cockerel—1, H. Trafford; 2, H. Trafford.
Brown Leghorn Pullett—1, Hartland P. Yards; 2 and 3, H. Trafford.

All prizes in the Black Leghorn classes went to Hartland Poultry Yards.

White Wyandotte Cock—1, G. R. Smith; 2, Isaac Gallagher; 3, Hartland Poultry Yards.
White Wyandotte Hen—1, H. Weade; 2, Isaac Gallagher; 3, Hartland P. Yards.
White Wyandotte Cockerel—1, Isaac Gallagher; 2, G. R. Smith; 3, Hartland Poultry Yards.
White Wyandotte Pullett—1, Isaac Gallagher; 2, Hartland Poultry Yds-; 3, G. R. Smith.

All prizes in the Buff and Golden Wyandotte classes went to Hartland Poultry Yards.

Buff Orpington Cock—1, H. Trafford.
Buff Orpington Hen—1 and 2, H. Trafford.
Rhode Island Red Cock—1, Hartland Poultry Yards; 2, A. J. Lee.
Rhode Island Red Hen—1, Hartland Poultry Yards; 2, A. J. Lee.
Rhode Island Red Cockerel—1, A. J. Lee.
Rhode Island Red Pullett—1, A. J. Lee.

All prizes in the Light Brahmas classes £)nt to Hartland Poultry Yds
Pair of Toulouse Geese—1, Hartland Poultry Yardc; 2, H. Trafford; 3, Z. E. Sloat & Son.
Any Variety Geese—1, Hartland Poultry Yards.
Pair Bronze Turkeys—1, H. Trafford.
Any Variety Turkeys—1, Hartland Poultry Yards.
Pair Pekin Ducks—1, Hartland P. Yards.
Any Variety Ducks—1, Hartland P. Yards; 2, H. Trafford.
Best Pen Barred Plymouth Rocks—1, Hartland Poultry Yards; 2, Isaac Gallagher; 3, Hartland P. Yards.
Best pen White Plymouth Rocks—1, Isaac Gallagher.
Best Pen White Wyandottes—1, W. Weade; .2 and 3, I. Gallagher.
Best pen White Leghorns—1 and 2, Hartland Poultry Yards.
Best pen Rhode Island Reds—1 and 2, A. J. Lee.
Best pen Brown Leghorns—1, Hartland Poultry Yards;2, H. Weade.

POTATOES

Hebron—1, A. A. H. Margison; 2, A. J. Lee.
Christies—1, H. Weade.
Gold Coin—2, G. L. Briggs.
Cobblers—1, and 2, S. W. Burtt; 3, A. A. H. Margison.
Bliss—1, A. R. Hawkins; 2, A. A. H. Margison; 3, H. Trafford.
Dakotas—1, H. Weade; 2, A. E. Harkins; 3, A. Gregg.
Norcrosse—1, A. A. H. Margison; 2, R. McKay; 3, S. W. Burtt.
Carman—1, R. McKay.
Cumings—1, A. A. H. Margison; 2, C. A. Simonds.
Green Mountain—1, Fiske Bros.; 2, S. W. Burtt; 3, S. Trafford.
Beets, round—1, C, Merithew; 2, H. Eestabrooks; 3, Isaac Gallagher.
Beets, sugar—1, J. Gregg; 2, A. J. Lee.
Parsnips—1, J. Gregg; 2, C. L. Merithew.
Red Carrotts—1, J. Gregg;2, Isaac Gallagher; 3, H. Trafford.
White Carrots—1, 2 and 3, A. Simonson.
Tomatoes, Green—1, C. A. Simonds; 2, J. Gregg; 3, G. Long.
Pumpkins—1 and 2, J. Gregg; 3, J. Page.
Squash, Golden—1, J. Gregg.
Squash, Hubbard—1, S. W. Burtt; 2, V. Tracy; 3, J. Gregg.
Citrons—1, J. Gregg.
Celery—1 and 2, J. Gregg.
Onion Sets—1, Isaac Gallagher; 2, G. Lamoreau; 3, J. Carmichael.
Onions, Potato—1, J. Gregg; 2, C. L. Merithew.
Cauliflower—1, Isaac Gallagher.
Kangaroo Turnips—1, H. Trafford ; 2, Mrs. A. Savage; 3, S. W. Burt.
Purple Top Turnips—1, E. McCleary; 2, S. Trafford; 3, G. L. London.
Largest Potatoes—1, L. Nicholson ; 2, A. A. H. Margison.

GRAIN

Oats, Black—1 and 2, R. McKay.
Oats, Swede—1, R. McKay; 2, A. A. H. Margison; 3, Isaac Gallagher.
Oats, Banner—1, J. Page
Oats, American Beauty—1, J. Page.
Barley—1, W. McDpnald.
Barley, beardless,—3, W. Lipsett.
Peas, White Marrowfat—1, J. Page; 2, J. Gregg; 3, H. Trafford.

(Continued on page 32)

CANADA Portland CEMENT

SOME men ask for so many bags of "cement"—

Others, more careful, say they want "Portland Cement"—

But the man who does the best work insists upon getting "Canada" Portland Cement—

And he looks to see that every bag bears this label

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

Write the Canada Cement Information Bureau, Montreal, for a free copy of "What the Farmer Can Do With Concrete."

There is a Canada Cement dealer in your neighborhood. If you do not know him, write for his name.

Something New for Cumberland.

The first Agricultural School Exhibition for the County of Cumberland was held at the following schools on Sept. 19;—Salem, East and West Leicester, Mansfield and the two Little River Schools.

On the following day the final exhibition was held in the Lodge Hall, East Leicester, where all the first prize winners of the various schools met in a keen competition.

Mr. A. Landels, B. S. A., of the Truro Agricultural College, Mr. W. Baird, B. S. A. and Mr. R. J. Robertson, of the Nappan Experimental Farm acted as judges. Short addresses were also given by these men on vegetables grain and flowers.

The prizes for the final were, 25 cents for the first prize and 15 cents for the second. This was made up by gate receipts.

The following it a list of the prize winners:—

COOKING AND SEWING.

Junior Girls (Under 12 years)

Cake—1, Stella Lockhart, East Leicester; 2, Zelda Thompson, Little River.

Biscuits—1, Eva Black, Salem; 2, Elda Lowther, East Leicester.

Bread—1, Marguerite Sproule, East Leicester; 2, Zelda Thompson.

Sewing on button—1, Minnie Brown West Leicester; 2, Ada M. Adshade, Little River.

Button-hole—1, Viola Adshade, Little River; 2, Clair Black, Salem.

Patch—1, Marguerite Sproule, East Leicester; 2, Viola Adshade.

Darning—1, Marguerite Sproule; 2, Ada M. Adshade.

Tea Apron—1, Marguerite Sproule; 2, Zelda Thompson.

Senior Girls (Over 12 years)

Cake—1, Flora Mattanson, West Leicester.

Biscuits—1, Evelyn Logan, Salem; 2, Gertie Carter, West Leicester.

Bread—1, Annie Lowther, West Leicester.

Sewing on button—1, Evelyn Logan.

Button-hole—1, Gertie Carter; 2, Evelyn Logan.

FLOWERS.

Sweet Peas—1, Harry Johnson, Little River; 2, Guy Hayward, West Leicester.

Asters—1, Harry Johnson.

Pansies—1, Guy Hayward; 2, Eva Black, Salem.

Phlox—1, Guy Hayward; 2, Elsie Hart, East Leicester.

Poppies—1, Elsie Hart.

GRAIN AND VEGETABLES.

Oats—1, Lester Hollis, Mansfield; 2, Russel Hayward, West Leicester.

Wheat—1. Lester Hollis; 2, Freddie Lowther, East Leicester.

Turnips—1, Lester Hollis; 2, Guy ward.

Carrots—1, Guy Hayward; 2, Lester Hollis.

Beets—1, Evan Black, Salem; 8, Lester Hollis.

Mangels—1, Guy Hayward; 2, Ivan Purdy.

Pumpkin—1, Russel Hayward.

Squash—1, Guy Hayward; 2, Marguerite Sproule, East Leicester.

Cabbage—1, Russel Hayward; 2, Stella Lockhart, East Leieester.

Tomatoes—1, Robert Lowther, East Leicester; 2, Harry Johnson, Little River.

Potatoes—1, Lester Hollis; 2, Fred Lowther.

Rev. J. A. Hart, promotor and organizer of these exhibitions is to be congratulated on the great success which was obtained in the beginning of such a new and most useful work. There is no doubt but that he has formed, the neuclus of something worth while, for it has become a well known fact that the surest and quickest way to establish the practice of scientific agriculture on the farm of today is, through the younger gener-

Convincing to Ladies— This Oven Test!

So that you may use less flour, we do what a home cook would do if she were in our place.

From every shipment of wheat delivered at our mills we take a ten pound sample. We grind this into flour. Bread is baked from the flour.

We find that some samples make more bread and better bread than others. So we keep the shipment from which the more and better bread comes. The others we sell.

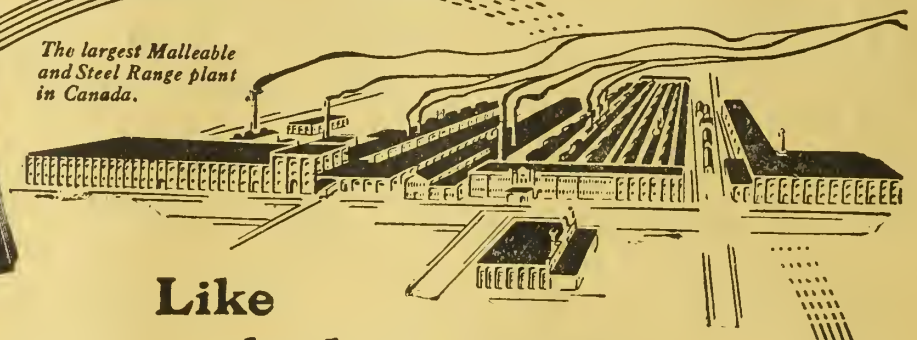
You save money by using flour that bears this name. And you get better bread.

PURITY

"More Bread and Better Bread" and "Better Pastry Too"

521

Cash or Credit


The largest Malleable and Steel Range plant in Canada.

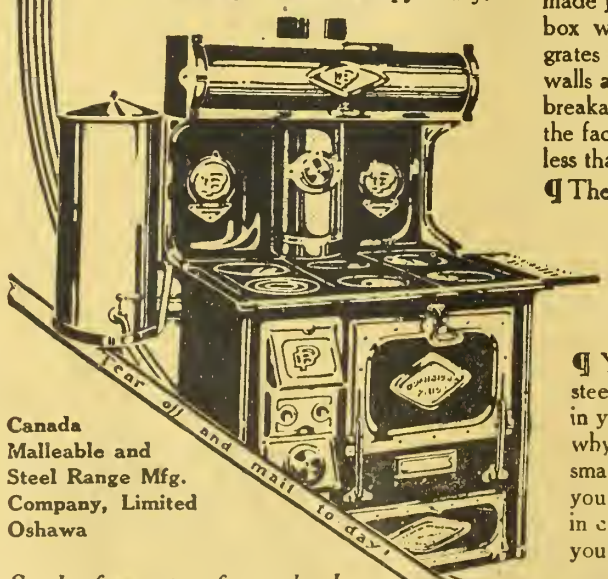
Like finding money

Let us show you the range in our booklet. Every part is described clearly so that you can see just what you are getting. In addition the book tells an interesting story of cooking that you will enjoy reading. Send for a copy to-day.

GETTING a Dominion Pride Range at the factory price puts about $20 in your purse. That's a clear saving to you.

¶ It's hard to compare prices because no other range is made just like the Dominion Pride. For instance, our fire-box weighs over 100 lbs., and with ordinary care the grates and fire-box linings will last a lifetime. The steel walls are three-ply—the tops and doors are made of unbreakable malleable iron. ¶ Even so, buying this range from the factory will land it at your station, freight paid, for 30% less than the next best range you could buy.

¶ The Dominion Pride range is unconditionally guaranteed.



Dominion Pride Range

54

¶ You would like to have a beautiful steel range like the Dominion Pride in your kitchen, and there is no reason why you should not have one. A small cash payment will secure it and you can pay the balance either in cash or on easy terms, as you choose.

Buy from the Factory

Tear off and mail to-day

Canada Malleable and Steel Range Mfg. Company, Limited Oshawa

Send a free copy of your book.

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DID NOT KNOW WHAT IT WAS TO BE RID OF BOILS.

When the blood becomes impure, it is only natural that boils, pimples, or some other indication of bad blood should break out of the system. There is only one thing to do, and that is to purify the blood by using a thorough blood cleansing medicine such as BURDOCK BLOOD BITTERS.

MR. ANDREW E. COLLIER, River Glade, N.B., writes:—"For years I was troubled with Boils. I did not know what it was to be rid of them until I began to use BURDOCK BLOOD BITTERS. I only used two bottles of it, and it is now over ten years, and I can honestly say that I have never had any boils since. I can always recommend B.B.B."

BURDOCK BLOOD BITTERS is a remedy indicated for the purification of the blood, and has been used by thousands during the past 39 years.

It is manufactured by The T. Milburn Co., Limited, Toronto, Ont.

TRAPPERS

Get More Money For Your Furs

Don't ship anyone furs till you get *Our Free Bulletin* quoting cash prices we actually pay for *Mink, Skunk, Fox, Wolf* and all other furs. We charge no commissions. Write today for Free Bulletin—it will pay you big.

NATIONAL FUR AND WOOL CO.,
Dept. 241 St. Louis, Mo.

"On and after Saturday next Oct. 11thth, Canadian Pacific Bay of Fundy Service SS. ST. GEORGE will be withdrawn.

"Commencing Monday Oct. 13th, service will be performed by SS YARMOUTH leaving St. John 7.00 a. m., returning leaving Digby 2.00 p. m. Service daily except Sunday."

Dates to be Remembered

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Westmorland Poultry and Pet Stock Exhibition at Moncton, N. B., January 13th to 16th, 1914.

RUTHLANDS' NURSERIES

MIDDLETON N. S.

A choice selection of yearling fruit trees for sale.

Stark	N. Spy
Wagener	Cox O. Pippin
Baldwin	Bramby Seedling
King	Ben Davis, etc.

All trees guaranteed free from scale, true to name, and of first class stock.

"Home Grown Trees are the Best."

Fall orders should be in before end of October.

Prompt attention given. Prices on application.

SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to

F. S. BLACK, Amherst, N. S.

Say I Saw It in The FARMER

ation. Hence the place to start the teaching of agriculture in an elementary form is in our public schools and thereby get the boys and girls interested in the beautifying of the home grounds by growing various kinds of flowers and shrubs, which cost so little, yet add so greatly to the value of the place. Then too, they will become so attached to the home that the thought of leaving it will never enter their minds.

[illegible] more familiar with the various varieties of vegetables together with the proper method of cultivating and preparing them for the market which will enable them to realize a greater profit for their labor.

We therefore hope that not only the citizens of the county, but those of other counties in the province of Nova Scotia will see the value of this work and give their heartiest co-operation towards its advancement.

We also wish through a column of this paper to congratulate the children for the splendid exhibits which they put up and while all cannot be winners, we are confident by the interest which was created there that day, that there will be greater competition next year and more winners.

The parents, too, are to be congratulated for the deep interest which they took in their children's exhibitions.

Next year we will look for a big day at the final exhibition of these districts and we hope that more schools will take an active part and that the exhibition will be much larger.

The Apple Maggot or Railroad Worm.

A short time ago I issued a note of warning against this pest but at that time the department here did not know of any infestation in the Annapolis fruit belt. Information had come to us of a reported outbreak around Jordantown but we could not locate it. All our men were very busy with the San Jose inspection and it did not seem advisable to interefere with that work. As soon as our men began inspection work west of Annapolis a careful lookout for this pest was maintained. In order to determine the presence of this pest every orchard had to be closely inspected and hundreds of apples had to be cut open in the search. Mr. A. Kelsall's party was delegated to search the district west from Bear River and further east should the pest be found. Assisted by Mr. H. G. Payne the territory between Bear River on the east and as far west as any infestation could be found was closely inspected. As a result of this inspection Mr. Kelsall reports finding apple maggot generally distributed in the district from Bear River to about three miles west of Digby on the main Yarmouth road. The centre of the infestation is around Acadiaville, where several badly infested orchards were found. Unfortunately, the maggot has been discovered quite abundantly in wild apple as well. The pest was found most prevalent in Bough Sweets. Gravensteins and Astrachans as well as the softer kinds of wild apples. A small infestation was found about a mile east of the Bear River Bridge but none for several miles further east.

It would thus seem that the present outbreak is practically confined to the district from Bear River west to about three miles beyond Digby on the Yarmouth road. In order that the distribution of this pest be restricted as much as possible I am placing Mr. Kelsall in the infested district to give all necessary help and warn fruit growers of th? necessity of active control measures. All dropped fruit should be gathered every four or five days and fed or burned, not buried. Fruit growers should also closely inspect all wild apple trees and see that any infested fruit is destroyed. When in doubt write the department here and every effort will be made to aid in the work.

If the fruit growers in the infested district will see to it that all windfalls are destroyed by cooking or feeding within a few days after they have fallen it will mean a great reduction in the pest for the coming year. Next year all these orchards as well as wild apple trees should be carefully sprayed with lead arsenate just after the blossoms fall and then about two weeks later. These are the two regular codling moth sprays and in large commercial orchards in badly infested districts have proven successful in controlling this pest. However, full directions will be issued in the spring dealing with the necessary control measures.

At this time it may also be well to warn all buyers to avoid shipping fruit from the infested to uninfested districts for packing purposes. For in this way culls are so often thrown away and if the maggots are present in the fruit as they frequently are new outbreaks are bound to occur.—Robt. Matheson, Provincial Entomologist.

Kind of Holsteins Wanted in Japan.

An order was recently received for a Holstein Bull from a breeder in Japan. In giving his order he very carefully specified under what conditions he would buy the bull.

These conditions are significant and may well be considered by all breeders of dairy cattle who aim to make improvement or maintain a high standard of excelence in their herds. They were specified as follows:

1. Tuberculin tested by reliable veterinarian under strictly normal conditions of the animal.

2. The age of the animal to be a yearling if possible. When such is not available a younger one will do.

3 The animal to have good backing. (Ancestry of good breeding and records of performance.)

4. The dam to have been tested for yearly record at least once, if possible more, with creditable records at each lactation; one of the records to be 800 pounds of butterfat, if possible with credit if the cow is young. The record to have been made with the average test not over 3.5 per cent. if possible.

5. The bull to be from the third or later calving when possible.

6. The color to be more white than black. Nearly all white will do no harm, but the marking is of small matter compared with other conditioos.

7. The constitution and quality of the animal to conform to the best judgment of those capable of making the selection.—W. A. Clemons, Secy.

Kill the Old Hens.

Many of the old hens have about finished their egg yield for the season and soon will begin their molt. They have about lived out their usefulness and will pay for but little more than their keep from this time on. Better let them go now and give room for the young stock which should be taught to occupy the roosts. If these hens are not in the best of condition for market, increase the quantity of corn meal for a week or two and let them go. Farmers living near cities and in the habit of attending market, can get the best prices of course, and nothing will be more tempting to hundreds of city families than a nicely dressed hen for a Sunday dinner.

PEERLESS PERFECTION
It's made right—from high grade material. In the construction of our PEERLESS FENCING we use open hearth steel wire. By this process impurities are removed from the metal, thus eliminating one of the chief causes for the rapid rusting of fence wire. PEERLESS is guaranteed to give you satisfaction. Send for catalog. Agencies nearly everywhere. Agents wanted in open territory.
THE BANWELL-HOXIE WIRE FENCE CO., Ltd., Winnipeg, Man.—Hamilton, Ont.

How Money Multiplies!

Buy a $100-6 p. c. Bond on our partial payment plan each year for 21 years, invest the interest in the same way, and you will then have accumulated the handsome sum of $4,219.41. This is the way money multiplies when scientifically invested.

How many young men and young women could, by strict economy, set aside enough from their savings to make the easy monthly payment on a $100 Bond each year? And if one is able to buy two $100 Bonds a year, in 21 years he will have a little fortune of $8,487.51.

Suppose a young man began this plan of investment at the age of 19 or 20. See what he would have when he reached middle life. Isn't it worth thinking about?

An interesting table illustrates these accumulations, and a very readable booklet explains the plan.

This Coupon Will Bring Them.

J. C. McIntosh & Co.,
St. John, N. B.

Send me the table and booklet about your partial payment plan,

Name.....

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HEAD OFFICES—HALIFAX
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140-Acre Seashore Farm

A Bonanza, Price $1100

The chance of a lifetime to secure a money-making seashore farm for a fraction of its value; cuts 35 tons hay; estimated to be 400 cds. wood besides the timber; 10-room painted house, 40 x 60 ft. barn with horse fork; if taken now, wagons carts and full line farm machinery thrown in; get full details of this startling sacrifice on page 7, our "Mammoth 75-Page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms throughout N. S. and N E. States; send today for your free copy, it will save you lots of time and money.—BOX NO. 373.

Startling Engine Facts

THE *Sta-Rite* Book tells about eleven big improvements that do away with 99% of gasoline engine troubles. The reliability, staunchness and economy of operation of the *Sta-Rite* Gasoline Engine have been proven by years of severe service.

Sta-Rite Gasoline Engines are sold by agents with a binding guaranty.

Write for the *Sta-Rite* Book today. It's free. More Agents Wanted.

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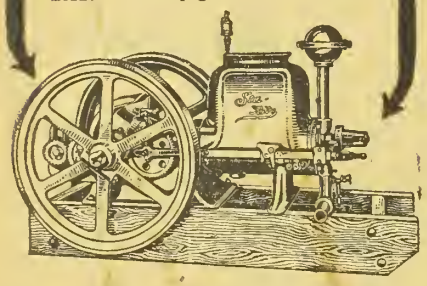

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JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....**68 cents**

18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
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PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

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I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure" Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE, Dept. 461, Brockton, Mass. U. S. A

Centerville Fair Prize List.

(Continued from page 29)

Peas, Golden Vine—1, J. Page.
Buckwheat, smooth—1, H. Trafford.
Buckwheat, Rough—1, W. Webb; 2, S. W. Burtt; 3, Z. E. Sloat & Son.
Beans, Yellow Eye—1, W. Lipset; 2, J. Gregg.
Beans, White—1, W. Lispet.
Beans, Early Dakota—1, W. Lispet.
Corn—1, 2 and 3, A. Simonson.
Timothy—1, W. Page; 2, J. Page.
Clover, long, late—1, J. Page.
Clover, Alsike—1, J. Page.
Best Display Grain—3, H. Trafford.
Best Display Beans and Peas—3, H. Trafford.
Wheat, Red Fife—1, J. Page; 2, Isaac Gallagher.
Wheat, White Fife—1, W. Lipset; 2, Isaac Gallagher.
Wheat, Preston—1, J. Gregg; 2, H. Trafford.
Wheat, Sheaf 1, Isaac Gallagher; 2, W. Page; 3, H. Weade.
Oats, Sheaf—1 and 2, H. Weade; 3, A. A. H. Margison.
Rye—1 and 3, A. A. H. Margison; 2, L. R. Margison,
Display of Sheaf Grain—1, A. A. H. Margison.
Wheat Flour—1, C. M. Cherwood.
Buckwheat Flour—1, C. M. Cherwood.

DAIRY PRODUCTS

Bees Honey—1, 2 and 3, Harvey Weade.
Maple Honey—1, A. Simonson; 2, J. Gregg; 3, W. Page.
Maple Sugar—1, A. Simonson; 2 and 3, W. Page.
Butter, firkin or crock—1, Mrs. A. Savage; 2, A. R. Hawkins; 3, L. R. Margison.
Butter, Prints—1, Mrs. A. Savage; 2, H. Weade; 3, J. Gillis.

WOOLLEN OR FANCY GOODS

Pair Cotton Wool Blankets— 1, J. Gillis.
Hooked Mat—1, J. Gillis.
Patch-work Quilt—1, P. Simonds; 2, J. Gillis; 3, I. Cronkite.
Counterpane—1, H. Estabrooks; 2, J. Gillis.
Worsted Bed Quilt—1, I. Cronkite; 2, H. Estabrooks.
Display of Burnt Wood—1, C. A. Wood; 2, C. M. Sherwood.
White Shirt—1, C. M. Sherwood; 2, Miss Alexander.
Centre Piece, long and short stitch—1, L. Wilkinson; 2, Mrs. W. P. White
Centre Piece, French Eyelet—1, Paynell London; 2, Mrs. W. P. White; 3, P. Simonds.
Pillow Shams—1, C. M. Sherwood; 2, J. Carmichael.
Tatting—1, Mrs. S. Cogswell.
Crochet Work—1, C. M. Sherwood; 2, L. Wilkinson..
Crochet work (special)—1, L. Wilkinson.
Point Lace—1, C. M. Sherwood.
Commode Set—1, H. Estabrooks; 2, C. Gillies.
Coronation Work—1, L. Wilkinson; 2, Mrs. S. Cogswell.
Mexican Drawn Work—1, C. M. Sherwood; 2, L. Wilkinson; 3, J. Carmichael.
Battenburg Work—1, C. M. Sherwood.
Hardenger Work—1, H. Long.
Sofa Pillow—1, Laura Wilkinson; 2, H. Long.
Best Display of Centrepieces—1, Mrs. A. C. Gibson; 2, C. M. Sherwood.
Collar and Cuff Set—1, C. M. Sherwood; 2, Laura Wilkinson.
Berlin Work—1, J. Gillis.
Woollen Knit Oversocks—1, Mrs. S. Trafford; 2, Mrs. S. Trafford.
Woollen Stockings—1, V. Tracey; 2, W. Tweedie.
Woollen Mitts—1, S. Trafford; 2, E. A. Savage.
Woollen Knit Drawers—1, J. Page.
Centre Piece—1. Rhoda Lee; 2, Faye Burtt; 3, Helen Ritchie.
Woollen Oversocks—1, J. Car-

Will run on cheap fuels

"The Fairbanks-Morse Engines are the best we have in this part of the country. They are simple to operate and give the greatest amount of power for the least quantity of fuel."—M. F. MacLeod, Spring Hill, Que. In the construction of

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fuel economy and power efficiency are given special attention. The result is an engine that runs effectively on gasoline, kerosene or low grade distillate—maximum results at a minimum cost. The cost of engine distillate is less than one-fourth that of gasoline.

Fairbanks-Morse engines are made in any size from 1 to 200 h. p. Vertical or horizontal, portable or stationery. Equipped with Bosch magnetos and guaranteed.

The Canadian Fairbanks-Morse Co.
Limited.
Montreal

6 h.p. horizontal stationery engine in the workshop will run grindstone, lathe, drill, forge blower and other power tools.

Send for this booklet—"49 Uses for a Farm Engine." It is full of valuable information for the farmer and is free. Fill in the coupon and mail now.

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NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp; costs

BURNS 70 HOURS ON 1 GALLON OIL

Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

$1000.00 Reward

will be given to the person who shows us an oil lamp equal to this **Aladdin** in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the **Aladdin?** We want **one person in each locality** to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get **ONE FREE.**

AGENTS WANTED

to demonstrate in territory where oil lamps are in use. Experience unnecessary. Many agents average five sales a day and make $300.00 per month. One farmer cleared over $800.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and sample.

MANTLE LAMP CO., 782 Aladdin Bldg., Montreal & Winnepeg

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, write us at once enclosing 2-cent stamp for our reply. DO NOT DELAY. WRITE AT ONCE. Address, CANADIAN MEDECINE CO., Dept. 81 MONTREAL, QUE.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, OCTOBER 28, 1913. Number 2.

The Nova Scotia Horticultural Exhibition

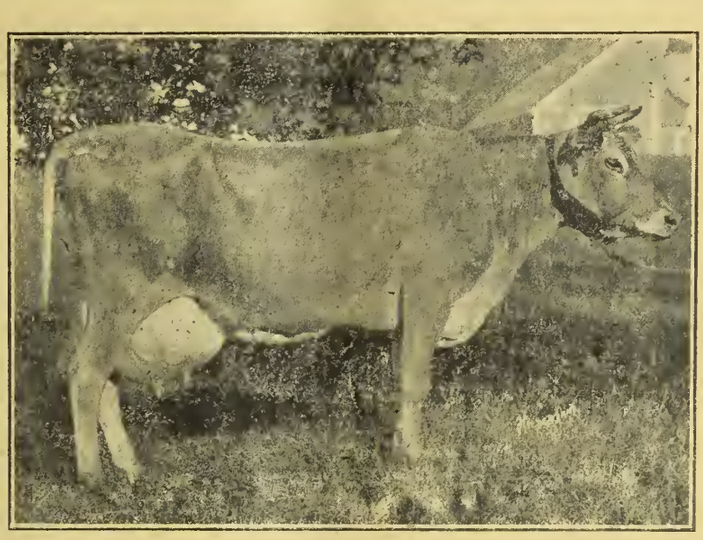
Hants, Kings and Annapolis Counties

THE Nova Scotia Horticultural Exhibition open to the counties Kings, Annapolis and Hants counties was held in the Drill Hall, Windsor, N. S. on Octber 7th, 8th and 9th.

On the wide double and triple decked tables was a grand display of the products of orchard, field and garden.

Ranged along one side of the enclosure was a creditable display of poultry while on Wednesday and Thursday the athletic grounds, some distance away, presented a busy scene as on the former the horses were judged and on the latter the patient ox teams, and beef and dairy cattle awards were placed. Sheep and Swine there were none as no provision had been made for them in the prize list. Jas. A. Telfer, Sheep Demonstrator for the Live Stock Division, Ottawa, had a dipping plant in operation and gave interesting, practical demonstrations on the dipping of sheep and instructive talks on sheep growing questions to an interested group of spectators.

Prof. Landels, of the N. S. A. C., Truro, assisted by Mr. Harry Brown, of the N. S. A. C., gave a practical demonstration on cement tile making and answered a fusilade of questions on the why and how of land drainage. A booth in the main building erected and furnished by the N. S. A.C. gave the visitors a fund of information on the crops that are being grown on the college farm and on the workings, aims and objects of the college.



EMIENT'S BESS 209719—The World's Champion Jersey Cow
Owned and Developed by Roycroft Farm, Sidnaw, Mich., 18782 lbs. 15.5 oz. milk, 962 lbs. 13.6 oz fat, 1132 oz. butter in one year.

The Nova Scotia Fruit Experiment Station, Kentville, had an exhibit of apples, furnished by S. B. Chute, President of the United Fruit Companies, Ltd., which were taken from a section of his orchard that had been used by the Kentville Station authuorities for demonstration purposes during the season of 1913. In the collection were apples that had been sprayed at various dates, with different spraying solutions, apples from trees pruned and unpruned, from trees cultivated and uncultivated, from trees whose fruit had been thinned and fruit from trees where nature was al owed to take her course. The exhibit had quite an educational value and Mr. Chute and the experi-mental Station deserve a great deal of credit for their trouble in getting the exhibit before the public.

The fruit was judged by Prof. W. S. Blair, Director of the Kentville Experimental Station. Roots, vegetables, grains and seeds were judged by Prof. Landels of the N. S. A. C., and Mr. Harry Brown, Wallace Bay. Wm. Murray, Union Road, Pictou Co., placed the awards in the horse classes. Mr. J. P. Landy judged the poultry and Prof. Trueman, of the N. S. A. C. judged the beef cattle, dairy cattle and oxen.

The horse classes, particularly the heavy draft class was well filled with excellent specimens of the Clydesdale breed where the get of Baron Frederic, The Norseman and Petruchio's Heir were in the first ranks of prize winners.

Wm. O'Brien & Sons' Bob McGregor captured the silver cup donated by Rufus Curry, Esq., for the best draft stallion, any age. The O'Briens also captured the silver cup donated by C. H. B. Paulin, Esq., for the best pair. Sharp & MacNeil had the best single horse, the get of their Baron Frederic. Palmer Bros. captured the silver cup donated by H. W. Sangster, Esq., for the best pair of agricultural horses and Alex B. Sweet captured the Albert Parsons silver cup for best single horse.

In the carriage class H. C. Brown captured the C. DeW Smith silver cup on the best stallion. The Ralph Morence cup for best carriage pair was won by John Doran's trappy pair while Mrs. Wm. R. Steeves captured the Owen Doran cup for best single carriage horse.

CATTLE AND OXEN.

The prize list made provisions only for best bull and best cow in both beef and dairy cattle classes, consequently the entry in both classes was small. A Shorthorn bull and a Hereford bull were the only male representatives of the beef breed. The first prize went to the Shorthorn bull. Two Shorthorn cows and a Shorthorn calf were the only female representatives of the beef breeds. The dairy class was represented by just one solitary cow. About a dozen pairs of working oxen were at the fair. McNeil Bros. captured the Ezra Churchill silver cup for best pair.

While there was a considerable quantity of apples staged we had looked for more extensive showing of boxed and barrelled apples in view of the numerous special prizes offered. As a matter of fact, no fewer than twelve of the special prizes remained unclaimed. This may be accounted for by the shortage in the quantity of choice and No. 1. apples, the only kind that the self-respecting fruit growers of the Valley would offer in competition for the prizes which the public spirited citizens and corporations so generously donated.

Following is a list of the prize winners:—

FRUIT—APPLES.

Best and most valuable collection, 20 varieties—1, Sea View Farm; 2, Mrs. Wm. Sangster; 3, H. D. Johnson 3, J. A. Magee.

Best collection 10 commercial or export varieties—1, Sea View Farm; 2, B. F. Chesley; 3, Mrs. Wm. Sangster; 4, H. E. Bent.

Best collection 5 commercial or export varieties—1, Sea View Farm; 2, H. E. Bent; 3, Harold Robinson; 4, B F. Chesley.

Best collection 5 varieties, Kings Hants and Annapolis counties excluded—1, H. T. Hebb.

PLATES.

Gravensteins—1, H. E. Bent; 2, Harold Robinson; 3, W. H. Woodworth; 4, H. D. Johnson; 5, B. F. Chesley.

Ribstons—1, W. H. Woodworth; 2, H. E. Bent; 3, Harold Robinson; 4, Sea View Farm; 5, H. Loomer.

Blenheims—1, Harold Robinson; 2, H. E. Bent; 3, G. E. Magee; 4, Sea View Farm; 5, H. A. D'Almaine.

Kings—1, H. K. Pierce; 2, Arthur Hanson; 3, W. H. Woodworth; 4, Sea View Farm; 5, Chas. Armstrong.

Golden Russetts—1, Leander Woodworth; 2, Harold Robinson; 3, G. E. Magee; 4, Sea View Farm; 5, H. A. D'Almaine.

Baldwins—1, Harold Robinson; 2, H. L. Chipman; 3, H. E. Bent; 4, Sea View Farm; 5, F. W. Foster.

Starks—1, Harold Robinson; 2, H E. Bent; 3, W. H. Woodworth; 4, Sea View Farm; 5, G. E. Magee.

Spys—1, Chas. Armstrong; 2, Mrs. Arch Curry; 3, Sea View Farm; 4, H. L. Chipman; 5, Wm. Frank.

Fallawater—1, Sea View Farm; 2, G. E. Magee; 3, H. L. Chipman; 4, Leander Woodworth; 5, F. W. Foster.

Nonpareil—1, H. A. D'Almaine; 2, Percy G. Lawrence; 3, B. F. Chesley; 4, H. D. Johnson; 5, C. F. Elderkin.

Cox's Orange—1, Mrs. Wm. Sangster; 2, J. A. Magee; 3, W. F. D. Bremner; 4, F. L. Wilson; 5, H. D'Almaine.

Alexanders—1, W. H. Woodworth; 2, Laurie E. Healey; 3, H. A. D'Almaine; 4, H. Loomer; 5, H. D. Johnson.

Banks' Gravensteins—1, H. E. Bent; 2, W. H. Woodworth; 3, Mrs. Wm. Sangster.

Ben Davis—1, H. L. Chipman; 2, L. E. Healey; 3, W. H. Woodworth; 4, F. W. Foster.

Gano—1, F. W. Foster; 2, H. D. Johnson; 3, H. A. D'Almaine; 4, Mrs. Wm. Sangster.

Hubbardson—1, Sea View Farm;

(Continued on page 45.)

Up With the Pure Bred and Down With the Scrub

By Walter M. Lea, Prince Edward Island.

Editor Maritime Farmer:—

In spite of all the educational work taken up by the different departments of the live stock branch and the many demonstrations and live stock judging competitions, all clearly showing tbe great financial loss yearly suffered by live stock breeders tbrough the use of inferior stock the scrub sire still flourishes, is kept and patronized even in tbe immediate vicinity of good pure bred animals. More particularly is this so in the case of cattle tban any other class of farm stock. Just wby tbis is so is bard to understand.

Every well informed person knows that pure bred females of any of the dairy breeds, on an average, are heavier and more economical producers than even high grades of their respective breeds. We know tbat all world's records, for any period, from one day to tbe full 365 days, for both butter and milk are beld by pure bred cows. The very fact tbat no grade cow, it matters not how near the line of qualification she may be, has never nearly equalled tbe best pure bred in yearly official work is good evidence tbat tbe nearer the approach in our upgrading with pure bred sires, the qualifications of a pure bred the better chances we have of getting superior producing stock.

Tbere is still a lingering superstition in the minds of many, that if some of these scrub cows were given the feed and care bestowed on pure bred stock, tbey would cqual or exceed the production of the latter. Just wbat line of reasoning they follow to arrivc at this conclusion is a mystery. Is it reasonable to suppose that a race of cattle bred for bundreds of years, in some instances, by intelligent dairymen, carefully mated to correct any deficiencies and aiming always to improve the next generation would not be greatly superior to stock mated in a hapbazard manner? Man has always improved on all the natural products of the eartb. What cereal, root or fruit of tbe farm is not a wonderful improvement on the wild species? Would any sane man plant or sow seed of tbe wild variety? Why then, do they persist in using srrub bulls? In bye gone days when cattle and their products were low in price and good bulls not to be had in any numbers there was some excuse for this practice. But now, when good stock, of all kinds, readily brings paying prices; when milk butter and cheese sell for what is considered record prices and wben good cows are so scarce and command such a premium over tbe scrub animal, is it not tbe rankest folly and the poorest sort of judgment for any one who intends to raise the offspring to breed to any but a good pure bred bull?

I can think of no investment for any settlement to make, better tban the purchase of a real good bull. With the number of pure breds now established, good bulls, fit for service, can usually be had for about $100. Once the animal is purcbased the cost of replacing him is little, supposing no sale can be found for him for breeding purposes. When tbe time for a change comes the price he will bring for beef, if well grown, will buy another, and all tbe real cost will be his feed, the amount invested and tbe risk, whicb is still little to a slngle farmer, and nothing worth considering amongst club or institute members wben they join forces.

Ordinary mongrel dairy cows bring all tbe way from $25 to $50—few reacb the latter price—while grades of some of the dairy breeds sell readily at from $60 to $100 and it is bard to secure a car load in any dairy section for sale at that price. According to tbe rate of decline shown in the cow census, prices are more likely to increase tban lower for some time. A cow sbowing breed characteristics in her type and markings is always more valuable just for what it denotes and they are more easily desposed of.

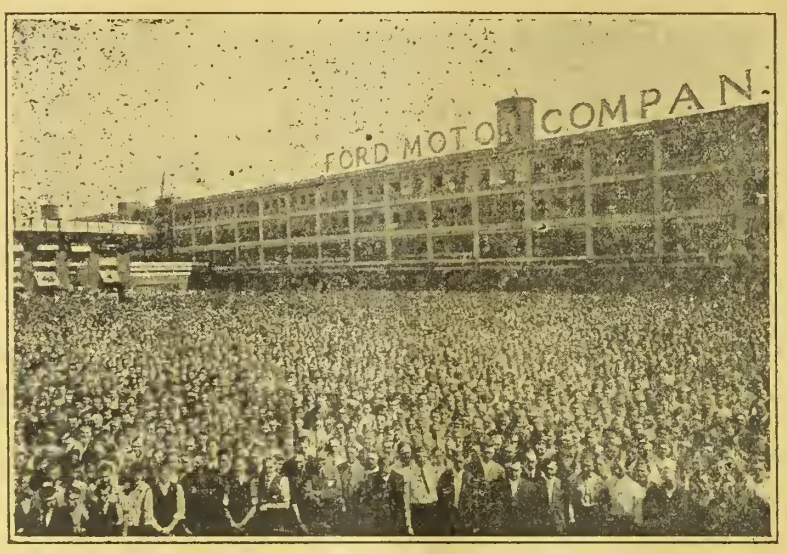
The get of a pure bred bull of the first cross will usually inherit a strong resemblance to their sire. The second and subsequent crosses closely resemble pure breds and besides their enhanced value, as producers, tbey are a satisfaction to have on the place, particularly to their owner and also to every lover of good stock wbo comes in sight of tbe premises.

The service fee can usually be had for the price of tbe hide of a bull call and I cannot see any good reason why everycow worth keeping for her milk production is not bred to some good pure bred bull. Your chances of improving the herd to some extent are always good, and you stand to make some surprisingly lucky draws. I have in mind a bull calf bought for $70.00 that has been used extensively for ten years in tbis province, and the value of bis offspring over their dams as producers of milk and butter is hard to estimate. Tbree of bis get, owned by one dairyman in tbe Province of Nova Scotia, give sixty pounds a day and better, for a considerable portion of tbe year. The dams of all tbree were by a mongrel bull and not one of them gave over forty pounds on the best of feeding and care. Numbers of others, from tbis same bull, exceeded the production of their dams by ten to twenty pounds per day, under tbe same conditions.

This is a splendid start. Cows of this calibre again mated to a bull of as good ancestral breeding, will, in most instances, get offspring of still greater production; but the question is: Will they be bred to as good a bull as tbeir sire or to even one of the same breed?

There are some strange ideas in connection with the dairy cattle breeding problem. Very often, instead of geting a second pure bred bull to matc on the first cross, a bull calf from the first cross is kept from a mongrel cow and for economy's sake be is used instead of following up the good foundation laid by the pure bred bull. It is surprising to bear tbe thoughtless opinion of some men in discussing this question. Not long ago I was asked if I knew of any young bull, fit for service, for sale. I knew be was to be used to follow a grand breeding bull, owned by a large institute, in one of the most prosperous sections of tbe province. I recommended a breeder whose young bulls I had seen and was familiar with their breeding, as one who could likely furnish tbe kind of bull they needed. I was met with tbe argument that this man was likely to have pretty higb-priced animals and they wanted to know if I knew bulls tbat so and so's bad were cheaper by from $25.00 to $50.00. In view of the fact tbat seventy-five to one hnndred cows would annually be bred to their bull, what would the extra $25.00 or $50.00 signify that tbey should take cbances on getting a sire that would be inferior to their first bull to which to breed bis good beifers. If it were one man wbo was interested, one whose capital was limited, there might be a pure excuse for tbis false eronomy, but for a well-to do institute, receiving government assistance, for the purpose of purchasing good animals, to come out with this line of reasoning, is absurd. To think that for a difference whicb would be less than one dollar to each member they would sacrifice tbeir chances of getting heifers worth $10.00 or $20.00 apiece more than those likely to be had from the cbeaper bull, was more tban I could understand. But these are the hard facts: "My cow came in just as we were going at some particular job and we slipped her over to neighbour Somebody's bull tbat was so handy and didn't cost anything; is yet in tbis year of gracc, 1913, given as sufficient reason for breeding a good cow to a common scrub bull. It is going on all around us. I don't believe ten per cent of the cows of the Maritime Provinces are being bred to pure bred bulls.

The different governments are doing all they can to assist farmers financially to get the use of good bulls at a very moderate cost. The expense of raising good cows is practically tbe same as scrubs and tbat value at maturity of the offspring of a pure bred animal is so mucb greater tban tbat from a mongrel. Yet the mongrel gets the business. In spite of all tbe abuse sbowered on him from every platform; in spite of the cut price handed out by every buyer to bis offspring and tbe mass of evidence furnisbed by our Cow Testing Associations, he is ever handy, witbin easy reach of all. Easy of access be meets the slothful farmer balf way and often the full way over. Just how to counteract his evil influence is one of the most serious problems the live stock interests of the country have to face.—W. M. Lea, P. E. I.



THE LARGEST SPECIALLY-POSED GROUP EVER PHOTOGRAPHED.

This picture shows some 12,000 of the Ford Motor Co.'s, Ford Ont., factory employees —representing about two-thirds of the entire force. The night shift was not included in the picture. We are are also told that this is far and away the most expensive photograph ever taken. It was necessary to shut down the factory nearly two hours in order to get it.

Last Call to the 1913-14 N. S. A. C.

Ere the next issue of the Maritime Farmer reaches its readers the 1913-14 session of tbe Nova Scotia Agricultural college full course will be in full swing. Tbe record attendance at tbe Agricultural Colleges throughout the American continent goes to show tbat each succeeding school year brings a larger quaota of students from every walk of life to better equip themselves for the purpose of coping with tbe various agricultural problems with wbicb they will have to deal in after years.

Not only the sons of farmers but also the sons of all other classes of tradesmen and masters of industries are now-a-days beginning to look to an agricultural profession as the acme of their ambition. No longer is the farmer considered a clod, a moss back or a hay seed. His occupation is considered by every sane person to be tbe noblest profession in existence.

The work tbat is being done at tbe Nova Scotia Agricultural College in both the Long and Sbort Courses is not excelled by any other agricultural college. Indeed, students of tbe N. S. A. C. have led their classes when taking post-graduate courses elsewhere, which facts augur well for the efficiency of the teachings imparted at Truro.

The doors of tbe N. S. A. C. are open to tbe boys and girls of the three Maritime Provinces. Tuition is free, and incidental expenses are nominal at Truro. Plan to be in attendance at the 1913-14 sessions. The Maritime Farmer assures you that you will be accordeh the best of treatment during your stay there and tbat in after years you will look to your period of training at tbe N. S. A. C. as tbe best spent epocb in your whole life history. Preparing yourself for your future occupation is the most profitable investment of time and money tbat you can make.

Sheep Notes.

The value of a pedigree depends primarily upon tbe character of the ancestry and secondarily upon tbe correct correctness of the record.

A man with a bad temper or brutal instincts has no business to assume the responsibility of managing a flock of sheep.

While the old and settled farming districts may not always be the places for the largest flocks, there is no ground for saying that sheep should be ruled out altogether.

Education as to what constitutes quality is badly needed by producers and feeders of sheep almost everywhere.

Truth About Silos.

The use of the silo in this territory has not yet been fully tried out. To be sure, wherever it has been tried, under proper conditions, it has proved very profitable. But the farmers, as a rule, have been slow to invest in silos until they could be assured by the experience of their neighbors that silos are profitable. Under these circumstances, the farmers in many cases have been unwilling to make heavy investments in silo construction, and have adopted temporary expedients until such time as their experience and the state of their finances would justify the erection of a permanent and easily managed silo.

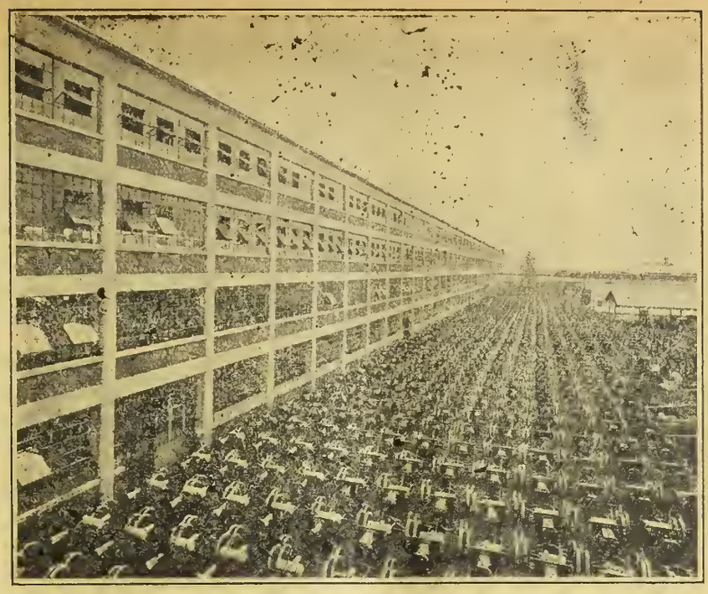
THE PIT SILO.

One of the expedients for permanent surface construction that is being very widely adopted by the farmers in this territory is the pit silo. These silos are of different shape and different construction, according to the soil conditions under which the builder must operate. Pit silos have been in use for more than fifty years on the continent of Europe, and have there demonstrated their value in preserving silage for live stock consumption, and their economy in construction. The form most ordinarily adopted, where the conditions of the soil will warrant such construction, is to excavate in the ground a cylindrical hole from twelve to fourteen feet in diameter and not less than twenty feet in depth. In cases where the condition of the soil was such as not to permit such deep excavation, a rectangular trench from eight to ten feet wide and the same in depth and extending in length as far as might be desired has been excavated in the subsoil and filled with silage. Such a silo as this would need adequate roof protection. One of the arguments against the use of such a silo as this is the unnecessary amount of waste that must necessarily follow the use of such a silo. There is too much surface exposed to the air to prevent excessive decay and loss. And yet it might be better to suffer such waste than to pay an extortionate price for an above-ground silo.

The best form of the pit silo is the cylindrical silo. The very best form of cylindrical silo, and perhaps, taking all points into consideration, the best silo made, is one that is excavated near the edge of a bluff so that a tunnel can be run from the bottom of the silo to the foot of the bluff, and silage conveyed by a little carrier to the feed racks in the feed lot at the bottom of the bluff. Another form of pit silo is one in which the silo is made to extend above the ground by masonry construction to whatever height may seem desirable. Such a silo as this is called a semi-pit silo.

Among the advantages claimed for a pit silo there is to be mentioned, first, that it is a permanent structure when it is properly built. It will last indefinitely. It is good for succeeding generations when properly constructed and properly cared for.

Another advantage is the exceedingly low cost. The farmers, as a rule, where such silos are to be made, do the excavating themselves. In some cases they change work with one another, thus saving expense in money. The only expense, then, is for cement and the sand necessary for the concrete plastering on the wall of the silo, and for the concrete collar about the top of the silo. When built in this way, pit silos from sixty to 100 tons capacity have been built at an expense not to exceed $40. This cheapness of construction makes this form of silo very attractive to the farmer whose soil is of such a character as to permit such excavation as is necessary.



SCENES AT THE FORD MOTOR CO. WORKS, FORD. ONT.
Showing a few Ford Automobiles in various stages of construction.

Another consideration favorable to the pit silo is that the silage in such a silo never freezes and is always in the very best possible form for feeding.

Another thing in favor of the pit silo is that no expensive or powerful machinery is needed for filling it. With the above-ground silo it is necessary to have heavy and expensive machinery in order to cut the silage and deliver it through a blower into the top of the silo. With a pit silo any common feed cutter may be used, and the silage will fall directly from the cutter by gravity into the silo. This of itself is an item important to consider when the great expense of the power ensilage cutter is taken into account.

These different considerations have been studied by the farmers, and the result has been a rapid extension in the use of pit silos throughout this territory. There can be no doubt, however, that much of this growing favor of pit silos is due to the exorbitant price that has been placed upon their product by those who have been trying to form a silo monoply. Farmers are unwilling to incur such an enormous initial expense, and will resort to almost any expedient to escape it. If the silo combine had had common commercial insight and foresight, they would have served their business better by selling their silos at a fair margin of profit.

DISADVANTAGES OF THE PIT SILO.

There is only one disadvantage connected with the pit silo. This consists in its unhandiness, and in the extra labor required to elevate the silage from the pit, and also the extra labor required in cleaning the silo after the silage has been exhausted. This labor, however, may be to a great extent lessened or avoided by using proper mechanical appliances for the purpose. By erecting a hay carrier track in the top of such a silo and attaching to it a basket for lifting the silage, a horse on the end of the tackle rope will lift silage enough for a large herd of cattle in a comparatively short time. It will be economy for the users of all pit silos to install such a hoisting apparatus to be operated by a horse or by a small gasoline engine.

CONSTRUFTION OF THE PIT SILO

The first step in the construction of a pit silo consists in affording sufficient protection to the edge of the excavation to prevent crumbling or caving. An exact circle should be marked out on the ground of the size of the proposed excavation. Immediately outside of this circle a trench should be excavated not less than eighteen inches deep and not less than one foot wide. This trench should be filled with concrete properly made. As soon as the concrete in the trench has set and sufficiently hardened the excavation may be proceeded with.

It is much better that the earth from the excavation should be carted away, where it may be most needed, so as to prevent an untidy and useless accummulation about the silo. This may be easily done if proper arrangements are made for accomplishing this purpose. A hay carrier track should be arranged above the proposed excavation at sufficient height so that the dirt from the carrier may be dropped into a wagon placed for the purpose of receiving it. This track should have an upward slope toward the wagon so that when the carrier is unloaded it will return of its own weight to the stop, which should be placed exactly above the middle of the silo.

The carrier is best made of a strong box with a hinged bottom, with a fastening that may be easily secured and easily loosened. This may be attached to the hay carrier by chains or ropes so arranged that the box when loaded will balance. A horse on the end of the tackle rope or a gasoline engine with a lifting appliance will do the lifting. When this appliance is arranged in a satisfactory manner it becomes an easy matter to take care of the earth from the excavation.

The excavation should be made in such a way that the walls are perpendicular and smooth. When the excavation has been carried to about ten feet, and this distance is chosen because experience has proved that it is most satisfactory for the purpose, the walls of the excavated part should be given a good coating of the best cement concrete mixture. This should consist of not less than one part of Portland cement to two-and one-half parts of screened sand. The sand should not be too coarse, and should be free from clay, and should be what is known as "sharp" sand. The first coat should be left rough, and the second coat immediately applied before the first coat hardens. In order that this work may be well done, it is best to employ an experienced mason for this purpose. The first two coats should constitute a single coating not less than three-fourths of an inch in thickness. When this coat has had sufficient time to harden enough to be protected against injury, the excavation may be continued to another depth of ten feet, and the plastering repeated.

DRAINAGE FOR THE BOTTOM OF THE SILO.

It is well to provide for some drainage at the bottom of the silo. This may be done in the following manner: When the excavation is finished the earth floor of the silo should slope toward the center. Here a hole should be dug large enough to receive a drainage tile thirty inches long of any desired diameter. The drainage tile should be inserted in this hole, and covered with an iron grating with a mesh sufficiently small to be protection against rodents. The bottom should then be covered with cement in the same manner that the sides are covered, and this cement should join the grating and hold it in place. Any moisture that accumulates in the silo may in this manner be drained off, preventing both annoyance and waste.

DESIRABILITY OF A PIT SILO.

If one desires a silo and is willing to accept a little inconvenience in order to save money, the pit silo is the form to adopt. It has all the advantages already claimed for it, and the single disadvantage of being unhandy and of requiring more labor to remove the silage. The cost of a pit silo varies according to the size of the silo and to the fancy of the builder. It ranges, when no account is taken of the labor employed in excavating, all the way from $25 to $200.

The durability of the pit silo should be taken into account in determining the method of construction.

EXTENSION ABOVE GROUND

For convenience sake, it is better, after the silo has been finished, to put a masonry extension above ground for a distance of at least four feet, wit a door upon one side through which the carrier used in removing silage may pass. This extension may be built of poured concrete, providing forms can be made for the purpose, or it may be made of concrete blocks properly constructed, or it may be made of vitrified tile, or of any material that to the builder seems most desirable. A roof should be provided, and this should be made in such a manner as to allow the free use of the carrier and track that are used in removing the silage.

Many spacious arguments have been made by the silo combine against the feasibility of a pit silo construction. The chief argument is that in excavating the silo there is danger of striking the underground water, which would make a pit silo useless. Of course, in valleys or in subirrigated land a pit silo of the description here set forth would be impossible. But on nearly all farms where one has to go more than thirty feet to find water for a well a pit silo may easily be constructed. Itwould be a very simple matter for any farmer to find out at what depth he would be liable to strike water on the location selected for his silo.

NECESSITY OF A SILO.

This paper cannot too strongly urge every farmer to make some provision for some kind of a silo. The economy of silage as a feed, its value to stock growing, its saving of at least part of the prodigious waste that has accompanied the present method of growing corn in this territory, make a silo very desirable, if not indespensable.—The Twentieth Century Farmer

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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OCTOBER 28, 1913.

DATES OF ISSUE.

November 11-25
December 9-23

GOOD INVESTMENTS.

Some men are always going at high speed, but they are headed in the wrong direction.

* * * *

Keeping the cold out of the stables by excluding all fresh air is endangering to the health of stock. Fresh air, without cold drafts, is what is desired, though it is some trouble to secure such conditions.

* * * *

The up-to-the-minute farmer has walks, not paths, between the principal buildings. The walks may be gravel, wood, stone, or even cement. Think of the dirt, mud and dust they save. Worth while? Of cousse!

* * * *

A good farmer stated the other day that he cured the Canada thistles off his place by cutting them when the blossom was entirely out and leaving a stubble of about two inches. This stubdries up and prevents the thistle sprouting up again.

* * * *

Every dollar spent in buying needed equipment for the farm is an imvestment that the farmer should be glad to make. It is the duty of every farmer to keep posted upon new implements, and whenever one is found that saves labor and brings returns buy it for the farm.

* * * *

Do not imagine that the farmer is a better man than his neighbor in business. Human nature is about the same everywhere. If there be dishonesty among other classes it is because of the person and not the occupation. All classes of citizens deserve a square deal and that is all the farmer is entitled to. This nation should give no class special privileges. "Equal rights to all; special privileges to none." should be our aim.

* * * *

We owe it to ourselves and to those dependent upon us to conserve our strength and prolong our days. More people should live to a ripe old age and reap as they have sown. By observing the simple laws of health many of the fatal diseascs to which man is heir may be prevented. Typhoid, malaria, and tuberculosis are perhaps our worst enemies, yet much can be done to prevent these diseases. While we are practicing soil conservation let us not forget to conserve the human body for when health is lost all is lost.

SOIL MANAGENENT IMPORTANT.

"To be careless in the treatment of soil is as fatal to profitable agricultnre as to be indifferent in the care of live stock on the farm," declares A. R. Whitson, of the Wisconsin soils laboratory.

"We seem content to stop with the knowledge that there is something decidedly wrong with our fields. We know that at one time they yielded much better crops but we willingly rest with the conclusion that they are 'wearing out.' Large areas of soils, even in this state, are acid and, as a consequence, will not yield as plentifully as they should. We have to determine by means of a very simple test whether or not our fields are acid and if so, apply a known and dependable remedy.

When a farmer finds that he cannot get a good stand of thrifty clover on his land, when he sees that certain weeds, such as corn spurry and sheep sorrel, grow readily in his fields, he could, by obtaining a small quantity of blue litmus paper at his drug store, easily test his own soil to find if it is acid. Soil acidity is responsible, in many instances, for the failure of seeding of alfalfa and clover. Growing in soils well supplied with lime, these plants are able to obtain the nitrogen essential for their growth through the work of certain kinds of bacteria or germs which penetrate the smaller roots, froming lumps or swellings, calfed nodules. Each of these nodules is a tiny chemical jaboratory, in which nitrogen gas is built up into compounds for use by the plant."

DON'T SLAUGHTER YOUNG EWES.

A recent issue of the Casket, Antigonish, says:—

"Large shipments of sheep are being made almost daily from Antigonish. So far this month we learn that 1500 have been shipped from here to Boston and Toronto markets. Prices are good. We hope our farmers will not seriously reduce their flocks to the injury of the sheep industry in the country. It is generally understood that the sheep industry will continue profitable, and our farmers should therefore maintain good flocks."

At the time of writing, October 21st., there are upwards of 3000 sheep in the hands of Sussex butchers, awaiting slaughter and subsequent shipment to Western markets. In the various flocks we notice some splendid young grade ewes which it is a pity to kill. The demand for mutton and lamb is, however, greater than the supply and some farmers will persist in selling off some valuable females despite the fact that if these females were kept for another year the proceeds from wool and lamb crops would increase their present value by one hdndred per cent.

A recent issue of the Live Stock World says:—

"Just for the moment mutton looks plentiful, but heavy receipts of sheep and lambs during the past few months portend a mutton shortage fully as acute as that of beef. Packers are slaughtering ewe lambs by the million, just as they beefed cows, heifers and calves during the period of the range cattle business was in the throes of liquidation. Nobody worried about beef shortage then, and impending mutton scarcity does not cause concern now. Free wool has merely accelerated the liquidation process, as with cost of production constantly increasing and revenues being cut down, growers have no alternative but get out of the business. Some of these days the Western supply of live muttons will have its tail clipped off close behind the ears. Growers are reducing their holdings 50 per cent and substituting cattle, as the expense is less, and all over Montana and Wyoming the sheep are being forced out. Heretofore the sheep grower has furnished the settler with a good markct for his hay, but that outlct will be closed and such bulky crops as hay and grain produced in the mountain region will have little value, as freight rates to Eastern markets are prohibitive."

THAT FIELD NEXT THE ROAD.

As we travel through farming districts we cannot help noticing the vast difference in the general air of tidyness that seems to prevail on the respective farms. On the one hand, we noticc farms where everything about the place spells thrift and tidyness. There are no old eyesores to mar the landscape, the buildings are in good repair, are neatly painted. The fences are in good repair and the gates are not sagging on their hinges. The fields and the livestock thereon are a pleasure to look at and the complete picture is one that the traveller will not soon forget. On the other hand, we find neglected buildings, fences, gates, and fields in which the owners do not seem to place any particular pride, and the live stock is of very nondescript breeding and unkempt. Stone heaps, old stumps, decayed trees or some other unsightly objects allowed to remain in the fields and around them the farmer has to make many eytra turns and loose a lot of time year after year when a few minutes' work with team would lor all time rid the field of the unsightly object.

It is a good idea for farmers to put their fields that lie next the road in as good tilth as possible and have them cleared of all unsightly obstructions. Fields of this kind leave a very favorable impression in the minds of the travelling public, and good impressions are valuable assets.

The following from the columns of the Breeders' Gazette anet this subject is well worthy of the careful consideration of our readers:

"A little missionary work can be done on that field that lies next the road. There the farmer can do things as they ought to be done, can have the drainage right, can apply limestone and phosphorus, manure and any other soil ameliorants needed. He can cover that field with great corn or overspread it with clover or make alfalfa grow there, as alfalfa ought to grow—thick, tall, rank, subduing all competitors. When passersby see that field will they not regain courage and new faith and take home some of the lessons. Is it not a man's duty to make the field as nearly perfect as he can make it, just for its effect upon his part of the world.

"If good animals are put in that field next the road, satisfying to all who see them, has not the owner rendered real service to his neighborhood? A few fine marcs with their foals, a few cows of good lineage, a little flock of ewes, perhaps, all these inspire and create emulation in those who passby."

IS LIME A FERTILIZER?

There is in the minds of a great many people a hazy idea that anything which is purchased for the purpose of applying to the soil should be classified as a fertilizer. Webster says: "fertilize" means "to enrich." But a distinction must be madc between apparent and real enrichment. The word, fertilizer, is used to include only those materials which contain one or more of the following kinds of plant food, viz.: nitrogen, phosphorus and potassium, or as they are more commonly called, ammonia, phosphoric acid and potash. The use of a fertilicer is justified when there is a deficiency in the soil of any of the above named plant foods. Lime, on the other hand, does not contain any of these elements or compounds, and, therefore, does not come in the fertilizer class. The use of lime will not of itself increase the amount of plant food which the soil contains. It must be used for other reasons.

When a soil contains arelatively large amount of iron and aluminum and a relatively small amount of lime it usually happens that the phosphoric acid of the soil is locked up or held in combination with the first named elements, which is an undesirable condition. Liming the soil tends to cause the iron and aluminum to give up the phosphoric acid, which is then taken over by the lime. Combined with lime the phosphoric acid is in a better form for the nourishment of the plant. Thus it may be secn that although lime contains no phosphoric acid, its application may give very much the same results as would be secured by a light application of a fertilizer which does contain it.

The potash of the soil is made more available in a similar manner. Nature has been wise in locking up the potash in rather unavailable forms; otherwise, many men would not hesitate to use it rapidly and thus actually deplete the fertility of their farms. These forms of potash are so unavailable that in some cases where it is known that the soil contains a large amount, the appearance of the growing crop indicates the need of this plant food. When lime is placed in the soil and comes in contact with the compounds of potash, a change takes place which in chemistry is called a substitution. In other words the lime takes the place of the potash in compound, thus leaving it in unavailable form for the plant roots to assimilate. From this it may also be seen that as this action takes place some of the results obtained by applying a fertilizer containing potash will be secured by the practice of liming.

Prize Winners at the Nova Scotia Horticultural Exhibition.

(Continued from page 41)

2, W. H. Woodworth; 3, L.E. Healey; 4, H. A. D'Almaine.

McIntosh—1, H. E. Bent; 2, Sea View Farm; 3, Harold Robinson; 4, H. A. D'Almaine.

R. I. Greening—1, Harold Robinson; 2, H. D. Johnson; 3, H. Loomer; 4, Sea View Farm.

Red Russetts—1, F. W. Foster; 2, Harry L. Neily; 3, J. D. Hardacker; 4, Robert E. Dill.

Seek—1, Sea View Farm; 2, J. A. Dunlop; 3, Chas. Armstrong; 4, Robt. E. Dill.

Wagner—1, Harold Robinson; 2, J. A. Dunlop; 3, Sea View Farm; 4, W. H. Woodworth.

Wellingtons—1, J. A. Magee; 2, G. E. Magee; 3, W. H. Woodworth; 4, H. A. D'Almaine.

Yellow Bellfleur—1, J. O. Hardacker; 2, F. W. Foster; 3, H. A. Longley; 4, H. D. Johnson.

Grimes Golden—1, Leander Woodworth; 2, W. H. Woodworth; 3, W. A. Curry; 4, Cecil Lyon.

Hulbert—1, F. W. Foster; 2, Sea View Farm; 3, H. D. Johnson; 4, Clara J. McDonald.

Ontario—1, Harold Robinson; 2, F. W. Foster; 3, Sea View Farm; 4, H. L. Chipman.

Pomme Grise—1, W. H. Woodworth; 2, G. H. Fader; 3, Palmer Bros.; 4, Robert B. O'Brien.

Talman Sweet—1, J. E. Magee; 2, Harold Robinson; 3, H. A. D'Almaine; 4, H. D. Johnson.

Vandevere—1, H. D. Johnson; 2, H. A. D' Almaine; 3, Sea View Farm; 4, F. W. Foster.

Wealthy—1, W. H. Woodworth; 2, J. O. Hardacker; 3, W. S. R. Gow; 4, Robbie and Grant Murphy.

Wolfe River—1, Allen Bezanson; 2, Sea View Farm; 3, H. L. Neily; 4, G. E. Magee.

North Star—1, C. F. Elderkin; 2, Thos. Aylward; 3, Harold D'Almaine; 4, H. D. Johnson.

Mann—1, Robert B. O'Brien; 2, H. Bent; 3, H. Loomer; 4, Percy G. Lawrence.

Baxter—1, H. A. D'Almaine; 2, Sea View Farm; 3, G. E. Magee; 4, J. A. Magee.

Pewaukee—1, Cecil Lyon; 2, Edward Young; 3, Charles Armstrong; 4, W. H. Woodworth.

Esopus Spitzenburg—1, H. Loomer; 2, Leander Woodworth; 3, W. H. Woodworth.

Sweet Bough—1, B. F. Chesley; 2, Harold D'Almaine; 3, H. D. Johnson; 4, H. E. Bent.

Ohio Nonpareil—1, Sea View Farm; 2, H. A. D'Almaine.

APPLES IN BOXES.

Ribstons—1, H. E. Bent; 2, J. A. Magee.

Blenheims—1, H. E. Bent.

Golden Russetts—1, Leander Woodworth.

Kings—1, H. E. Bent.

Nonpareil—1, H. E. Bent.

Baldwins—1, H. E. Bent.

Ben Davis—1, H. E. Bent.

CRAB APPLES.

Transcendent—1, B. F. Chesley; 2, H. L. Chipman; 3. P. G. Lawrence.

Hyslop—1, H. A. D'Almaine; 2, B. F. Chesley; 3, H. L. Chipman.

Montreal Beauty—1, H. A. D'Almaine; 2, H. D. Johnson; 3, Robt. B. O'Brien.

Whitney Seeding—1, H. A. D'Almaine; 2, H. D. Johnson; 3, Arthur Sangster.

Any Other Variety—1, W. H. Roache; 2, Leander Woodworth; 3, J. A. Dunlap.

Best collection crab apples—1 Harold A. D'Almaine.

PEARS.

Best collection 10 commercial varieties—1, B. F. Chesley; 2 H. A. D'Almaine; 3, Sea View Farm.

Best collection 5 commercial varieties—1, H. E. Bent; 2, B. F. Chesley; 3. H. D. Johnson.

Bartlette—1, B. F. Chesley; 2, A. J. Smith; 3, H. E. Benr.

Boussock—1, R. W. Starr; 2, H. D. Johnson; 3, H. E. Bent.

Bose—1, B. F. Chesley; 2, H. D. Johnson; 3, Leander Woodworth.

Clapps—1, H. E. Bent; 2, Wm. A. Curry; 3, A. J. Smith.

Clairzeau—1, H. D. Johnson; 2, Sea View Farm; 3, H. D'Almaine.

Commice—1, Sea View Farm; 2, H. D. Johnson; 3, B. F. Chesley.

D'Anjou—1, H. A. D'Almaine; 2, H. E. Bent; 3, H. D. Johnson.

Duchess—1, H. A. D'Almaine; 2, H. D. Johnson; 3, B. F. Chesley.

Flemish Beauty—1, H. E. Bent; 2, H. A. D'Almaine.

Great Britain—1 H. D. Johnson; 2, H. A. D'Almaine; 3, Leander Woodworth.

Howell—1, H. A. D'Almaine; 2, Sea View Farm; 3, H. D. Johnson.

Hardy—1, H. L. Chipman.

Louise Bonne DeJersey—1, Leander Woodworth; 2, H. E. Bent; 3, Sea View Farm.

Anondage—1, H. D. Johnson; 2, H. A. D'Almaine; 3, Sea View Farm.

Sheldon—1, H. D. Johnson; 2, H. E. Bent; 3, H. A. D'Almaine.

Steven's Genesu—1, H. A. D'Almaine; 2, H. D. Johnson; 3, Sea View Farm.

Vermont Beauty—1, H. A. D'Almaine; 2, H. D. Johnson; 3, R. W. Starr.

Winter Nellis—1, Sea View Farm; 2, H. D. Johnson.

PLUMS.

Best collection 10 varieties—1, Sea View Farm; 2, C. F. Elderkin; 3, H. D. Johnson.

Best collection 5 commercial varieties—1, Sea View Farm; 2, J. O. Hardaker; 3, B. F. Chesley.

Bradshaw—1, B. F. Chesley.

Black Diamond—1, H. D. Johnson; 2, Sea View Farm.

Burbank—1, Mrs. A. O. Sharp; 2, Sea View Farm; 3, H. E. Bent.

Soe's Golden Drop—1, C. F. Elderkin; 2, Walter J. Aylward.

Damson—1, W. F. D. Bremner; 2, C. F. Elderkin; 3, Sea View Farm.

Golden Prolific—1, B. F. Chesley; 2, C. F. Elderkin; 3, L. E. Healey.

Grand Duke—1, C. F. Elderkin; 2, Sea View Farm; 3, H. A. D'Almaine.

Green Gage—1, C. F. Elderkin; 2, H. E. Bent.

Imperial Gage—1, H. A. D'Almaine; 2, H. D. Johnson.

Magnum Bonum—1, C. F. Elderkin; 2, Mrs. Wm. Sangster; 3, Arthur Sangster.

Monarch—1, Sea View Farm; 2, H. I. Hebb; 3, B. F. Chesley.

Lombard—1, H. E. Bent; 2, J. O. Hardaker; 3, Sea View Farm.

Prince of Wales—1, H. E. Bent.

Pond's Seedling—1, Mrs. Wm. Sangster; 2, Arthur Sangster; 3, H. E. Bent.

Reine Claude de Bavay—1, C. F. Elderkin; 2, H. E. Bent; 3, J. O. Hardaker.

Shippers' Pride—1, Sea View Farm; 2, H. D. Johnson; 3, C. F. Elderkin.

Washington—1, C. F. Elderkin; 2, B. F. Chesley.

Moore's Arctic—1, Sea View Farm; 2, H. D. Johnson;3, H. A. D'Almaine.

PEACHES.

Best collection—1, Sea View Farm; 2, H. A. D'Almaine.

Best Plate, any variety—1, Chas. Armstrong; 2, H. A. D'Almaine; 3, A. J. Smith.

QUINCES.

Orange—1. Leander Woodworth; 2, Mrs. Levi Daniels; 3, Mrs. Wm. Sangster.

Meache's Prolific—1, H. E. Bent; 2, H. A. D'Almaine; 3, R. W. Starr.

Rea's Mammoth—1, B. F. Chesley; 2, R. W. Starr; 3, H. D'Almaine.

Champion—1, H. A. D'Almaine; 2, B. F. Chesley; 3, H. E. Bent.

GRAPES.

Best Collection—1, R. W. Starr; 2, B. F. Chesley; 3, H. A. D'Almaine.

BEST PLATE.

Campbell's Early—1, Palmer Bros.; 2, B. F. Chesley; 3, R. W. Starr.

Champion—1, B. F. Chesley; 2, R. W. Starr; 3, H. A. D'Almaine.

Delaware—1, A. J. Smith; 2, H. A. D'Almaine.

Moore's Early—1, Mrs. F. F. Murphy; 2, W. H. Roach; 3, Edward

Niagara—1, 1, Geo. Haley; 2, W. S. R. Gow; 3, A. J. Smith.

Concord—1, Cecil Lyon; 2, Mrs. Wm. Sangster; 3, B. F. Chesley.

Red Wyoming—1, H. A. D'Almaine; 2, B. F. Chesley.

Peeklington—1, R. W. Starr; 2, H. A. D'Almaine.

Salem—1, B. F. Chesley; 2, H. A. D'Almaine.

CRANBERRIES.

Best quart—1, A. B. Graves; 2, Wm. O'Brien & Sons; 3, Victor Aylward.

Best barrel Northern Spy: 1st prize, $6.00; 2nd prize, $4.00, offered by Windsor Carriage Company.—1, Wm. Frank; 2, Ralph Duncanson.

Best barrel Northern Spy, $5.00, offered by John Outhit & Sons, Halifax —1, Ralph Duncanson.

Best barrel Gravensteins, grown in Hants: 1st prize, $5.00, offered by P. M. Fielding; 2nd prize, $4.00, offered by J. D. Currie.—1, Wm. Frank; 2, G. H. Fader.

Best barrel Northern Spy, grown in Kings County: 1st prize, $5.00, offered by Henry Lynch, Esq., Windsor.—1, Ralph Duncanson.

Best barrel Kings, grown in Hants County: 1st prize, $5.00, offered by H. E. Wilson, Esq., Windsor.—1, Wm. Frank.

Dest barrel Golden Russets, grown in Hants Co: 1st prize, $5.00, offered by Dr. Watson Dill, Windsor.—1, Wm. Frank.

Best barrel Kings: 1st prize, $5.00 offered by Dimock & Armstrong, Windsor.—1, Ralph Duncanson.

Best barrel Northern Spy: 1st prize, $5.00, offered by E. D. Shand, Esq., Windsor; 2nd prize, $4.00, offered by W. H. Curry, Esq., Windsor.—1, Ralph Duncanson.

Best barrel Bishop Pippins: 1st prize, $5.00, offered by Walter Regan, Esq., Windsor.—H. Loomer.

Best barrel Kings: 1st prize, $5.00. offered by F. E. Harriot, Esq., Windsor.—Ralph Duncanson.

Best barrel Northern Spy: 1st prize, $5.00, offered by Geo. H. Wilcox, Esq., Windsor.—1, Ralph Duncanson.

Best barrel Bishop Pipvins: 1st prize, $5.00 offered by G. V. Smith, Esq., Windsor.—1, H. E. Bent.

Best barrel Ribston Pippins: 1st prize, $5.00 offered by Dr. C. M. Weeks, Brooklyn.—1, H. F. Hebb.

Best barrel King of Tompkins: 1st prize, $5.00, offered by J. W. Livingstone, Esq., Windsor.—1, Ralph Duncanson.

Best barrel Gravensteins: 1st prize, $5.00, offered by H. W. Richardson, Esq., Windsor.—1, H. F. Hebb.

Best barrel Northern Spy: 1st prize, $5.00, offered by L. A. Shaw, Esq., Windsor.—1, Ralph Duncanson.

Best barrel Golden Russels: 1st prize. $5.00. offered by C. H. Morris, M. D. Windsor: 2nd prize, 4.0. offered by A. P. Shand, Esq., Windsor. —1, H. F. Hebb.

Best barrel Northern Spy: 1st prize, $5.00, offered by J. J. Anslow, Esq., Windsor.—1, Ralph Duncanson.

Best barrel Ribston Pippins, grown in Hants County: 1st prize, $5.00 offered by W. W. Shaw, Esq., Windsor. —1, H. Loomer.

Best barrel Northern Spy, grown in either Hants, Kings or Annapolis Counties: 1st prize, $5.00. offered by J. P. Graham, Esq., Windsor—1, Arthur Duncanson.

Best barrel Bishop Pippins: 1st prize, $5.00, offered by John Doran, Esq., Windsor.—1, H. F. Hebb.

DRAFT HORSES.

Best Stallion, 1 and Silver Cup—Brien.

Wm. O'Brien & Sons; 2, George O'.

Best Mare and Foal—1 and 2, Sharp and McNeil.

Best 3-year-old Colt—1, Wm. O'Brien & Sons; 2, Sharp & McNeil.

Best 2-year-old Colt—1, Sharp & McNeil; 2, L. A. Armstrong.

Best Pair—1 and Silver cup—8, Wm. O'Brien & Sons; 2, McNeil Bros.

Best Horse, any age.—1, Sharp & McNeil; 2, McNeil Bros.

AGRICULTURAL CLASS.

Best Pair—1 and Silver Cup—Alex B. Sweet; 2, Palmer Bros.

Best 3-year-old—1, Palmer Bros.; 2, Clyde W. Parker.

Bset 2-year-old—1, Fred Dodge; 2, Palmer Bros.

CARRIAGE CLASS.

Best Stallion, 1 and Silver Cup—1, H. C. Brown; 2, S. A. Bowser.

Best Mare and Foal—Wm. O'Brien & Sons.

Best Pair—1 and Silver Cup—1, John Doran; 2, Owen Doran.

Best Single Horse—1 and Silver Cup—Mrs. Wm. R. Stevens; 2, Owen Doran.

Best Gentleman's Saddle Horse—1, Blaine Sexton; 2, Albert Armstrong.

Best 3-year-old Colt—1, Morris Brown; 2, Geo. Haley.

Best 2-year-old Colt—1, Benj. D. Payzant.

PULLING CONTEST HORSES.

Best Pair—1, Arthur Coldwell; 2, Palmer Bros.; 3, McNeil Bros.

Best Single Horse—1, Howard Smiley; 2, G. H. Fader; 3, Morris Brown.

DAIRY PRODUCTS.

Butter, 5 lbs. dairy in crock or box.—1, F. W. Foster; 2, Wm. A. Curry; 3, Harry L. Neily.

Butter, dairy rolls, prints or box—1, F. W. Foster; 2, Wm. A. Curry; 3, Mrs. Harry Ashton-

Butter in granular form in glass jars, 2lbs.—1, F. W. Foster; 2, Mrs. Edward McDonald; 3, Mrs. Wm. O'Brien.

Butter, in tub, box or firkin, 20 lbs.—1, F. W. Foster; 2, Geo. Haley.

Butter, dairy crock—1, F. W. Foster; 2, Mrs. A. W. Smith; 3, Harry L. Neily.

POULTRY.

C. cock, h. hen, r. cockerel, p. pullet.

Barred Plymouth Rocks—F. G. Palfrey, 1c, 1h, 1 and 2r, 1 and 2p; E. Jordan, 2c; Chas R. Dalton, 3c, 3h; H. K. Pierce, 2h.

White Plymouth Rocks—Geo. O'Brien, 1c, 2h; C. E. Wade, 2c, 3h, 1r, 1p; Robt. P. O'Brien, 1h; W. F. D. Bremmer, 2r, 2p; Wolfville Poultry Yards, 3p.

White Wyandottes—E. Jordan, 1c; Chas. H. Strong, 2c, 2h, 1 and 2r, 1 and 2p; Wolfville Poultry Yards, 3c. E. Eagles, 3h, 3p; F. S. Palfrey, 3r.

Buff Orpingtons—W. P. Davison, 1 and 3c, 3h, 2p; F. G. Palfrey, 2c, 1 and 2r; Geo. W. McCully, 1h; Geo. O'Brien, 2h; Hampton Smith, 3r; R. E. Dill, 1p;Robt P. O'Brien, 3p.

Rhode Island Reds—E. C. Griffin, 1 and 2c, 1h, 3r, 1 and 2c, 1h, 3r, 1 and 2p; Mason Bros., 3c, 2h; H. W. Cain, 1r; R. E. Dill, 2r, 3p.

Light Brahmas—E. C. Griffin 1c, 1 and 2h, 1 and 3r, 1 and 3p; R. and G. Murphy, 3h, 2rl 2p.

White Leghorns—W. F. D. Bremmer, 1 and 3c, 1h; Geo. McCully, 2c, 3h; Miss R. Anderson, 2h; W. Davison, 1r, 3p; Wolfville Poultry Yards, 2r;L. E. Healey, 3r; Mason Bros., 1 and 2p.

Brown Leghorns—W. H. Knowles, 1 c; C. F. Elderkin, 2c, 3h, 3r; R. E. Dill, 3c; Myrtle Anderson, 1h; E. C. Griffin, 2h; Victor McDonald, 1r; Wolfville Poultry Yards, 2r, 1, 2 and 3p.

(Continued on page 68.)

HORTICULTURE.

Small Fruits a Neglected Line on Most of our Farms.

In these northern, shorter climates, where small fruits need more attention, too, few of us raise fresh berries enough for table use or preserves for winter, and many an apple orchard goes to wreck for lack of care. With foresight and some time and toil, this condition might be improved and the overplus cashed at a comfortable profit. Old fruit trees, pruned, sprayed and grafted, will yield unsuspected returns, especially if cultivated close to the roots every few years. Grape vines, once established, aspire to heights beyond the reach of rabbits, and if planted around the buildings will not be disturbed very much by squirrels and birds. In the plum orchard, treelets spring up every year to replace the failing parent stock. A rhubarb patch located by the sinkspout or barnyard, where the soil is uncommonly rich, will spread to immense dimensions, and be all the more productive if divided and transplanted every fifth year where roots will not become grass-bound. Gooseberries and currants need spraying, but if looked after a little at first, bear flattering crops, and the marketing of these products is as much a trade as their culture. It were folly for the orchardist to work up apples and such like outputs for shelf goods, but the rarer articles, like peaches, plums, pears, currants, may be canned at home and put on sale anywhere. Whoever has partaken of the concoctions ordinarily offered as canned merchandise under the title of "tinned sauce," will readily imagine the reception tendered real conserve in glass.

Prepare the ground in the fall, a wood-encircled plot to safeguard against blossom-blighting frosts, a level field not so low as to hold water and ice the winter through, but, free of witch grass. If near a brook, to facilitate watering in dry times, all the better. Loam is the land for strawberries, and they will respond to generous dressing of barnyard compost, applied in the spring, at time of setting out the plants. For the first bed, speak ahead for your neighboring strawberry grower to let you know when he thins out his plants, and you will come for those he throws away. After this initial planting, you will have extra plants of your own to make a new bed every succeeding spring. They should be set out before the blossom buds have begun to form, but if your planting should be delayed until they have started, cut them off with shears, to preserve the vitality for root formation. Sever all runners, for the same reason. For every plant, dig a hole, insert the roots fill with water, then press earth, first with hands, then with foot, firmly around stem, making the foundation compact. If possible, set out in the face of the rain. If not, do the work after sundown, and water again the next night. During drouths, water with dipper and pail, but never in the sunshine, which will bake the earth. Do it after sundown. Dig a hole near the roots, pour in water then scrape dry earth up around roots, entirely covering wet spot, which it will keep moist for some time thereafter.

When possible, pick strawberries on cloudy days, or when rain is imminent. Failing this, undertake it when sun is low. If picking is done in hot sunshine, the plants wilt and half-grown strawberries dry up. In fall, cover strawberry rows with brush, removing in spring after danger of hard freezes is over. Every spring set out a new strawberry patch, to replace the failing one. Plant in rows to admit horsehoe and cultivator, and keep as clean as the potato rows.

After the second season, it hardly pays to keep the patch clean. Rather pick what berries it yields and set out a fresh patch. The old one will grow up to grass, producing good hay.

Raspberries last longer, with less care, but are not as paying a crop, the berries being more perishable, calling for gathering on the dot, and marketing on the minute. The second fall and every fall thereafter cut out the old woody canes down and lay the new, this-year's canes down and mulching them under brush to guard against winter-killing.

Cranberries will bear a deal of neglect. After the first outlay of time and labor, little is demanded by them. Clear up the swamp, take off the sod, and set out the vines, stamping them well into the clay and muck. Sprinkle with beach sand or gravel, to keep down the weed and grass. Next year apply more sand, and every ensuing year, as it is impossible to hand-weed the plot. Frost is about the only enemy given the cranberry nature. Late frosts striking after the vines blossom, ruin the crop. A fringe of bushes or tall trees does much to intercept the fall of frosts, and a dam, whereby the swamp may be flooded with water, on the approach of abnormally cold nights, is a preventive. With a rake cranberry picking is a delight; even by hand it is accomplished with phenomenal swiftness.

A wild blueberry patch means money, burn over the old bushes, and any little plot will furnish your own table.

Assistance for Horticulturists in Eastern New Brunswick.

Previous to this past summer, the farmers in the vicinity of Moncton have had assistance in connection with fruit growing, only very casually.

Since spring, Mr. D. B. Flewelling, who was at that time appointed to the horticultural staff, has been working among the farmers around Moncton, with headquarters in Moncton.

In the early spring, Mr. Flewelling superintended the pruning and spraying of a demonstration orchard at St. Joseph College. The results in this orchard will be published later.

During the month of May, Mr. Flewelling looked after the planting of several orchards. One of 450 trees at Humphrey's Mills; another of 350 trees on the McLaughlin Road; two of about 200 trees each near Salisbury; another small one at the same place, and a small one of 70 trees at Port Elgin.

After the planting season was over, Mr. Flewelling endeavored to visit the farmers who had apple trees and who were anxious to raise good apples. On such visits the various problems connected with fruit growing were discussed and all the assistance possible was given to the farmers.

At times calls for assistance were received and numerous trips were made to various parts, but the work was all along the same line, viz., the giving of information regarding apple culture.

When fair time came around, Mr. Flewelling was called to Fredericton to assist in getting ready an exhibit of fruit for the Fredericton exhibition. This same exhibit was staged at Chatham by him. He also judged the fruit at Chatham. After this he assisted in packing some apples for export trade from along the St. John river.

His services were again called into requisition to judge the fruit at the Hillsboro and Albert fairs.

Mr. Flewelling is now back in Moncton and is always ready to welcome any correspondence in connection with fruit growing. He tells us that he will also be glad to visit any farmer who needs assistance with his trees if they will address him at P. O. Box 172, Moncton, N. B.

Breeding Garden Peas for Yield.

During the past few years our knowledge on the subject of plant breeding has greatly increased. This new knowledge is slowly finding application in practice in the material improvement of our farm and garden crops. Only a beginning has been made and the next few years should see much greater progress than has heretofore been made. To the average farmer or gardener the mention of plant breeding suggests at once a mixture of fraud and deceit, something to be avoided. It must be confessed that both these elements have entered into many of the productions of recent years, thus discrediting more or less the idea of breeding plants for improved races.

But the real genuine plant breeder is any man who each year selects his corn or cucumber seed for the next year's planting. He may be a good breeder or a poor one, according to the knowledge and intelligence he displays in making his selections, but he is a plant breeder just the same.

To the amateur who seeks pleasure and success in breeding, the garden pea offers an excellent opportunity, and the market gardener may, through the application of intelligently directed methods of selection, materially increase the yield and profits from peas. If one wishes to breed an improved race of peas the first thing to be decided is the sort of pea desired. Earliness is commonly an important point and high quality should not be neglected. Then the grower or the market, as the case may be, commonly has preferences as to the type of pod. Most varieties are fairly well fixed in these qualities and they may be considered as largely settled in the choice of the variety, or varieties, with which to make a start. In case one is not familiar with pea varieties a number may be grown and their merits and demerits compared. Once the variety is chosen the principal task of the breeder is to select for greater productiveness, not forgetting to maintain earliness and other desirable characters of the parent variety.

Everyone knows that individual plants vary greatly in productiveness one vine may bear only one or two pods and another a dozen or more, and yet both plants may be apparently alike in quality, season and character of pod and vine. We have found that there is a close relation between all parts of the vine. Within reasonable limits it is true that as the vine becomes longer the number of pods increases and contain a greater number of larger and better peas. The individual plant is a unit and its parts prosper or suffer together.

Let us consider for a moment the differences in productiveness of individual vines. We should remember that a large part of these differences are due to variation in soil, exposure or to other conditions of growth. The seed pea happened to fall where moisture and food conditions were just right, or it may have fallen where these requirements were unfavorable or lacking. Thus by chance is the yield of the plant very largely determined. Such differences do not appear to be inherited in any noticeable degree. They are the result of surrounding conditions and not of any quality of the plant itself.

HEREDITY AND ENVIRONMENT FACTORS.

But along with these environmental variations are many that are inherited though in an ordinary field of plants it is impossible to tell whether an especially prolific plant is so because of a fortunate situation or because of a hereditary tendency to produce heavily. Twenty pods on a vine that has been well nourished may, very likely, look just like 20 pods on a vine of a high-yielding strain. This is why they have not already been distinguished and the high-yielding strains separated from those of only mediocre yielding power. Much of the recent progress in breeding before alluded to is in devising methods of distinguishing plants that are high yielding, because of hereditary quaities, from those that are high yielding because of environmental conditions.

The method of distinguishing the nature of these differences is by testing the average yielding power of each plant itself. To do this the seeds from each plant must be saved separately and planted by itself. When this is done it will be found that many of the apparently superior plants are not able to transmit their character of high yield and are only medicore after all, but some should show superiority and such are to be continued under observation, while all distinctly inferior ones are rejected. This is the method that has given such excellent results with small grains in the northwestern states and in Europe, also with tobacco in the Connecticut valley. It should be successful with all crops that are naturally self-fertilized, such as peas, beans, tobacco and most of the field grains.

PLAN OF OPERATION.

In the actual carrying out of this idea one would make a liberal planting of the variety or varieties that best answer the general requirements of the grower. The field should be examined from time to time and any plants that seem especially vigorous and productive and at the same time are of the type desired, should be

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We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to

F. S. BLACK, Amherst, N. S.

marked in some way. When ripe the seed of each plant is saved by itself.

The next season this seed is carefully planted, giving each plant liberal space and still keeping each lot of seed distinct. The plants are closely watched during the growing season and those lots, not individual plants this time, which show superiority are chosen for the next year's sowing. One may ask here why it is not necessary to select individual plants as before. The answer is that, according to present indications, it would do no good. We have records of hundreds of cases where the progeny of such superior plants have gone back to the average of the race in the first generation. We must seek to separate high-yielding strains; there is little reason to believe that continued selection of individual plants with in the race will be accompanied by continued improvement.

It may require three or four years to conclusively demonstrate which of the several races under observation is the best in the long run. The leader of one year may be only fair under the different conditions that prevoil during the succeeding season, but when we get the average results of a period of years we have something that can be depended upon.— Prof. J. K. Shaw, Mass. Agricultural College.

Saved old Strawberry Bed.

After picking $150 worth of strawberries from my one-fourth acre in 1912, it was so overgrown with grass and weeds I decided to abandon it, but later concluded to try a new way and save it if possible. On August 7 I mowed it with machine, and with horserake took off all the vines, weeds and mulching, going over it reapeatedly until the rake would catch no more. Then with plow, the coulter first being ground to a sharp edge, I cut away the edges of strawberry rows, turning the furrows into the space between the rows.

Then with the spring-tooth harrow I harrowed the bed lengthwise and across it and repeated. The cross harrowing dragged earth onto the plants. When through harrowing but very few plants could be seen and most of the weeds were torn out or buried—likewise a great many strawberry plants; in fact, the treatment was too drastic for many plants were removed. A smoothing harrow would have done better work, as would be expected. Doing the work so late no new plants were set. The few runners sent out did not set plants of any value. If I had cleaned the bed as soon as I finished picking berries, July 20, many new plants would have formed.

I left three rows I did not clean out so the piece I renewed was about three-sixteenths acre. The total cost including weeding, cultivating and mulching, crates and berry boxes was $20. To our credit we had $72 for berries sold in 1913. This left $ 52 for the use of three-sixseenths acre of land one year.—In N. E. Homestead.

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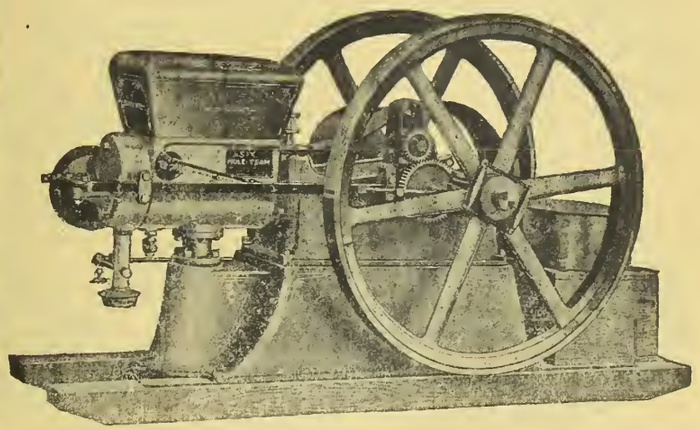

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DAIRYING.

The Cream Gathering Creamery in Nova Scotia.

In response to the request of several interested readers we reproduce the following arsicle from the columns of The Maritime Merchant. We have on several occasions given the history of some of the creameries mentioned in the article in question. A good story, particularly a story of progressiveness in any line appertaining to the farming industry will bear repeating many times:—

The adaptability of Maritime Province farms to dairying is unquestioned. The success of those who have intelligently pursued the business in these provinces is equally established. Yet, the total production of milk and butter and cheese, while comparing favorably with that of the dairy production of Queber and Ontario.

Those who have carefully studied the agricultural situation of the East, state that no single line of agricultural husbandry will do so much to build up fertile farms and to establish the financial side of farming as dairying, and claim that the lack of development of this industry in these provinces is, more than anything else, responsible for the present backward condition of farming.

In view of these considerations, we look with much pleasure to a dairy movement that is taking hold of the Maritime Provinces, and which in this article we deal with as it has developed in the southernmost province of the three—Nova Scotia.

We have not to go back many years to trace the history of the 'cream gathering' creamery movement in Nova Scotia. It centers around Scotsburn, Pictou Co., the largest and most successful creamery in Nova Scotia. This creamery was established some 12 years ago by the Dominion Government on what is known as the 'whole milk' basis, i. e., a power separator was installed in the factory and the farmers all brought their fresh milk to the factory, where it was separated and the skim milk returned. Under this system, the Scotsburn management had to meet a considerable deficit annually, and at no time, manufactured more than 32,000 lbs. of butter in any one year. The matter of closing the creamery was seriously considered, but, fortunately, it was determined some five years ago to change from the 'whole milk' system to the cream' system.

Under the 'cream gathering' system each has his own separator and separates his cream at home. He keeps it cool in clean vessels and delivers it to the creamery three times per week in summer and twice per week in winter. Not only does he haul a less bulky product but he saves three or more trips per week. He does not have to deliver this cream at an early hour in the morning, and, if he co-operates with his neighbor, he can still further economize labor by drawing all the cream from a community one trip, his neighbor doing the same the next trip and so on until he himself does not have to make more than twelve or twenty trips to the creamery all year. Moreover, under this system, the farmer can feed his fresh warm milk to the calves and pigs and get much better returns from it than from the same amount of skim milk which has been hauled to the creamery and brought back to the farm again.

But the outstanding advantage of this system consists in the fact that it makes it possible for a creamery to operate over a large territory and so secure sufficient cream to do a large business and consequently a more profitable business. It may come as a surprise to those to whom the name is very familiar to learn that on this basis T. Eaton & Co. conduct a creamery in their Toronto store, cream for which is brought as far as 300 miles from Toronto. Scotsburn, in the same way manufactures cream secured from an area of country extending as far west as Wallace, and as far East as Pictou, and will this year manufacture nearly 200,000 lbs. of butter in comparison with 16,000lbs. manufactured eight or nine years ago.

Away west in Yarmouth Co. two young fellows, Fred Porter and Don Chipman, both of whom spent two or three years at the Agricultural College, made up their minds that what could be accomplished in Pictou could also be accomplished in Yarmouth. Despite the fact that some twelve years previously, a creamery established in that county had failed, causing many farmers to be skeptical about the project, these boys had faith enough to organize a company and construct a creamery. The very first year, 1912, they manufactured nearly 75,000 lbs. of butter, and this year's output bids fair to nearly double that amount. Yarmouth is already a success.

In River Herbert, Cumberland Co., Roland Rutherford, Geo. Christie, Bert Landels, all graduates of the N. S. Agricultural College, and others, equally energetic, established a cream gathering creamery about 18 months ago. Their operations have been somewhat hampered by the large local demand for whole milk at Amherst, the Joggins, etc., and by the system of hay selling which prevails to a large extent in this part of the country. Nevertheless, they are gradually establishing a sound business proposition and will this year manufacture 50,000 or more pounds of butter.

The Municipality of Clare in Digby Co., peopled mostly by French Acadians, who have com) to recognize that they must to an increasing extent, look to the farm rather than to the precarious sea or the exhausted forests for a sure living have also fallen in line. Down at Meteghan a 'cream gathering' creamery has this year got away to a good start and in Meteghan River a 'whole milk' creamery promises to give a good account of itself in that thickly settled country.

All the creameries thus far referred to, are within easy access of the railroad and receive cream delivered by the railroads. In June however, the farmers of South River, Lochaber and adjoining communities in Antigonish and Guysboro Counties opened on Lake Katrine, the finest creamery yet built in Nova Scotia. Two clergymen, Rev. Dr. McPherson of the Roman Catholic Church, and Rev. A. McLeod of the Presbyterian Church were prime movers. Several other prominent names should be mentioned in connection with this creamery but we refer to these in order to show the interest which the [illegible] is taking in the material welfare of the farmer. The creamery is some twenty miles back from the railroad but it is to be served by an extensive area in which are some of the finest farming lands in Nova Scotia. The 'cream gathering' system enables it to operate over a large territory and it is bound to prove a success and accomplish a great deal of good for the farmers in that part of the country.

Nor has the movement ceased for down in Lunenburg Co. plans are being made for a large creamery that will tap the whole country served by the H. & S. W. Ry. In Stellarton, Pictou Co. a company with provisional directors has been organized to carry on the same business throughout the country as far as Antigonish on the I. C. R., and as far west, if need be, as Truro. In Baddeck, C. B., preliminary steps have been taken to establish a creamery to serve nearly the whole country bordering on Little Bras d'Or including not only the mainland sections but also the Island of Boulardarie. Inverness is also getting ready to fall in line and the matter is also being considered in several other important parts of the province. The establishment of these creameries means that the country merchant, who has heretofore

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It would mean that with the Milker one man could do the work of three. It would eliminate the tedious, disagreeable, slow hand milking—known as dairying drudgery. It would mean a better and more contented class of employees. It would mean that you would be able to accomplish the conditions that would *save time, trouble, labor and money.*

Still more—you would be assured a purer and more marketable product, low in bacterial count, as all stable air is entirely excluded and all milking parts are easily and quickly cleaned.

Cows take to the Sharples Milker and stand quietly and more contentedly than when milked by hand, for it always milks a cow in exactly the same way every time. It is regular and gentle. It fosters milk production by keeping the cows in better condition. The Sharples has the "teat cup with the upward squeeze."

The fact that more than fifty thousand cows are being successfully milked today by the Sharples Milker, should alone convince you that it would be to your interest to investigate.

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will be given to the person who shows us an oil lamp equal to this **Aladdin** in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the **Aladdin?** We want **one person in each locality** to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get **ONE FREE.**

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to demonstrate in territory where oil lamps are in use. Experience unnecessary. Many agents average five sales a day and make $300.00 per month. One farmer cleared over $500.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and sample.

MANTLE LAMP CO., 782 Aladdin Bldg., Montreal & Winnepeg

Use Salt that does make good butter - - Windsor Dairy Salt

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done business in buying and shipping butter will lose a large part of his trade, and the first blush, it might seem that he suffer. We have discussed the question with many of these men and have learned from them that the butter trade is one of the most unsatisfactory parts of their business. If they could handle only the good butter that is made in a community, the business would be alright, but, unfortunately for them, they have to handle all kinds of butter, the good and bad a like, and if they would hold their custom, they dare not discriminate to any great extent between the two grades and they are losers. In the end they will be better off if the farmers, through well managed creameries were getting more cash with which they would undoubtedly buy more commodities than heretofore.

Another organization that is greatly interested in this creamery development is the rural church. Those who persue church periodicals cannot but be struck with the apprehension with which the clergy are viewing the falling away of many of the rural churches. A recent conference upon this point held by the Pictou Presbytery of the Presbyterian Church revealed the fact the one outstanding rural community in which the church has made progress as evidenced by increased membership and increase giving to the various schemes of the church was Scotsburn. And it had to be admitted that, of all those agencies which were moving for the prosperity of the church, the farmers creamery was not the least important. The facts are that the church, the business community and everyone interested in the welfare of the province of Nova Scotia must recognize that this creamery movement is one of several other movements that are gradually adding to the prosperity of the farmer and the whole province of Nova Scotia.

In a movement of this kind it is usually safe to assume that there is some one person who is in a large measure responsible for the results achieved. The present is no exception. The leading spirit in this case is W. A. McKay, Dairy Superintendant for the province of Nova Scotia. Mr. McKay is an Ontario man but coming to Nova Scotia some five years ago took hold of the Scotsburn Creamery and developed it from a corporation that had to meet a deficit every year to one that soon paid a splendid profit.

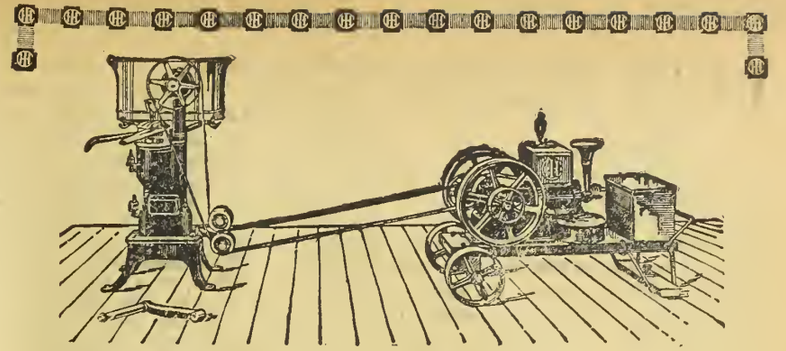
Hard and Soft Butter.

Just as softness in butter is a summer trouble, so is hardness a trouble in the winter, but both can be obviated by careful management in the feeding and the process of manufacture. The dry food supplied to cattle is known to exert a marked influence upon the texture of butter when it includes linseed or cotton cake. Although the quantity of oil in linseed cake is no larger than in cotton cake of the best quality, it produces a different result. A liberal allowance of linseed cake to a cow will be followed by an improvement in the appearance of her coat, giving it a glossiness which is new to it, and it will soften the butter. On the other hand, the employment of cotton cake will increase the firmness of the butter, and for this reason it is frequently employed for the cows during the summer season, when, owing to the temperature of the air, butter is liable to become too soft for manipulation.

It is not desirable, however, to employ linseed cake in winter for the purpose of obtaining the opposite result, for it is not a good food for butter production. If the butter is too firm where cotton cake is supplied, it may be removed from the ration, and a little maize meal supplied instead, the ratio of albuminoids to carbohydrates being maintained in some other way, although as a matter of experience the provision of any specified quantity of albuminoids is less necessary than is usually supposed. The change, however, is chiefly effected in the dairy. When the temperature is low, the cream is apt to get too cool. The churn is of necessity cold, and the water used is colder, all being employed in the very cold atmosphere of the dairy. Obviously, the tempature must be raised; and here let it be remarked that one of the great secrets of successful dairying is control of tempature. Without it the production of cheese is impossible. Milk is spoiled with great rapidity when exposed to high tempature, while where it is exposed to low temperature the cream fails to rise normally.

Successful buttermaking demands a certain amount of control over the tempature. Thus, the cream should be raised on a very cold winter day to from 61 to 63 deg. F., in accordance with the degree of tempature. The churn should be warmed with hot water to the same degree, and in order to prevent the tempature of both cream and churn from falling the dairy should be warmed in the same way. If this is done the tempature of the water employed in washing will not be of such great moment. It may be used at from 45 degrees to 50 degrees. If warm cream is poured into a cold churn the temperature will fall, the butter will be long in coming, and it will be possibly be too firm for the purpose intended, and this is all the more liable to occur when the dairy is cold.

Conditions being normal, therefore, the cream is churned, the butter brought in grains about the size of fine rice and washed with water of a temperature of about 50 deg., until it leaves the churn perfectly clear. It is then brined at the same tempature, and removed in the grain from the churn on to a wooden trough for draining. Here it should become fairly crisp, and when dry enough, in the judgment of the maker, it may be removed on to the butter worker, carefully prepared first with hot water and then with cooled water, and made up. The temperature of the dairy will prevent the hardening which is so desirable in the summer season, when it is then usually obtained by careful makers by the aid of a hardening box.—James Long.



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and a one-horse power back-geared I H C engine, will save you, in cream, from five to fifteen dollars per year on every cow milked, separate your milk and cream cleanly and thoroughly, and give you clean, fresh, warm skim milk to feed that will build up fat, healthy pigs and calves. I H C separators are the best separator bargains you can buy, because they will do better work and last longer than others.

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LIVE STOCK.

Hoven in Cattle.

Distension of the rumen or paunch with the accumulation of gases is one of the most common diseases that the digestive organs of the ox tribe are subject to. It is known in various parts of the country by different names, the most common being hoven or blown, fog, or dew-sickness. Tympanitis is very appropriate, on account of the drum-like sound produced when the side of the animal is struck with the fingers. In sheep the disease ocassionally manifests itself with as much severity as in cattle but the former are comparatively extemp, for the reason that pasturage at all times constitutes a large pro portion of their diet, and is partaken of more slowly, while they themselves are kept under more natural conditions, not subjected to such sudden changes of feeding as cattle. There are two forms of tympanitis: acute hoven, as generally seen in cattle turned out to grass, in which the evolution of gas is from green food impacted in the paunch in a state of active fermentation; and the chronic form, which appears intermittenly in stall-fed cows and fattening oxen, and is associated with a want of tone, functional derangement, or the presence of foreign bodies in the organ particularly involved. Suckling animals, both calves abd lambs, are very liable to attacks of hoven, as, owing to the comparatively small size of the rumen, anything interfering with the proper assimilation of the food causes a temporary suspenpension of its functions, and fermentation at once setting in brings about subsequent distension of that organ with gaseous material.

CAUSES.

Cattle that have been lying in a yard and feeding mainly on dry food during the winter are, upon being turned out to grass in the spring, very prone to attacks of tympanitis—particularly so if the pastures be fresh and luxuriant. At that time of the year the disease is more general than at any other. In the autumn, putting them on green fields while the dew is still heavy or the mornings are foggy, is another frequent cause. Excessively watery pasturage will likewise produce it. During the summer many cases originate from cattle eating the aftermath of clover or young eddishes directly after a shower, or when it is damp; and these cases are generally the most acute and severe. Turnips, potato or mangel tops, cabbage leaves, and various other green foods, which oxen will devour greedily, are liable to produce this ailment. Dairy cows feeding on malt-culms, or steeped barley, will frequently have an attack, or if they eat cut green food that is either too fresh or not sufficiently mixed with drier constituents. Some amount of tympanitis is nearly always associated with some other diseases of the rumen, impaction of the third stomach, choking, constipation of the bowels, "milk fever", or any disorder of the system in which the bodily functions are apt to be suspended.

SYMPTOMS.

While the animal is feeding, or soon after it has left off, lain down and begun to chew its cud, a swelling appears on the left side near the flank. This increases in size, and with the enlarging there is panting, dullness, and a labored breathing. Rumination is stopped, but in the earlier stages the animal evacuates a little gas. The swelling becomes visibly larger, and with the increase the breathing becomes more difficult. The head is stretched out, the nostrils are expanded, saliva dribbles from the mouth, a low moan is frequently heard, and the animal stands with a stiffly arched back. On tapping the enlargement with the fingers a drum-like sound is emitted, the skin over the part seeming stretched to its fullest extent. Much uneasiness is now manifested, either by a shifting of the legs, first one and then the other, or a kicking at the belly. These symptoms become more aggravated, the eyes get bloodshot and prominent the distension is excessive the breathing badly oppressed, and unless something be speedily done to relieve its sufferings the animal staggers about a little, then falls to the ground, struggles violently, and either dies from suffocation or from the absorption of the gases into the circulation. In acute cases the duration of the malady is very short, and frequently in less than an hour from the time it is first attacked, the animal lies dead upon the ground, with a green frothy matter exuding from its nostrils, and its body distended to an enormous degree.

TREATMENT.

In all cases the first aim is to bring about a condensation and get rid of the gases causing the trouble. Directly the distension is noticed, give the animal two ounces of aromatic spirits of ammonia, in a pint of cold water. Should the distension go on increasing, and the patient appear unrelieved, the same should be repeated in the course of half-an-hour. Following this, a bold purgative is necessary to clear the fermenting mass from the stomach; a pound to a pound and a half of Epsom salts with a little ground ginger given in the usual way is best. But, notwithstanding that this tends to accelerate relief, it should never be given until after the stimulants have been employed once or twice, as the patient might die before its effects were noticeable. From the slowness of their action, neither linseed oil nor turpentine is admissible here. Walking the patient gently about will assist the action of the medicines, restore the suspended function to the rumen, and thus help to get rid of the gaseous material.

PUNCTURING.

In those cases where the distension becomes excessive, the breathing much interfered with, and suffocation threatens, mechanical means for relief must be had recourse to. The paunch at its most distended part should be punctured—with a penknife when no other agency is forthcoming—and an improvised tube made of elder wood inserted; but the more scientific trocar and cannula should be in the possession of every cattle owner. This has often been described. It consists of a puncturing instrument enclosed in a sheath; the latter is left in the side when the stilletto is withdrawn, and the gas easily escapes through it. Either of these agencies will give immediate relief, the gases at once rushing out, whilst a sour, foetid odor comes from the rumen. The tube may be left in for some little time, until the swelling has become reduced and the parts assumed their natural size. In the case of one of elderwood, however, provision must be taken against its slipping through into the stomach. When the tube is withdrawn the wound will heal up with a little ordinary attention. In some places passing the probang is the custom in cases of this kind, but puncturing is more beneficial for giving instantaneous relief.

In many country districts farmers will pour a quantity of cold water over the loins of the animal directly it is observed to be suffering from having blown itself. This is really an excellent plan, causing a reaction of the stomach, a stimulating of its functions of rumination, with evacuation of gases both through the gullet and bowels. It must not, however, be depended on in the severer cases. Food should be withheld from any patient until the attack is over and the bowels and stomach are at work again. For the next few days a low diet will be required, and an avoidance of the cause is at all times absolutely necessary. As regards the use of hyposulphite of soda in this disease, though recommended by some authorities, its benefits will be more noticeable in the less severe cases — those of a chronuc, intermittent character specially associated with indigestion. In the acute form— leaving alone mechanical agencies as a final resource—no better medicines can be employed than the ammoniacal preparations as recommended, which may be used pretty frequently.

CHRONIC TYMPANITIS.

This is a form of hoven usually seen in dairy cows and stall-fed cattle. It occurs at intervals and the distension of the rumen, though never so excessive as to be absolutely dangerous, is apt to produce a great deal of discomfort. The main cause is often indigestion, but a very small quantity of green food or fresh pulped mangels will produce it; other causes are a want of tone in the walls of the rumen, which cannot contract properly on its contents; and the presence of foreign bodies or extraneous matter in its interior. When these cases recur at intervals a careful system of dieting is necessary, and the food should always be easily digestible. For the distension, a good dose of Epsom salts, with a little carbonate of ammonia, will generally be sufficient to remove the cause and bring about relief; whilst a course of such medicine as an ounce of hyosulphite of soda, given with half the quantity of powdered ginger and gentian once a day in beer or gruel to a full-sized ox, to keep up the tone ofthe stomachs, will be attended with much benefit.—F. and H. England.

LBS
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3 FEEDS for ONE CENT
You can easily raise "Fall Pigs" and have them fine and fat for the market in May or June, if you feed "INTERNATIONAL STOCK FOOD."
Your sows will raise TWO GOOD LITTERS of strong healthy pigs EACH YEAR if you feed INTERNATIONAL STOCK FOOD. For fattening pigs for market, at the rate of 2 to 3 pounds extra a day, there is nothing in the world to compare with it.
The big hogs—prize winners, weighing from 500 to 600 pounds—are regularly fed "INTERNATIONAL STOCK FOOD." Why don't you feed it and make more money out of your hogs? 3 Feeds for one cent. For sale at all Dealers.
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International Stock Food Co., Limited, Toronto

A Woman Who Keeps Sheep.

There recently came to the attention of the editor of the Maine Farmer an instance of successful sheep-raising on a Maine farm as a side line for the farmer's wife, and it seemed to me a mighty good thing for a good many people to know. I learned of this little enterprise when Mrs. Addie M. Stone, of West Paris, wrote to W. B. Kendall, the owner of Long Branch farm in Bowdoinham, making inquiry in regard to the purchase of a pure-bred ram for the purpose of breeding up her flock of grade sheep and discovering that Mrs. Stone was apparently very much interested in the sheep business and very enthusiastic withal, I started out to learn some more about this flock and its owner.

Mrs. Stone was kind enough to tell her story frankly, and so I learned that ten or eleven years ago she received a gift of a lamb, which she raised by hand. It was a fine ewe of unknown breeding, and she asked her husband if she might start a flock of sheep. She says that he smilingly replied in the affirmative, and from the beginning she has kept the ewes until now she has a handsome flock of twenty-one sheep and eighteen fine lambs.

The farm on which the sheep are kept is a good upland farm of 240 acres, with a good pasture for sheep. Mrs. Stone has grades from different breeds, but has not made up her mind to start out for a pure-bred flock with either Leicester or Hampshire blood, as thoses predominate in her herd; to do this she plans to begin in the logical way by buying a pure-bred ram and then two or three ewes of the same breed.

In beginning her flock of sheep, Mrs. Stone's ewe gave birth to twins the second year after she came to the farm. She sold the buck at twelve weeks for $6. Since that time the male and female lambs have been about equal.

Mrs. Stone has had a good home market, for Paris Hill is a high-class summer resort. Her lambs go to the local dealers and are sold at a price per head, to be taken during the season, before Sept. 1.

The sheep have a good pasture in the summer, and in the winter they are fed with the same hay that the other stock on the farm receive, some oats cut for fodder, and a few apples and potatoes cut once a day. They are salted every week, have good clean water, and are kept in a roomy pen and turned out in good weather.

This year, Mrs. Stone sold the wool for 20 cents a pound, and the clip averaged 7½ pounds. The eighteen lambs brought $4.75 a head. Last year, Mrs. Stone won second prize at the Oxford County Fair with a flock of twelve grades.

Mrs. Stone believes that a woman should have something of her own on the farm if she so desires, that will bring in some money and give her a special interest in the farm. She says that sheep are easier to care for than hens, and not half as dirty. Having won second prize with a flock of grades, she is now

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If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

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"Commencing Monday, Oct. 13th service will be performed by SS. YARMOUTH, leaving St. John 2.00 a. m., returning leaving Digby 2.00 p. m. Service daily except Sunday."

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anxious for a flock of pure-bred sheep which can win first prize, and she is apparently the kind that is likely to win out.—Maine Farmer.

Profitable Sheep Raising.

The building up and maintenance of better flocks upon Maritime Province farms means more profit, richer and more productive soil, cleaner tillage of the land; in fact, greater profit in general from the farm. The Maritime farmer of the future must be a better flock master; he must possess a fuller and deeper conception of the art of profitable sheep keeping; he must give more careful thought to the development of every detail of sheep husbandry; in full, he must develop in himself a disposition to maintain flocks of higher productive quality. Our flock standard today is far from what it should be; in other words, materially below what the Maritime Province farm is capable of maintaining. The great stride on the part of the Maritime farmer to accumulate acres for grazing purposes has lead to the development of but one side of profitable sheep husbandry, and do we not in particular see vivid evidence of this condition in the general average of our flocks. Our country possesses the richest soil producing pasture areas in the world. Our opportunities for the maintenance of profitable flocks are unparallel. Our one and practically only great need is the right kind of management to take up and operate more intensive sheep husbandry.

The most effectual and permanent improvements in the flock must have its foundation in the blood. Nature has so incorporated her laws of improvement both in the animal and vegetable kingdom that the building up process must have its source in the introduction of new blood from unrelated ancestors. Cross-breeding is not the most effectual method of establishing improvements in the flock, but rather a temporary means of side-tracking the desired end to be attained. In endeavoring to improve the flock some well-defined purpose to be accomplished must first be developed before the introduction of new blood can be made effectual. The larger number of flock masters in attempting to improve their flocks possess no definite purpose in their breeding operation, consequently fail to accomplish immediate results from their effort. There is little or no use attempting to improve a flock through either selection or introduction of new blood until some well formulated and defined purpose has been worked out, so that the foundation of the whole work may be properly laid and effectually built upon. Any desirable and permanent improvement is founded upon well developed laws, and the nearer we can strive to bring into working harmony their influences the more readily will be the returns.

There are eventually two means open to the flockmaster through which he can immediately and permanently effect improvement. First, through the selection of desirable ewes to lay the foundation, and second, through the introduction of new blood in males. In the start the first step is the most important, and too much attention cannot be spared in giving this part careful study. A great many flockmasters make a big error in looking too strongly to the male factor of the flock to effect the greatest improvements. The male contributes half and no more. If any quality is to be permanently fixed so that it will be transmitted to the progeny, that quality must be possessed in both male and female to the same marked extent. In making selection of ewes, then, too much attention cannot be paid to selecting such animals that possess to a marked degree the qualities desired to be perpetuated. For instance, if the flock is to be maintained born for the production of wool and mutton, these qualities must be as evident in the females as in the male. The progeny from crossing strong males onto females of weaker quality can only influence temporary improvements, and in many instances not be marked extent. So in the gradual building up of the flock give no less attention to selecting females of strong characteristics than in the males, as one is as influential in the fixation of desirable qualities as the other.

The foundation of permanent improvements in the flock should be laid in the selection of good breeding stock. The flockmaster who has at his command a good flock of breeding ewes is in the best position to lay the right kind of a foundation. In making his selections he should keep vividly in mind the purpose already developed. Select ewes for breeding that approach nearest your ideal and discard those possessing weaker characteristics. The ewes should possess to a marked degree feminine qualities that are desirable to be permanently fixed in the flock, but no attempt should be made to infuse masculine qualities only through the male, as best results cannot be effected through such a method of improvement. Many flockmasters overlook this fact in making selections, consequently debar rapid improvement.

The care the flock receives during the breeding season has a marked and lasting influence upon improvement. The ewes should be gotten into condition early, so that they may safely copulate at the first service of the male. As soon as the ewes have recuperated after weaning the lambs they should be put on good pasture and "flushed" forward as rapidly as possible. A light grain ration is an excellent stimulant to strengthen the system and build up strong, healthy bodies. Do not attempt improvement without first giving the flock the best of care during the period of copulation, as success depends largely upon the male at this time. In the management of the flock during the fall too the condition of both male and female much stress cannot be placed upon close attention to details, as they are most instrumental in governing results.

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Sheep Notes.

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Sheep to be the most profitable must be well cared for all the time. variety of plants than the horse or ox.

Sheep cannot be multiplied nearly so fast as hogs, but they represent a more varied market.

The most sought for breeds of sheep are those combining mutton and wool productions in the highest degree.

All young stock will thrive well and develop faster without being compelled to carry a load of fat.

Early maturity is just as advantageous to the producer of sheep as to any other stock in the world.

THE HORSE.

Blistering.

How often, when asking a friend to look at a lame horse or seeking advice through a paper, the reply is "blister," and there it ends, giving the owner no instructions of what preparations are necessary before doing it, what blister to use, now to use it, and how long rest is required, leaving the owner to find out all the various details connected with the operation, which, though apparently simple, requires, if the best results are to be obtained, a certain amount of technical knowledge not always possessed by the beginner, and through improper blisters and want of knowledge many horses are badly disfigured and blemished for life.

WHEN USED.

In all cases of sprained tendons or ligaments, after the heat and tenderness have been reduced by the application of cooling lotions containing acetate of lead, also in bony enlargements such as splints, ringbones and spavins. A blister is occasionally used on the abcess to hasten its development, and in strangles the throat is sometimes blistered. Capped knees and hocks may be blistered to reduce the swelling. Before blistering, have the horse in the stable for afew days, giving either a condition powder or a dose of Epsom salts in a bran mash daily, half feeds or corn, and a fair quantity of long hay. See that there is a stall where the horse can be conveniently kept on the pillar reins for awhile, being careful to choose a stall out of a draught, as during the time the animal is very susceptibble to cold owing to nervous depression and want of exercise. Never blister more than two legs at once, either two fore, two hind, or cross blister legs near fore and off hind, or vice versa, as it is cruel to blister all four legs at once. Have the hair clipped off the legs, leaving it behind the knee and in the heels, so as to protect the parts from the blister.

THE BLISTER TO USE.

These are either made of cantharides (Spanish fly), or the red biniode of mercury. The Spanish fly or, more properly speaking, beetle is about one inch in length, of shining metallic colour, and is caught and sent into the market from Hungary in a dried condition. A good fly blister is made of 1 oz. of Spanish olive oil. Infuse the flies in the oil, in a covereh vessel, for twelve hours, then place the vessel in boiling water for fifteen minutes, strain through muslin with strong pressure, add the product to the wax previously melted, and stir constantly while the mixture cools. This can be obtained from the chemist under the name of cantharides ointment, of the British Pharmacopoeia of 1885, and is always the same strength and quality, no matter where bought. The red iodide of mercury in fine powder into 1 oz. of benzoated lard or unsalted lard. Then there is a liquid blister, which may be used for sweating a joint or for applying to the throat in cases of influenza or strangles. Take 5 oz. of Spanish fly and mix with three fluid ounces of acetic ether, pack in a percolator, and at the expiration of twenty-four hours pour acetic ether over the contents of the percolator and allow the solution to pass slowly through until 20 oz. are obtained. This is known to the chemist as blistering fluid, and should be kept in a stoppered bottle.

Often both the red and the fly blister are used on the same leg if there are bony excrescenes as well as strained tendons. The general rule is to app,8 fly blister for tendinous troubles and red for bony trouble, such as ringbones, splints, etc. The front legs require about 2 oz. per leg, the hind 3 to 4 oz. per leg.

Never blister the legs of an ill horse, as it throws so much strain on the kidneys, etc., that you are liable to lose the animal. Should the weather be very frosty and cold, blistered legs do not do so well, and most people wait for abreak in the weather. Chestnut and thin-skinned horses do not require so much blister or rubbing in as a thick-skinned one, and the skin is more liable to crack if very severely blistered.

APPLYING THE BLISTER.

After having decided which legs are to be blistered and the blister to be used. have the legs well washed the night before. The best time to blister is in the morning, so as to be able to keep an eye on the animal during the day, as the blister takes effect in about from four to six hours' time after application. Have the horse well secured with rat chains, and, if the fore legs are being blistered, tail towards the manger, as if towards the manger is very liable to cap or kick while stamping from effects of the blister.

Apply in heel, to prevent blister running into it and making a sore place, either a thick coating of lard, zinc ointment, or resin ointment, taking care before rubbing blister in to fill your nails full of the ointment to protect yourself. Well rub in the blister over the parts required for about five minutes, and apply a little over the part when finished rubbing. The horse should be kept tied up on the pillar rein to prevent lying down or gnawing legs, which would blister the belly and lips. It is safer secured with a chain and rope halter, as if one breaks the other holds. Well pack under with straw to prevent injury from kicking. Keep horse well rugged up, and give plenty of hay and half feeds of corn, with an occasional bran mash. The horse must be kept on the pillar reins for quite a week, when it may be turned loose with a cradle on to prevent biting. On the third or fourth day after the blisters have appeared the legs should be dusted with Fuller's earth and half an hour's walking exercise given daily to take off the stiffness, but must be put back on the pillar reins. Short straw should be used for bedding, or ferns, etc.; in fact, anything that is not likely to prick the legs.

Don't use as blisters preparations of turpentine, ammonia, Chinese fly, euphorbium, sulphuric acid, or acetic acid, as they are very liable to blemish and leave bald, unsightly places, which always tell the tale when trying to sell the animal. Paraffin, if well rubbed in will do the same thing, and I have seen horses renhered bald for months by a good dressing of it. Sometimes during blistering the horse is very irritable and nervous, develops a cough, but a few doses of fever medicine or cough electuary soon stop it.

RENEWING T E BLIBTER.

How soon to blister gaain? The animal should be either turned out or let loose in a roomy loose box for a fortnight after being taken off the pillar reins before working or blistering the other legs. Should the horse still be lame, and it is decided to reblister, it is better to wait till all traces of the first application are gone, which is generally in about three weeks to a month's time from doing the legs. It is better to leave the hard scabs on the legs than to try to remove with oil, etc., as they act as a bandage to the parts, and continue to do good until they drop off. If oil is applied it often sets up blistering again by dissolving the cantharides and rendering it active.

Having tried many various kinds of blister during my lifetime, I find that the best and the most lasting results are obtained from the above formulae.—Vet.

Moon Blindness.

T. F. M. has a mare that is troubled quite frequenely with sore eyes. They discharge water and eventually become coated with a bluish film which gradually disappears. This is moon blindness or periodic opthalmia, a disease that usually results in permanent blindness, and little can be done to cure it. During the attacks bathe several times a day with a clean, warm water and drop into the eye a few drops of a solution of boric acid (a teaspoonful to a pint of clean, boiled water). Severe attacks may be relieved by applying a blister of red iodide of mercury about the eye.

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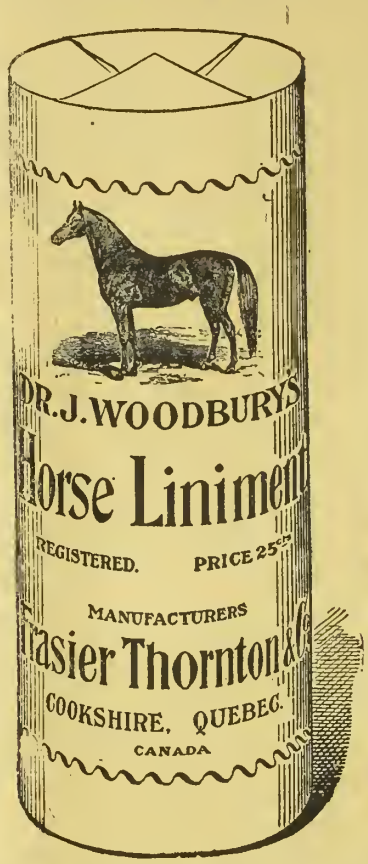

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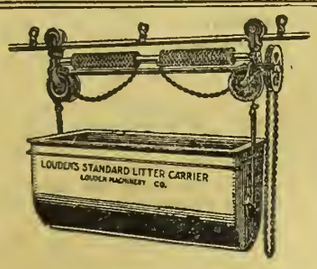

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Stumbling Horses.

Some horses are naturally addicted to stumbling, others acquire the fault, and still others have the stumbling habit thrust upon them. In the first instance, it is almost incurable, but the second and third causes can be remedied by the driver. If the ground is rough or uneven, horses with a low action are prone to stumble. Other horses, which are naturally slipshod, generally stumble because they do not lift their feet high enough from the ground. Laziness is another cause for stumbling, and horses that are heavy in front, or whose fore legs are weak and unsound, have the same fault. Very often carelessness on the part of the driver causes a horse to stumble. This makes it necessary to always bear in mind the value of keeping horses well in hand and sufficiently reined. If the habit is due to laziness, it can often be cured by riding or driving the horse over rough ground until he has broken off the fault, but in all cases the cure rests with the rider or driver.

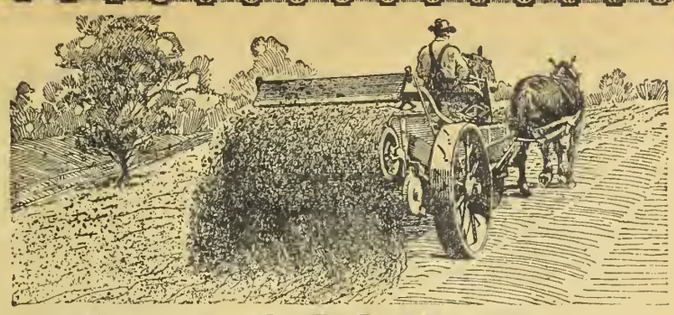
The most sure-footed of horses is bound to stumble at times, but this can be reduced to a minimum by keeping a tight rein. A slack rein is fatigue is the cause, extra care must be taken to keep the horse well up often the sole cause of stumbling. If to the bit. No good horseman will ever take chances on his horse stumbling by allowing a slack rein. Stumbling is not only an annoying habit, but it often results in serious injury and many times in the total disability of the animal. While an habitual tendency to stumble often does not admit a cure, the avesage case can be prevented by the methods that have been suggested above.

To Throw a Horse.

For this purpose a good strong soft hemp rope about 25 yards long is required. Double it in the middle and make a loop at the place large enough to go around the horse's neck close against the shoulder. This loop is placed over the horse's bead and the two free ends are passed between the fore legs, one to the right and the other to the left. These ends are then passed around each hind pastern from the outside to the inside and are carried underneath the line running from between the fore legs then up to and across the side af the shoulder through the loop round the neck. The assistant on the right side stands in front of the horse and the one on the left stands behind. The side lines are then hauled taut, which has the effect of pulling the hind feet up towards the chest and thus the animal is thrown. During this operation the head must be kept well back. The hind legs are then made fast by pulling the feet forward close up to each side of the chest and making a hitch round the pastens. The fore legs are then secured by passing the rope round each pastern at their respective sides and tying them to their hind pasterns.

Inactive Kidneys.

W. H. M. has a mare that passes small quantities of highly colored urine and strains a great deal; there is also a pimply eruption on the skin that is very irritable. It is possible that the condition of the kidneys may be the cause of the skin trouble. I would suggest giving her a heaping teaspoonful twice a day in feed, of a mixture of equal parts of saltpeter and powdered rosin for a week or ten days at a time. For the eruption a tablespoonful of Fowler's solution of arsenic in feed twice a day for ten days, alternating with the powder above.



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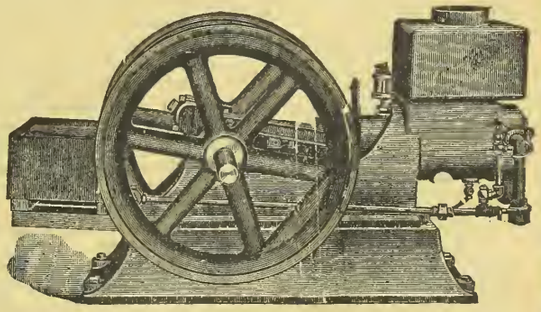

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POULTRY.

Telling the Laying Hen

To make a success, it is imperative that we know our hens. We must test their abilities. We cannot afford to keep drones.

Therefore, we must adopt methods by which we can determine the good from the bad. Noticing a hen repeatedly upon the nest is not a guarantee that she is about to lay. In using trap nests I have almost daily captured hens on the nest, but no eggs, and their annual records were very low.

Every time a hen cackles when coming off the nest is no criterion that she has laid. I believe it was Collingwood who once said "a cackling hen is either a layer or a liar,"—and in using trap nests—I have found quite a number of these cacklers to be "liars."

So, prior to the adoption of trap nests, the selection of layers has been more or less guess work. It was said by some writers that "spare and leggy birds are the best layers." This opinion, no doubt, was based upon the fact that the Mediterranean class is built after that fashion.

This view was coroborated by the late Francis A. Mortimer, when he said that he found that hens with short legs, chunky bodies, short necks and small heads are, as a rule, indifferent layers. This would seem so from the standpoint that such hens are more of the meat order, but trap nests have told us that during the past few years our chunkiest Wyandottes were in the front row of layers.

Felch said the pullets that commence laying earliest in life are the ones to lay the largest number of eggs through life. There is some logic in that, but we cannot always tell our earliest layers if we have no system of trapping them.

Some years ago there was quite a discussion of the so-called "egg type." But nearly all these opinions were based on the style of the Leghorn, but some writers differed. For example, one writer said that good layers have a "long, slim body, are broad across the shoulders, are triangular, deep in froot, not compact, and have legs of good length." Another differed by saying: "Carefully avoid the leggy, high built, reared up hen of the game-cock style. It is the short-legged, heavy set, motherly-looking hen that shells out the eggs." Many references could be given on this type question, but nearly all differ in some particular, but the opposites, quoted above, are fair samples of representations made in early days.

There is but one sure way of finding out which are our workers; we must catch the hens in the act. Each hen is to be known by the number on her band or ring that is placed on her leg. Catching the hen in the trap nest, her number is ascertained, and this marked on the egg. Each evening after the eggs are gathered these numbers are properly credited on a record blank provided for that purpose. At the end of the year we know for a certainty how many eggs the hen has laid. Not only that, but we also know the size of her egg—whether normal or not—and the color whether white, brown or tinted.

I do not, however, employ trap nests, solely for the purpose of finding out which are my best year-round layers. What I care most to know is which are my best cold-weather layers. I want to know which are the profitable workers during the late fall, winter and early spring—times when eggs bring the best prices. It is not a question with me how many eggs a hen lays in a year, but how much money her product brings. If it is possible to concentrate the bulk of her crop in six months of the year, when prices are high, and induce her to "take it easy" during the warm months, devoting the most of that time to broodiness and molting, I will have stronger and hardier stock and, consequently, more profit.

In conclusion, let me state, that there is but one guaranteed way of determining our profitable layers, and that is by the aid of trap nests, and no poultryman can afford to do with out them. It will mean a profit in the crop, and a saving of feed, room and labor.

While it is best at all times to have good, sharp grit constantly before the fowls, it is especially important that grit be supplied when feeding whole oats so that the hulls of oats, which are very tough and unyielding, will be properly ground. With plenty of sharp grit there is no danger attending oat feeding, although the safest rule is to first soak the oats for an hour in water so that they become more softened.

Green bones are bones fresh from the butcher, with the adhering gristle, meat, etc.

The sooner farmers recognize the fact that poultry culture should be followed on the same line that dairying is—giving food and care to secure results—the sooner will they begin to reap their share of profits and become competitors with practical poultry raisers.

Green bones contain the natural juices as well as the adhering substances, making it superior to the bones that have lain on the ground for a while and lost all the natural juices or animal matter. Green bones are also more soluble and capable of having the mineral matter digested.

In parts of England, turkeys are fattened chiefly on Indian corn, scalded Indian meal and boiled potatoes, with home grown corn for a change.

It is claimed that the most delicious, juicy broiler that an epicure can fancy is a turkey poult about six pounds weight, or when about two-thirds grown, and of medium size. Many a young male two-thirds grown would be too large to broil; if rather large, however, the breast may be gashed, and thus more easily cooked through, but it must not be dried.

The following facts on marketing feathers are well worth remembering: The quills from the third joint or tip end of the wings are called pointers, and should be kept separate. In packing, keep tail and wing feathers separate. Tie each kind in bundles by itself, and press the bundles in the boxes tightly. All feathers must be clean, sound and dry picked. The wing quills which have full plumage on both sides of the quill, which come from the first and second joints of the wing next the body, are more valuable than, and should be kept separate from the pointers. The tail feathers should be kept by themselves and are the most valuable. The short tail and wing quills, if saved, should be kept separate from the long ones, as they depreciate their value if mixed with them. The directions for shipping are to mark the correct weight tare on the boxes, also the name of the shippers, and ship as "turkey quills."

"Utility" does not mean 'mongrelism" any more than "thoroughbred" means "Standard-bred."

The old way of carrying fowls by their legs, or by the wings, is not practised by the present day poultrymen. It is a cruel practise. Holding the fowl firmly by the legs and allowing the body to rest on the arm is a better method.

Fowls are obliged to throw off much of the waste of the body through the lungs. They do not sweat in the sense that do other animals, but instead breathe several times faster than sweating animals when heated. To keep in good health a hen requires nearly seven times the amount of fresh air in proportion to its size as does a horse.

There is as much difference between different families or strains of each breed, as between the different breeds. Therefore, receive with some allowance the praise or condemnation of any breed.

In Paris markets the eggs are dated, and one pays according to the freshness, so that is is possible to be certain of newly-laid eggs, or if it is necessary to be economical, yesterdays eggs, or the day's before, are offered at a reduction.

There are still some people who imagine they can tell the sex of eggs before they are hatched, or as soon as they are laid. Some tell us that long eggs always hatch females, while others say that such eggs invariably hatch males. When it is considered, that each hen shapes her eggs according to the condition of her ovaries, and uniformly lays eggs of similar shape, the absurdity of the shape theory becomes apparent.

A fat young Guinea is a gamey and savory table fowl, though the flesh is dark.

It takes about two weeks to fatten a duck for market.

When the Indian Runner duck has reached a marketable age, she has nearly completed her growth, and has little left to do but complete her plumage and begin to lay.

A little granulated charcoal mixed in the soft food will generally check bowel trouble in chicks.

The much use of cayenne pepper has caused considerable trouble among poultry keepers, and so has overfeeding. The former brings on liver troubles, and the latter leads first to indigestion, then fever, and gangerene of the intestines; or inflammation of the mucous membrane, which is cattarrh or roup; or anthrax, which is black comb; and other fatal disorganizations of the muscular tissues of the liver.

The writer almost daily receives letters asking for cures for ailments in fowls. The bulk of these, at certain times of the year, principally winter, call for cholera cure. When

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the method of feeding is inquired into, it is found that corn is the principal if not the exclusive grain given and the only grit available is some gravel, mostly pebbles. This feeding of corn, with a lack of sharp grit, is the cause of nearly all reported troubles among western poultry—and two-thirds of the complaints come from the western states. —Michael K. Bover.

Layers vs. Show Birds.

To build up a strain of great layers calls for as much scientific knowledge and care as it does to produce superior show birds. But in the work of building up champions of either class a far different treatment exists.

To have strictly first class egg producers, it is necessary that they be bred exclusively for that purpose and after the strain has been established it must be followed by judicious and scientific mating.

It is not so much a matter of breed as it is the way the hens are handled that makes them prolific layers. It was said at one time that Leghorns and the rest of the Mediterranean class were the champion layers, and that the Asiatics were the poorest. Yet we have proof that in very many cases Brahmas outlayed Leghorns. The secret is to breed only from the best layers of the flock, and to have all hatches early. Early layers will as a rule produce early layers. Good layers bequeath their powers to their offspring.

Another point is to stick closely to purebred stock. Of all the phenomenal records we have heard of, not one has been credited to a common scrub hen.

Trap nests must be used in order to become accurate in the work. There is no other positive way of telling how good a hen is. The ability of each hen should be annually noted, and from the cream should come the next generation.

It is important, too, that the stock be strong and rugged. No matter how good utility blood is in the veins of the selected bird, if she is not from a hardy race she will not be able to show her physical powers.

It is a rule among marketmen that a pullet that will not lay before January, and a hen that delays operations until February are poor investments from a laying standpoint. They cost more than they are worth.

It is not always the early layer that gives us the best record. I have had pullets that began laying in October and quit in December, and did not start before February. On the other hand I had pullets begin in December and keep right along.

In creating our laying strains we should aim to have good winter laying rather than a good year-round record. A dozen eggs in winter are worth two dozen in summer. It is not the number of eggs we get but rather the amount of money that we receive for them that counts.

So much for producing our layers; what about our show birds?

The fancier mates according to the "standard" requirements. He does not for a moment stop to inquire how good laying powers the hen has. He does not concern himself about an early egg yield; in fact he does everything to prevent it. A fancier breeding for shows in January takes pains that his pullets do not lay before the exhibitions take place. It is therefore not possible to secure an early and consequently prolific egg strain from stock hatched for January, or even February shows.

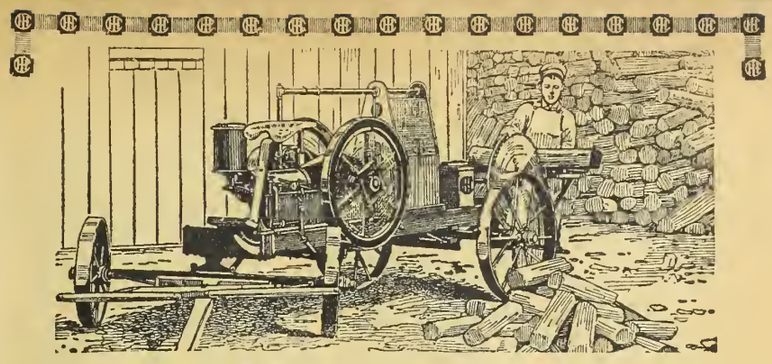
So in breeding, it has been proved that the two strains must be breed separately. Egg-strain fowls are not show birds, and neither are show birds egg strains. One authority tells us that chickens hatched for early shows, November and December, may be much better than those hatched for January and February shows but they will be poorer show birds and, and, in fact, if pullets for the fall shows they would hardly be able to win in mid-winter shows, the laying having developed them into hen shape

The Moulting Period.

Many inquiries are received from time to time as to the proper treatment of fowls during the moulting period, at which time of every year —preferably during the summer months—the fowls should shed their old coat of feathers, which in the course of time are replaced by a new one. It is best to have the moulting period in the summer months. The summer moult usually lasts from eight to ten weeks. Mr. James Shackleton, a well known authority, contends that by feeding specially prepared rations this period may be shortened. The following treatment has been successful in our department for several years. During the early part of July—after the breeding season is over—the fowls were placed on half the usual quantity of rations for 15 or 20 days. The effect of this treatment was the stoppage of egg production and the loosening of the old feathers. At the end of 15 or 20 days the full rations were resumed. A little linseed meal may be added to the mash with benefit on the resumption of full rations. Before the beginning of operations to bring on the moult the cock birds were removed from the breeding pens and placed in compartments by themselves. The hens were then allowed to run in small fields where they could find insect life, clover, grass, etc. In the breeding of fowls during moult care should be observed that they do not become too fat. The fowls are more apt to become over-fat from too generous feeding during the moult than after they got over it and commenced laying. It may be interesting to note that in relation to the annual moult that experience of many years has shown:

1. That yearling hens usually moult earlier and easier than older ones.
2. That moulting is more gradual in some cases than others.
3. That the progeny from parent stock which have moulted during the summer, in the majority of cases, have usually moulted at the same period.
4. That moulting hens are much benefited by a run in a field where clover, grass and insect life may be found.
5. That where moulting fowls are confined to limited quarters that meat in some form and green food should be regularly supplied.

The foregoing information, if followed, will be found of great service to the farmers of the country, and this, I am sure, is what your committee desires. It has direct bearing on the production of eggs and market poultry.—Experimenter.



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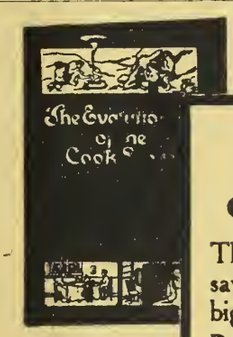

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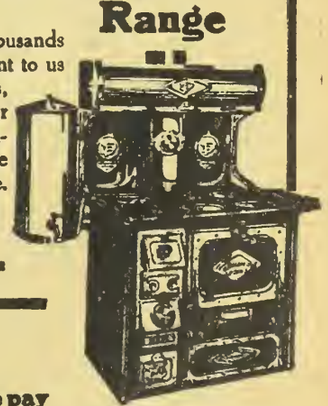

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

I promised to obey, and went upstairs with my message; thinking, as I went, that if Mr. Dick had been working at his Memorial long, at the same rate as I had seen him working at it, through the open door, when I came down, he was probably getting one very well indeed. I found him still driving at it with a long pen, and his head almost laid upon the paper. He was so intent upon it, that I had ample leisure to observe the large paper kite in a corner, the confusion of bundles of manuscript, the number of pens, and, above all, the quantity of ink (which he seemed ta have in, in half-gallon jars by the dozen), before he observed my being present.

"Ha! Phoebus!" said Mr. Dick, laying down his pen. "How does the world go? I'll tell you what," he added, in a lower tone, "I shouldn't wish it to be mentioned, but it's a —" here he beckoned to me, and put his lips close to my ear—"it's a mad world. Mad as Bedlam, boy!" said Mr. Dick, taking snuff from a round box on the table, and laughing heartily.

Without presuming to give my opinion on this question, I delivered my message.

"Well," said Mr. Dick, in answer, "my compliments to her, and I—I believe I have made a start. I think I have made a start," said Mr. Dick, passing his hand among his grey hair, and casting anything but a confident look at his manuscript. "You have been to school!"

"Yes, sir," I answered; "for a short time."

"Do you recollect the date," said Mr. Dick, looking earnestly at me, and taking up his pen to note it down, "when King Charles the First had his head cut off?"

I said I believed it happened in the year sixteen hundred and forty-nine.

"Well," retarned Mr. Dick, scratching his ear with his pen, and looking dubiously at me. "So the books say; but I don't see how that can be. Because, if it was so long ago,how could the people about him have made that mistake of putting some of the trouble out of his head, after it was taken off, into mine?"

I was very much surprised by the inquiry; but could give no information on this point.

"It's very strange," said Mr. Dick, with a despondent look upon his papers, and with his hand among his hair again, "that I never can get that quite right. I never can make that perfectly clear. But no matter, no matter!" he said cheerfully, and rousing himself, "there's time enough! My compliments to Miss Trotwood, I am getting on very well indeed."

I was going away when he directed my attention to the kite.

"What do you think of that for a kite?" he said.

I answered that it was a beautiful one. I should think it must have been as much as seven feet high.

"I made it. We'll go and fly it, you and I," said Mr. Dick. "Do you see this?"

He showed me that it was covered with manuscript, very closely and laboriously written; but so plainly, that as I looked along the lines, I though I saw some allusion to King Charles the First's head again, in one or two places.

"There's plenty of string," said Mr. Dick, "and when it flies high, it takes the facts a long way. That's my manner of diffusing 'em. I don't know where they may come down. It's according to circumstances, and the wind, and so forth; but I take my chance of that."

His face was so very mild and pleasant, and had something so very reverend in it, though it was hale and hearty, that I was not sure but that he was having a good humored jest with me. So I laughed, and he laughed, and we parted the best friends possible.

"Well, child," said my aunt, when I went down stairs. "And what of Mr. Dick, this morning?"

I informed her that he sent his compliments, and was getting on very well indeed.

"What do you think of him?" said my aunt.

I had some shadowy idea of endeavoring to evade the question by replying that I thought him a very nice gentleman; but my aunt was not to be put off, for she laid her work down in her lap, and said, folding her hands upon it:

"Come! Your sister Betsey Trotwood would have told me what she thought of any one, directly. Be as like your sister as you can, and speak out!"

"Is he—is Mr. Dick—I ask because I don't know, aunt—is he at all out of his mind, then?" I stammered; for I felt I was on dangerous ground.

"Not a morsel," said my aunt.

"Oh, indeed!" I observed faintly.

"If there is anything in the world," said my aunt, with great decision and force of manner, "that Mr. Dick is not, it's that,"

I had nothing better to offer, than another timid "Oh, indeed!"

"He has been called mad," said my aunt. "I have a selfish pleasure in saying that he aas been called mad, or I should not have had the benefit of his society and advice for these last ten years and upwards—in fact, ever since your sister, Betsy Trotwood disappointed me."

"So long as that?" I said.

"And nice people they were who had the audacity to call him mad," pursued my aunt. "Mr. Dick is a sort of distant connection of mine; it doesn't matter how; I needn't enter into that. If it hadn't been for me, his own brother would have him shut up for life. That's all.

I am afraid it was hypocritical in me, but seeing that my aunt felt strongly on the subject, I tried to look as if I felt strongly too.

"A proud fool!" said my aunt. "Because his brother was a little eccentris—though he is not half so eccentric as a good many people—he didn't like to have him visible about his house, and sent him away to some private asylum-place; though he had been left to his particular care by their deceased father, who thought him almost a natural. And a wise man he must have been to think so! Mad himself, no doubt."

Again, as my aunt looked quite convinced, I endeavoured to look quite convinced also.

"So I stepped in," said my aunt, "and made him an offer. I said, your brother's sane—a great deal more sane than you are, or ever will be, it is to be hoped. Let him have his little income, and come and live with me. I am not afraid of him, I am not proud, I am ready to take care of him, and shall not ill-treat him as some people (besides the asylum folks have done. After a good deal of squabbling," said my aunt, "I got him; and he has been here ever since. He is the most friendly and amenable creature in existence; and as for advice!—But nobody knows what that man's mind is, except myself.

My aunt smoothed her dress and shook her head, as if she smoothed defiance of the whole world out of the one, and shook it out of the other.

"He had a favorite sister," said my aunt, "a good creature, and very kind to him. But she did what they all do—took a husband. And he did what they all do—made her wretched. It had such an effect upon the mind of Mr. Dick (that's not madness, I hope!) that, combined with his fear of his brother, and his sense of his unkindness, it threw him into a fever. That was before he came to me, but the recollection of it is oppressive to him even now. Did he say anything to you about King Charles the First, child?"

"Yes, aunt."

"Ah!" said my aunt, rubbing her nose as if she were a little vexed. "That's his allegorical way of expressing it. He connects his illness with great disturbance and agitation, naturally, and that's the figure, or the simile, or whatever it's called, which he chooses to use. And why shouldn't he, if he thinks proper?"

I said: "Certainly, aunt, aunt."

"It's not a business-like way of speaking," said my aunt, "nor a worldly way. I am aware of that; and that's the reason why I insist upon it, that there shan't be a word about it in his Memorial."

"Is it a memorial about his own history that he is writing, aunt?"

"Yes, child," said my aunt, rubbing her nose again. He is memorialising the Lord Chancellor, or the Lord Somebody or other—one of these people, at all events, who are paid to be memorialised—about his affairs. I suppose it will go in, one of these days. He hasn't been able to draw it up yet, without introducing that mode of expressing; but it don't signify; it keeps him employed."

In fact, I found out afterwards that Mr. Dick had ben for upwards of ten years endeavouring to keep King Charles the First out of the Memorial; but he had been constantly getting into it, and was there now.

"I say again," said my aunt, "nobody knows what that man's mind is except myself; and he's the most amenable and friendly creature in existence. If he likes to fly a kite sometimes, what of that! Franklin used to fly a kite. He was a Quaker, or something of that sort, if I am not mistaken. And a Quaker flying a kite is a much more ridiculous object than anybody else."

If I could have supposed that my aunt had recounted these particulars for my especial behoof, and as a piece of confidence in me, I should have felt very much distinguished, and should have augured favorably from such a mark of her good opinion. But I could hardly help observing that she had launched into them chiefly because the question was raised in her own mind, and with very little reference to me, though she had addressed herself to me in the absence of anybody else.

At the same time, I must say that the generosity of her companionship for poor harmless Mr. Dick, not only inspired my young breast with some selfish hope for myelf, but warmed it unselfishly towards her. I believe that I began to know that there was something about my aunt, notwithstanding her many eccentricities and odd humours, to be honoured and trusted in. Though she was just as sharp that day, as on the day before, and was in and out about the donkeys just as often, and was thrown into a tremendous state of indignation, when a young man, going by, ogled Janet at the window (which was one of the greatest misdemeanors that could be committed against my aunt's dignity), she seemed to me to command more of my respect, if not less of fear.

The anxiety I underwent, in the interval which necessarily elapsed before a reply rould be received to her letter to Mr. Murdstone, was extreme; but I made an endeavour to suppress it, and to be as agreeable as I could in a quiet way, both to my aunt and Mr. Dick. The latter and I would have gone out to fly the great kite; but that I still had no other clothes than the anything but ornamental garments with which I had been decorated on the first day, and which confined me to the house, except for an hour after dark, when my aunt, for my health's sake, paraded me up and down on the cliff outside before going to bed. At length the reply from Mr. Murdstone came, and my aunt informed me, to my infinite terror, that he was coming to speak to

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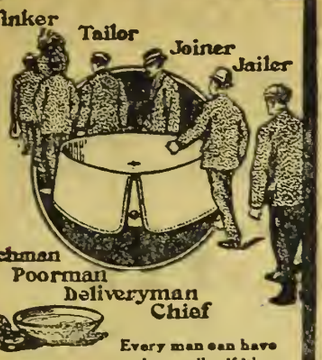

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her himself on the next day. On the next day, still bundled up in my curious habiliments, I sat counting the time, flushed and heated by the conflict of sinking hopes and rising fears within me; and waiting to be startled by the sight of the gloomy face, whose non-arrival startled me every minute.

My aunt was a little more imperious and stern than usual, but I observed no other token of her preparing herself to receive the visitor so much dreaded by me. She sat at work in the window, and I sat by, with my thoughts running astray on all possible and impossible results of Mr. Murdstone's visit, until pretty late in the afternoon. Our dinner had been indefinitely postponed; but it was growing so late, that my aunt had ordered it to be got ready, when she gave a sudden alarm of donkeys, and to my consternation and amazement, I beheld Miss Murdstone, on a side-saddle, ride deliberately over the sacred piece of green, and stop in front of the house, looking about her.

"Go along with you!" cried my aunt, shaving her head and fist at the window. "You have no business there. How dare you trespass? Go along! Oh! you bold-faced thing!"

My aunt was so exasperated by the coolness with which Miss Murdstone looked about her, that I really believe she was motionless, and unable for the moment to dart out according to custom. I seized the opportunity to inform her who it was; and that the gentleman now coming near the offender (for the way up was very steep, and he had dropped behind), was Mr. Murdstone himself.

"I don't care who it is!" cried my aunt, still shaking her head, and gestulating anything but welcome from the bow-window. "I won't be trespassed upon. I won't allow it. Go away! Janet, turn him round. Lead him off!" and I saw, from behind my aunt, a sort of hurried battle-piece, in whicn the donkey stood resisting everybody, with all his four legs planted different ways, while Janet tried to pull him round by the bridle Mr. Murdstone tried to lead him on, Miss Murdstone struck at Janet with a parasol, and several boys, who had come to see the engagement, shouted vigorously. But my aunt, suddenly descrying among them the young malefactor who was the donkey's guardian, and who was one of the most inveterate offenders against her, though hardly in his teens, rushed out to the scene of action, pounced upon him, captured him, dragged him, with his jacket over his head and his heels grading the ground, into the garden, and, calling upon Janet to fetch the constables and justices, that he might be taken, tried and executed on the spot, held him at bay there. This part of the business, however, did not last long; for the young rascal, being expert at a variety of feints and dodges, of which my aunt had no conception, soon went whooping away, leaving some deep impressions of his nailed boots in the flower beds, and taking his donkey in triumph with him.

Miss Murdstone, during the latter portion of the contest had dismounted, and was now waiting with her brother at the bottom of the steps until my aunt should be at leisure to rereive them. My aunt, a little ruffled by the combat, marched past them into the house, with great dignity, and took no notice of their presence, until they were announced by Janet.

Continued in next issue.

Uses for Sawdust.

Not so very long ago about the only real use anycne had for sawdyst was for packing ice. That was when small local saw mills were more common, and the amount of this form of waste wood was, or at any rate appaared, comparatively small. Now, when the tendency is to consolidate these into large mills with a capacity of several hundred thousand feet of lumber per day, the daily waste in sawdust is seen to be enormous and much experimenting is being done to discover new methods of utilizing it.

Perhaps the most promising venture in sawdust utilization in this country is the manufacture of ethyl (or grain) alcohol. The sawdust is treated with sulphuric acid under suitable conditions, resultibg in the formation of sugar, which is then fermented to produce alcohol. Several plants have been erected to produce alcohol from wood in this manner, and, though there are some difficulties still to be overcome, the ultimate success of the process on a commercial scale is assured.

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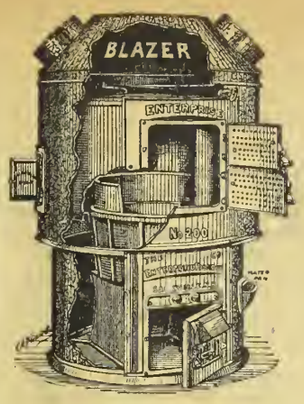
(Continued on page 65.)



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Canning Methods, Old and New.

For the past few years many housekeepers have somewhat given up the old-fashioned idea of canning fruit and vegetables and depended instead to a great extent upon store goods. Now the pendilum seems to be swinging again toward old-fashioned cooking, and home canned things are once more coming into their own. Certainly the factory canned goods are not as economical nor do they compare with home-made goods in richness or flavor. Some housekeepers claim that they have no luck in putting up fruit, but investigation shows that their luck may be accounted for in their disregard of a few general rules that make for success.

In the first place, the fruit or vegetables selected for canning must be perfectly sound, free from spot and just ripe. Underripe or overripe fruit will not be a success. They must be canned as soon after picking as possible, for both vegetables and fruit lose their flavor by standing around for any length of time.

Use an aluminum or enamel lined kettle for cooking and a wooden spoon for stirring, as metals are affected by the acid in the fruit. A gas stove is very convenient to use in canning or preserving, as the heat is more regular than that from the range and, too, the heat can be quickly regulated when necessary. Sterilize every jar and top used and buy new rubbers each season. The wide-mouthed jar is the best to use, as the fruit can be put in whole and the glass top is to be preferred, as the metal tops are apt to be damaged in opening the can.

The process of cooking most of the fruits and vegetables in the can is one that appeals to the housekeeper, both for its economy of time and for the results obtained. By this process none of the flavot is lost.

To can vegetables, pack the jars tightly with the uncooked material, pour over it cold water to cover, screw on the tops, not using the rubbers, and place the jars in a boiler. Do not allow them to rest directly on the bottom of the boiler. A piece of board cut to fit the boiler and having a double row of auger holes in it is the best thing for the jar to rest upon. However, straw may be used, or even folded newspaper will do. After putting the jars in the boiler so that they do not touch each other, pour in cold water around them until it nearly reaches the top of the jars. Cover the boiler tightly to keep in the steam and cook until the vegetables are tender. The time varies with different vegetables. They may be tested with a fork and when found to be tender, fill the jars to overflowing with boiling salted water, put on the rubbers and screw down the tops. Turn the jars upside down to see if any liquid escapes and then put them out of a draft to cool. Screw the tops again before putting them away, as they loosen while cooling, and store them away in a cool, dark place.

Fruit is canned by this same process, with the exception of using a rich boiling syrup of sugar and water or fruit juice to fill the jars in place of the salted water used with the vegetables. About two cups of sugar to one of water is the correct proportion to use in making the syrup. The cooking of fruit by this process takes from twenty minutes to a half hour.

Be sure to not put on the rubbers until after cooking, as the heat destroys the elasticity of the rubber and the contents of the jars will spoil. One housekeeper who had no luck in canning disregarded this important point and lost 20 jars. In-

Make Your Coal Oil Lamp Burn Gas.

The New "Great White Light" Burner Turns Ordinary Kerosine Illumination Into

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"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
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EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the Interior of the dome of the "Great White Light" Burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely diffenent, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two besides one we furnish free by sending 35 cents for each additional one wanted.

A Municipal Opportunity

"Indications are that municipal debentures are strongly coming back into favor with Maritime investors. The trouble now appears to be not to buyers—but to find debentures to satisfy the many enquiries. This active demand is confined almost altogether to the issues of the larger and better known towns, whose securities belong to the 'gilt edge' class, and of which the supply is pretty well exhausted.

The above paragraph is from last week's Mackintosh's Investment News," Since it was written we have been fortunate in securing some municipal debentures of this "gilt-edge" class, namely:—Town of New Glasgow Fives, due 1955, and which we quote at 100 per cent. and interest to yield a full 5 per cent. income. As we expect our holdings to be quickly taken up we advise immediate action.

J.C. Mackintosh & Co.
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THE MARITIME FARMER, SUSSEX, NEW BRUNSWICK.

stead of cooking fruit in the boiler, it may be cooked in the oven by putting the jars in a draining pan with about two inches of water around them. When tender, fill the jars with the syrup or from the contents o one of the jars of fruit.

Peaches and pears may have a bit of candied lemon peel placed in the top of the jar with a brandied paper over all before sealing. All candied goods must be kept in a cool, dark place, as light and heat injure their keeping qualities.

JELLY POINTERS.

There are a few points to be remembered in making jellies. Cooks af the old school claim that jelly must be made on a clear day to be a success. The fruit must be sound, not overripe,and should be cooked in an enamel pan at an even temperature. As little water as possible must be added. Make a few cups at one boiling.

Strain all fruit for jelly without pressure, as the forcing of the jelly through the straining cloth causes a cloudy jelly. The draining bag made in a three-cornered shape will facilitate matters. Most jelly is made cup for cup, that is, a cup of sugar to a cup of juice. When a little cooled on a saucer appears firm, it is done. Pour it into glasses and cover with melted paraffin. The paraffin can be kept hot in a small pitcher and poured out as needed. A small sweet geranium leaf added to jelly gives a good flavor.

Rhubarb Jelly: Cover the rhubarb, cut in small pieces, skin and all, with cold water, and cook until tender. Allow it to drip through a cheese cloth bag and to one cup of juice add a cup of sugar and boil a half hour. Dissolve gelatine in cold water, one teaspoonful to a quart of juice, and after adding it to the rhubarb and sugar put it into the glasses.

Crab Apple Jelly: Cut up the apples and cover them with water, boil until tender. Put them in a cheese-cloth bag and drain overnight. In the morning, add one cup of sugar to two of juice and boil until it jellies.

Perspiration and Health.

Men die of kidney disease because the kidneys are worn out and poisoned. The kidneys are compelled to do the work to carry on the processes of elimination which really ought to be attended to by the pores in the skin. There are spread over the surface of your body, if you are a man of average size, about seven million pores. Each is a quarter inch deep. These pores day and night eliminate from the body its poisons and impurities. If you don't take exercise if you don't perspire and keep the pores open, the work which those pores should do is thrown upon the kidneys. The kidneys cannot do the work. Your blood is poisoned, and kidney disease comes along to claim you. A keen student of health remarked the other day that in winter there are many more deaths from kidney disease than in summer. This is due, of course, to the fact that in winter the pores of the man who does not take exercise are even more clogged up than usual. Heat alone opens the pores in summer to some extent, although not enough.

Tired Feet.

When the feet are weary and tender owing to long standing or walking during the day, nothing will give more relief than a warm footbath in which has been dissolved a handful or two of sea salt. Bathe the feet and legs with this for about ten minutes, and then rub them well with a good rough towel. The effect is delightfully refreshing.

MME. MELBA

The world renowned singer who holds undisputed sway as Queen of the Lyric Stage, has made her choice of the—

New Scale Williams Piano

for her concert and private use while on her Canadian tour.

In selecting this piano Mme. Melba has shown her approval of the Continental fame achieved by this great Canadian instrument.

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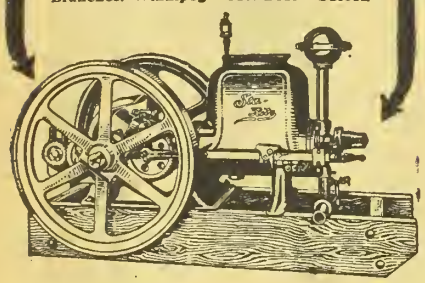
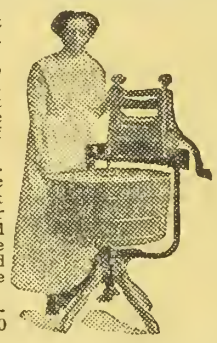


THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either



So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address Me Personally

G. F. Morris, Mgr. 1900 Washer Co.

357 Yonge Street, Toronto.

Prize Winners at the Yarmouth County Exhibition.

HORSES.

Hackney stallion, 4 yrs. and up, 1, Dr. C. A. Webster.—Mare of gelding, 4 yrs. and up, 1, C. A. Webster.—Filly or gelding, 1 yr., C. A. Webster.—Foal of this year, 1, C. A. Webster; 2, Richard Bain.—Brood mare with foal by side, 1, C. A. Webster.—Mare any age, 1, Richard Bain.

Clydesdale stallion, 3 yrs., 1, Herbert W. Murphy.—Filly or gelding, 2 yrs., 1, C. A. Webster.—Stallion, any age, 1, Herbert W. Murphy.—Mare, any age, 1, C. A. Webster.

4 yrs. and up, 1, A. W. Horner, Jr.;

Roadster Horses.—Mare or gelding, 2, S. A. Cook.—Filly or gelding, 3 yrs., 1, W. L. Harding; 2, F. G. Cook Jr.—Ditto 2 yrs., 1, David Marling; 2, Jonn A. Moir; 3, R. J. Melvin.—Ditto, 1 yr., 1, J. Munro Cook.—Foal of this year, 1, B. B. Law.—Brood mare with foal by side, 2, B. B. Law.—Mare or gelding, any age, 1, A. W. Horner, Jr.

Carriage Horses, mare or gelding 4 yrs. and up, 1, Geo. T. Bain; 2, M. E. Chute; 3, H. W. Corning.—Filly or gelding 2 yrs., 1, Chas. H. Butler.—Ditto 1 yr., 1, Mrs. Harry Boyd.

General purpose—Mare or gelding, 4 yrs. and up, 1, David Morrell; 2, Fred Churchill; 3, L. T. White.

Filly or gelding, 3 yrs., 1, Nathan N. Murphy; 2, Geo. Cleveland.—Ditto, 1 yr., 1, Geo. L. Cann; 2, Chas. G Pinckney; 3, Geo. Cleveland.—Matched pair shown in harness, 1, J. S. Boyd; 2, O. L. Churchill; 3, Harry A. Boyd.—Mare or gelding, any age, 1, Nathan N. Murphy.

Light Draught or Agricultural.—Mare or gelding, 4 yrs. and up, 1, J. M. Trefry; 2, Robt. Corning; 3, Frances Corning.—Filly or gelding, 3 yrs., 1, Adolph Corning; 2, Mrs. Clifford Cann.—Ditto, 2 yrs., 1, Fred Churchill; 2, Lloyd W. Cook; 3, Mrs. Geo. E. Killam.—Ditto, 1 yr., 1, Fred L. Rose; 2, Chas. G. Pinckney.—Foal of this year, 1, Phillips Bros.—Brood mare with foal by side, 1, Phillips Bros.—Matched pair in harness, 1, C. W. Cook; 2, I. M. Lovitt.—Mare or gelding, any age, 1, Phillips Bros.—2, J. M. Trefry; 3, I. M. Lovitt.

Heavy Draught Horses—Mare or gelding, 4 yrs. and up, 1, Benj. Bain; 2, Geo. W. Murphy; 3, Adolph Corning.—Filly or gelding, 3 yrs., over 1200 pounds, 1, Robt. A. Goudey.—Ditto, 2 yrs., over 1000 lbs., 1, Alfred Servant; 2, Adolph Corning.—Ditto, 1 yr., 1, Alfred Servant; 2, W. A. Churchill—Foal of this year, 1, Rae McKenna.—Matched pair in harness, 1, Edwin F. Kehoe.—Mare or gelding, any age, 1, Edwin F. Kehoe; 2, Benj. Bain.

Special Prizes—Roadster, 1, Smith Nickerson; 2, A. W. Horner, Jr.; 3, Jf M. Trefry.—Carriage Horse, 1, Geo. T. Bain; 2, N. E. Chute; 3, H. W. Corning.

CATTLE.

Short Horn, Registered—Dr. I. M. Lovitt won 10 1sts and 7 2nds.

Short Horn Grades—Cow, 4 years, and up, 1, Adolphus Corning.—Heifer calf, 6 mos. and over, 1, Rev. Gordon T. Lewis—Heifer calf 6 mos. and under, 1st and 2nd, Rev. Gordon T. Lewis.

Ayrshires, Registered—O. L. Churchill won 6 1sts, 3 2nds and 2 3rd prizes in this class; Donald Morine took 1st on bull 1 yr.

Ayrshire, Grades—Cow, 4 yrs. and up, 1, J. S. Ellis; 2, Adolph Corning; 3, O. L. Churchill.

Jerseys, Registered—Bull, 3 yrs. and up, 1, Harry Cann; 2, R. J. Melvin.—Bull 2 yrs., 1, John C. Corning; 2, F. G. Cook, Jr.—Bull, 1 yr., 1, I. M. Lovitt; 2, Amos A. Cook; 3, Frank Cann.—Bull calf, 1, Clifford Cann; 2, Stephen Bain.—Bull calf, 6 mos. and

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MY DEAR READER:

In the handsomely printed little book or private pocket compendium for men (containing 8,000 words and 40 half-tone photo-reproductions), which I publish and gladly forward by mail, free, sealed to any man anywhere in the world who sends me the free coupon below, I have included certain parts that contain some very important advice or suggestions of a strictly personal nature, which, I believe, cannot be found in any of the Private Hygiene books for men that are now sold at high prices all over the country. It will thus be seen I have endeavored, through the medium of my free book, to give my readers absolutely free of cost really MORE, in some respects, than others offer and make a large charge for. All you have to do to get this free book of mine is to use the coupon below, or if in my neighborhood, I extend an invitation to you to call at my office. Please remember that this free offer involves absolutely no obligation on your part, and there is nothing whatsoever for you to pay, and nothing whatsoever for you to buy in any way, unless you should decide at some time in the future that you would like to try one of my mechanical VITALIZERS (described below), but that rests entirely with yourself. Over a million of these little free books have now been sent to men who wrote for them, as I want you to do, and who live in all quarters of the globe. I publish this free book in English, Swedish, Danish, Finnish, German. French and Polish, but I always send the English edition of course, unless otherwise instructed. Kindly use the little coupon.

SANDEN, AUTHOR.

In reference to manly strength, I believe it is now more generally acknowledged than ever before that the manly man stands back of all that makes for progress, development and achievement in the world, a truth which any of us can easily verify if we but look about us with impartial eyes.

As a matter of fact, the man who is debilitated, unstrung and enervated cannot, for perfectly obvious reasons, expect to approach those real and masterful attainments which seem but a natural and easy accomplishment for him whose nerve force, brain power and manly strength are perfectly normal. Hence, we acknowledge the debilitated, weakened man to be handicapped in every walk of life where real manhood counts, yet it would indeed be cruel of me to here so state the fact in public print were I not of the honest opinion that there is every hope for the unmanly man to restore himself to a state of health and vigor, if he but clear his mind of abnormal fear, and then make a fair, square effort to redeem himself.

There are two specimens of humanity for which I have no earthly use. One is the man who, though now strong and vital, yet plunges into dissipation and excess with the certain knowledge of his unmanly fate. The other is the man who, though knowingly debilitated and enervated, makes no effort to get away from his life of dissipation and wrong practices. As a matter of fact, there is no hope for either of these unfortunates But for him who acknowledges his errors, who may come to me and say. "I have paid the penalty of my past follies, but I am THROUGH with my life of dissipation, and I am going to make a manly effort to restore myself," to such a man, I care not what his physical condition may be, I can say in all truthfulness, "You, my friend, are on the right road to new strength and new manhood", for he really is, and there is no doubt about it.

I make a little appliance that I call a VITALIZER, which I designed to aid just such men who seek manly strength. I am not offering this VITALIZER here for sale, but merely suggest that you, reader, take the opportunity to learn all about what this little appliance is doing today everywhere throughout the world; then, if in the future you want to use one yourself and will so write me, I will gladly make some liberal proposition whereby you may have one to try. The VITALIZER is fully described in one section of the free book which the coupon below entitles you to.

The VITALIZER is made up in a very light form weighing only several ounces, and you wear it on your body all night. It generates a great, soft, pleasant FORCE which I call VIGOR, and which flows in a continuous stream into your nerves, organs, blood and muscles while you sleep. I am satisfied in my own mind that I have access to a great POWER in this little VITALIZER which in the future will be more and more relied upon all over the world in the treatment of debilities and nerve weaknesses.

With special attachments which carry the FORCE of the VITALIZER to any part of the body, it may be used by women as well as men for the treatment of rheumatism, kidney, liver, stomach, bladder, disorders, nervousness, lack of energy, etc. Therefore, please send for the book today, or if you happen to live in or near this city, I should be very glad to see you in person. Office hours, 9 to 6.

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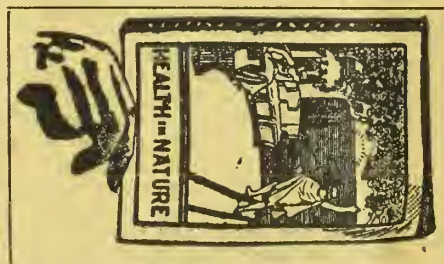
The little free illustrated book of special private information, referred to above, is meant really to be a self guide for all men through the years before and after marriage and onward to a ripe old age. It is written in perfectly plain language, entirely free from technical terms, so that any one may easily grasp the full power of its good advice from two or three careful readings. It attempts to point out a safe road to new manhood or new manly strength, and as such is dedicated to mankind generally. One part of this book fully describes my little VITALIZER referred to above.

Remember, as soon as the coupon below is received I agree to forward to you one copy of this illustrated booklet, absolutely free of charge and in a plain, sealed envelope, so that it will come to you privately, just as you receive any sealed mail.



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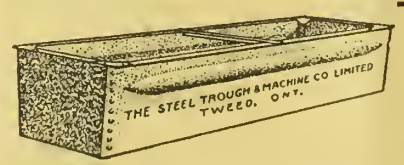

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under, 1, Clifford Cann.—Cow, 4 yrs. and up, 1, and 2, Clifford Cann; 3, Adolphus Corning.—Cow, 3 yrs., 1, I. M. Lovitt; 2, John C. Corning.—Heifer in milk, 2 yrs., 1, I. M. Lovitt; 2, Clifford Cann.—Heifer, dry, 2 yrs., 1, Harry Cann; 2, H. B. Cook.—Heifer, 1 yr., 1, Clifford Cann; 2, H. W. Cook; 3, Stephen Bain.—Heifer calf, 6 mos. and over, 1, Harry Cann; 2, John C. Corning; 3, Benj. Bain.—Heifer calf 6 mos. and under, 1, Adolphus Corning; 2, Clifford Cann; 3, Chas W. Patten.

Jersey, Grades—Cow, 4 yrs. and up, 1, Clifford Cann; 2, C. W. Cook; 3, John W. Corning.—Cow, 3 yrs., 1, Harry Cann; 2, Ross Durkee.—Heifer, 2 yrs. in milk, 1, Ross Durkee; 2, Leslie Spears.—Heifer, 2 yrs., dry, 1, Wm. A. Churchill; 2, Douglas Trask; 3, F. G. Cook, Jr.—Heifer, 1 yr., 1, C. W. Cook; 2, Amos A. Cook; 3, W. H. McConnell.—Heifer calf, 1, C. W. Cook; 2, Adolphus Corning; 3, W. H. McConnell.—Heifer calf, 6 mos. and under, 1, Fred Patten; 2, Clarke M. Killam; 3, Adolphus Corning.

Devons, Registered—Wm. A. Pinckney secured 5 1sts, 2 2nds; Chas. G. Pinckney, 1 1st, 1 2nd and 1 3rd; Kenneth Bullerwell, 1 on 2 year old bull; Harold Pinckney, 2nd on 4-year-old cow; Mrs. Henry Pitman 1st on heifer, dry, 2 yrs.; Hartley Pitman 2nd on heifer, 1 yr.; Mrs. Henry Pitman 1st an heifer calf, 6 mos. and under, and Harold A. Pinckney, 2nd ditto.

Devons, Grades—Chas. G. Pinckney took 3 1sts; also F. W. Burrill, 2nd on cow, 4 yrs.; Frank Burrill, 1st on heifer, 2 yrs. in milk; Gordon A. Nickerson, 1st on heifer calf, 6 mos. and over; 2, Hartley Pitman.

Guernseys, Registered—H. W. Corning took 8 1sts, 7 2nds, 3 3rds.; L. Cook 3rd on 3-year-old bull; J. S. Boyd, 3rd on heifer, dry, 2 yrs. old.

Guernseys, Grades—Cow, 4 yrs and up, 1, C. W. Cook; 2, H. W. Corning; 3, J. A. Ellis.—Cow, 3 yrs, 1, Howard Murphy; 2, Geo. Cleveland; 3, C. W. Cook.—Heifer, 2 yrs., in milk, 1, Hugh Murphy; 2, Maynard Hornet; 3, Adolph Corning.—Heifer, 2 yrs., dry, 1, Lloyd W. Coop; 2, Harry A. Boyd.—Heifer, 1 yr., 1, Murray Murphy; 2, Geo. L. Porter, 3, Emerson Servant.—Heifer calf, 6 mos. and over, 1, H. W. Corning; 2, Fred L. Rose; 3, Stewart Servant.—Heifer calf, 6 mos. and under, 1, H. W. Corning; 2, Haskell.

Holsteins, registered—Cow, 4 years and up, 1, Adolphus Corning; 2, Edison Cann; 3, Adolphus Corning.—Cow, 3 yrs., 1, Adolphus Corning.—Heifer. 1 yr., 1, Edwin Cann.

Holsteins, Grades—Cow, 4 yrs. and up, 1, Geo. W. Churchill; 2, Adolphus Corning.—Heifer, 1 yr., 1, Harold Pinckney; 2, Ross Durkee; 3, Wm. Porter.—Heifer calf, 6 mos. and over, 1, Geo. L. Porter; 2, Wm. O. Porter.—Heifer calf, 6 mos. and under, 1 and 2 Douglas Trask.

Herefords, Registered—Geo. H. Burrill took 4 1sts in the Grades, 2 1sts 1 2nd: also F. W. Burrill, 1st on cow 4 yrs.; Heifer 1 yr., 1, Hazel Churchill; heifer calf 6 mos. and over, 1, ill; heifer calf, 6 mos. and ovet, 1, Webster Burrill; 2, Earle Merrithen; 3, Sam Burrill.—Heifer calf, 6 mos. and under, 1, Webster Burrill; 2, Samuel Burrill.

There was an exhibit of Aberdeen Angus, bull calf, and heifer calf, worthy of first honors; name not mentioned.

Oxen, Steers, etc., any breed.—Yoke working oxen, 7 yrs. and up, 1, John C. Corning; 2, Geo. E. Killam; 3, Frank Burrill.—Ditto, 6 yrs. old, 1, J. A. Ellis; 2, H. B. Cook; 3, Geo. W. Churchill.—Five yrs. old, 1, Douglas Winter; 2, O. L. Churchill; 3, Jas. N. Purdy; 4 yrs. old, 1, Chas. Lyons; 2, Alex Spears; 3, Douglas Trask.—Yoke Steers, 3 yrs., 1, Chas. G. Pinckney: 2 yrs., old, 1, Robert A. Goudey; 1 yr., 1, Robert G. Goudey; 2, Edric F. Cann; 3, Keith Boyd.—Pair steer calves, 6 mos. and over, 1, F. W. Burrill; 6 mos. and under, 1, Kenneth Perry; 2, Edric F. Cann; 3, Samuel Burrill.

BEEF CATTLE.

Pair beef oxen, 4 yrs. and up, 1, Edric F. Cann; 2, Wm. A. Killam; 3, Geo. I. Handy.—Pair beef steers, 3, yrs., 1, Benj. Bain; 2 yrs. old, 1, Guy W. Earle.—Beef cow, 3 yrs. and up, 1 and 2, I. M. Lovitt; 3, Adolphus Corning.

SHERP.

Leicester, Pure Bred—Ram, 2 shears and over, 1, John F. Palmer & Sons; 2, Austin L. Robbins.—Ewe, 2 shears and over, 1, Austin L. Robbins.—Ewe lamb, 1, Austin L. Robbins.

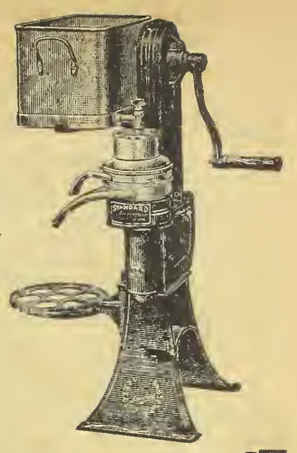
Cotswold, Pure Bred—Ram, 2 shears shearling, 1, Fred L. Rose.—Ram lamb, 1, Alfred Servant.—Ewe, 2 shears and over, 1, Geo. W. Churchill; 2, Hazel Churchill; 3, Emerson Servant.—Ewe, shearling, 1, 2 and 3, Emerson Servant.—Ewe lamb, 1, 2 3, Emerson Servant.

Shropshire, Pure Bred—Ram, 2 shears and over, 1, B. B. Killam; 2, John C. Corning; 3, Mrs. Geo. Sherman.—Ewe, 2 shears and over, 1 and 2, John C. Corning; 3, J. R. Golden.—Ewe, shearling, 1 and 2, John C. Corning.—Ewe lamb, 1 and 2, John C. Corning.

Oxford Downs, Pure Bred—Ram, 2

(Continued on page 64.)

Right Up To The Last Minute



There is no complicated "nest of gears"—no hard-to-clean "contraptions" in the bowl—no oil cups or glass lubricators—on the

Standard

cream separator. There's nothing "obsolete" in the whole machine. It's right up to the last minute. Built of the best materials by the most costly machines, and rigidly tested.

The few, simple working parts can be held in one hand. Every gear and bearing runs in a bath of oil, and machine needs to be oiled but once in four months. Wide-open bowl and perfectly smooth discs easily cleaned. Supply can about a foot lower than most machines. Crank four inches higher, eliminating back-breaking stooping. All working parts enclosed, keeping out dust and making it impossible for children to get hands or clothes injured.

These are some of the features that go to prove the Standard's up-to-dateness. Others are told about in our new catalog, which also shows the new records for close skimming established by the Standard at Government Dairy Schools. Write for a copy of this new catalog.

The Renfrew Machinery Co., Ltd.

Head Office and Works, Renfrew, Ont.

Sales Branches at Sussex, N. B. Saskatoon, Sask., Calgary, Alta.

Agencies Almost Everywhere in Canada.

Look for this label on every bag

CANADA CEMENT COMPANY LIMITED
PORTLAND
CANADA
CEMENT
MONTREAL

IT means *best quality—tested* quality—*full measure* and *thorough satisfaction.*

It is on every bag of

CANADA Portland CEMENT

UNLESS you have facilities for testing cement, you must depend upon the manufacturer for Cement that is reliable — Every car of Canada Cement is thoroughly *tested,* and unless it passes every test it is not allowed to leave the mill.

You can *depend* upon Canada Cement.

Be sure you get it.

Canada Cement Company Limited, Montreal

There is a Canada Cement dealer in your neighborhood. If you do not know him, ask us for his name.

Write our Information Bureau for a free copy of the 160 page book "What the Farmer Can Do With Concrete."

Keeping Food in Summer.

The United States Department of Agriculture recently issued the following practical suggestions in regard to keeping food and drink in hot weather, with a view to helping the public avoid sickness from eating spoiled articles of diet:

While people should be careful about the condition of the food they eat at all seasons of the year, they should be particularly watchful during the summer months. In hot weather, bacteria multiply far more rapidly than in cold weather and produce chemical changes in some foods which greatly lessen their nutritive value and often make them unfit for human consumption. Unfortunately, there is no quick, absolute, simple, practical way of determining the presence of hurtful bacilli in foods, or of obtaining positive evidence of the existence of ptomaines. The average family does not have the delicate apparatus needed for these tests, nor the skill to detect these micro-organisms.

The housewife will find eyes and nose the safest practical detectives of bad food in hot weather. If any article has any suspicion of an unusual odor or looks abnormal, it should be avoided. People eating in doubtful restaurants should be particularly careful about meats or fish cooked with a highly spiced or aromatic sauce which might disguise a bad taste or warning odor. Only sweet smelling, clean food should be eaten. Spotted, green, slimy, or frothy raw meat, or meat which is soft in spots also should be regarded with suspicion. Taste of course is a supplementary test, but one to be used after eyes, nose and fingers. A mother before she allowed her child to eat anything should examine it carefully in a good light, smell it, and finally taste it.

Milk particularly deteriorates rapidly under summer heat, especially if it already contains bacteria. Housewives, therefore, should see to it that their milk after being left by the milkman does not stand for any length of time on a hot back porch or stoop before it is put in the ice box. Milk bottles should be kept closed, both in the ice box and out of it. If there is any doubt at all as to the excellence of the local milk supply, pasteurize all milk.

All foods should be kept covered or wrapped, and always out of the reach of flies, which are deadly carriers of typhoid. All vessels, pitchers, etc., in which food is to be stored should first be scalded. Food should be handled as little as possible. The ice box, especially its drain pipe, should be cleaned thoroughly and frequently with boiling water and washing soda, and given an occasional airing. A persistent battle should be waged against flies in all parts of the home.

Uncooked foods as a general proposition should be avoided. Children should not be allowed to eat the skins of fruits, especially fruits which have been exposed to flies or street dirt on unscreened stands or push-carts.

Those who go away for vacation should not get the idea that everything in a summer resort or strange city is necessarily pure and wholesome. The danger of typhoid fever in country resorts is very great. Many of the cases of typhoid fever recorded in the fall in cities where the water is pure had their origin in water or contaminated substances drunk or eaten at some summer resort. Insist on boiled water. If you absolutely cannot get boiled water, make very sure about the reputation of springs, wells, or tap water. Refuse absolutely to take any water that comes from a source near an outhouse or stable, or in a neighborhood where fever is at all prevalent.

Boiled water can be made just as palatable as unboiled water. The flat taste which boiled water has soon after it has been boiled is due to the fact that boiling drives out of it the air which it held in solution. If the water after boiling is put in scalded shallow open pans and allowed to stand for 44 hours where flies or dirt cannot get at it, it will regain its air and have its usual taste restored by the second day.

Finally, it is particularly important in summer that people should not be misled into believing that the label, "Guaranteed under Food and Drugs Act," on cans and packages means that the government has tested these foods and pronounced them pure and desirable. The government does not make the guarantees. The guarantee is made wholly by the manufacturer, and means no more than when your own corner grocer guarantees that the sugar he weighs out for you is all right. Examine goods labeled "guaranteed," just as carefully as any other kind.

The Business of Living.

Do you ever stop to ask yourself why you are slaving away from morning until night? Is it for the doubtful satisfaction of laying up money in the bank, or buying more land, of being able to retire to town in your old age. Are any of these objects worth struggling towards through good health and ill? Today, with its small measures of twenty-four hours is all we have to use. Shall we live today or shall we give it with its drudgery and weariness to buy some glorious tomorrow which we may not be spared to enjoy?

I am afraid that in too many of our homes we are trying to run a bank account with life in which we hope to deposit many years of toil and backaches and meagre living and lonliness and draw out a few years of comfort and sociability at the end.

I have seen it happen so often that just as a man or a woman had decided that they could give up and take it a little easier the over-worked machinery, which is the body, slipped a cog and they passed into the great beyond without ever having drawn their interest.

It always gives me a queer little gripping feeling at the throat to see this, for I feel that these people have passed through life without having learned how to live.

That is why I am writing today to ask farm men and women who are hording up money while they live in the same old incommodious houses to bide-a-wee and think whether it is not better worth while to spend four or five hundred dollars now on installing a furnace, a water system, a lighting plant, a power washer and a gasoline engine to run it and the churn and the cream separator than to drag out an over-worked existence for another ten years.

Life is not measurable in dollars and cents but in the happiness and sweetness it has contained and it does not pay to put off taking its good things for too many years. It is better to gather the flowers of summer as we go and then if our summons comes early we will not have to leave behind us a barren stretch of years unfruitful in everything but wealth.

Cramp in the Leg.

a good strong cord (a long garter will do if nothing else is handy), and when the cramp comes on take the cord, wind it round the leg over the place that is cramped, take an end in each hand, and give it a sharp pull —one that will hurt a little. Instantly the cramp will depart, and the sufferer can go to bed assured it will not come on again that night.

Fancied Complaints.

A well-known doctor once gravely aserted that a third of the cases of illness of patients which came under his notice were neither more or less than imaginary, and yet it was impossible for him to tell his patients so without giving mortal offence, as their ill-health gave them a distinction which was gratifying to their self-love. If these people are told the honest truth, the result is sometimes real illness, for, having taken from them the fancied necessity for coddling themselves, life's interest and occupation would be gone, and the consequent nervous depression would seriously affect their health.

The Hydraulic Ram.

To most people an hydraulic ram is a mystery. As a matter of fact, it is the most simple and efficient mechanical device for raising water by water power. This is probably what makes it seem so mysterious to those who have never seen a ram at work.

Hydraulic rams are not only adaptable for pumping water for household purposes, but they can be used for delivering large quantities of water for irrigation, town water works, railroad tanks, etc. Where the least possible expense must be incurred for pumping water for any of these purposes, there is naturally a great demand for rams. This applies particularly to irrigation as it enables the farmer to raise crops at a minimum cost per acre.

Hydraulic rams can derive the power for operating them from a spring, brook, flowing artesian well or river. If the ram can be located at such a point that a constant stream of water can be supplied to it through a pipe having an incline or fall of three or more feet in a given distance, the conditions being such that the power water which escapes at the ram can be drained away, it is possible for the ram to deliver a steady stream of water to a point at an elevation 30 times the difference between the levels of the ram and the water supply. This stream of water once started flowing, will continue without interruption, day and night, winter and summer, requiring no attention nor expense except for the renewal of rubber valves. This is a trifling expense, as the valves cost but little.

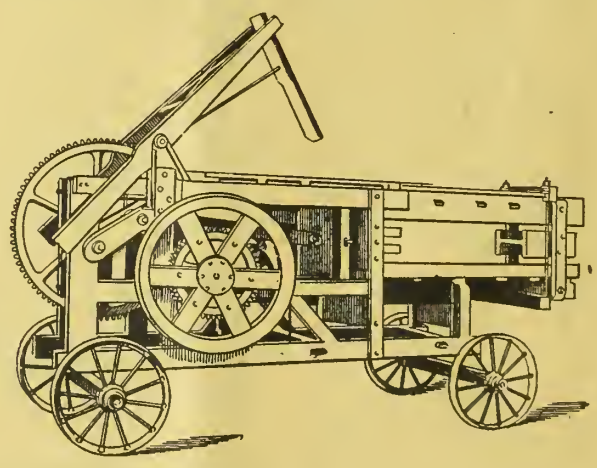
The efficiency of a ram can be very great, reaching, under favorable conditions, 80 per cent or more. This means that the ram will pump more water to the same height than any other kind of egine which pumps water by means of water power.

The amount of water that may be pumped per day by such a ram is remarkable. It will pump as much as 250,000 gallons a day. If a delivery of 2,000,000 gallons a day is required, a "battery" of rams can be installed. That is, two or more rams are placed side by side.

Where pneumatic pressure tanks are used instead of gravity tanks, rams will not only supply the water, but also maintain the air pressure up to 100 pounds, as may be desired — Scientific American.

Hay Presses & Woodcutters

Our Hay Press is operated by either Steam, Gasoline Engine or Tread Power. The whole machine is so powerfully constructed that no jar is felt in any part when in operation. The Bale Box is steel lined. The Side Springs, which are thoroughlv tested, are made of the best quality of Spring Steel, The Folder is located to do perfect work, and requires but a slight spring pressure to operate.



We manufacture our Woodcutters in four different sizes and styles: two styles Long Swing, Short Swing and Flat Roller Table.
All our machines are guaranteed for a year against any defects in workmanship and material.

Write for Catalogue and prices.

The Sussex Manufacturing Co., Ltd.

Sussex, N. B.

What We Gain by Rotation.

In the first place we get a greater return from the soil by rotating our crops, taking one year with another This has been demonstrated time after time, though the cause is not always apparent.

By rotating, soil will produce more even if no manure is applied. But it must be recognized that in that case the plant food in the soil is being depleted more rapidly than it would be if only one crop were grown. After all it is the taking of plant food out of the soil and turning it into merchantable products that makes money for the farmer, so we can afford to rotate to a limited extent.

I do not wish to be understood as saying that our sole aim should be to take plant food out and turn it into cash but let the cash crop come in the rotation after the soil has had a good feed.

Freedom from insects is helped by rotation. Certain insects are peculiar to certain crops. It generally takes a few years for a certain kind of crop to become infested with such insects. If the crop is taken off the field, and another put on as soon as the insects get bad, it will prove a check to the insects. This is notably so with the bill bugs that sometimes infest corn fields and with the wire worms that infest old meadows.

Grass lands are probably more improved by rotating than any other crop of the farm, for the reason that many of our old meadows are infested with insects and have been mown so long that they have become thin. It is noticeable that a thin meadow plowed up and put into a cultivated crop will, when again put into grass, produce remarkably well.

While the rotation of the meadows [illegible] is not always desirable, in the main it enormously increases the production of that land. I remember on large fields that had been devoted to grass growing for so many years that the sod had become thin and the grass on it was hardly worth cutting. It was plowed up and put into potatoes and cultivated crops for three years after which it was returned to grass land.

For several years after the grass grew so high and the hay made from it was thick, that it was always a question as to how it could be properly cured.

Destruction of weeds is one of the things we gain to a considerable extent by rotating our crops. When such things as the wild morning-glory and the wild onion appear in the grain fields, rotation becomes a necessity. The crop that requires the most cultivation and that will pay best by such cultivation is the best weed killer.—Ex.

Bang System Vindicated.

Readers of farm papers, who have followed the cattle tuberculosis question at all carefully are familiar with the Bang system, which is the segregation of the healthy animals in a diseased herd, or more particularly the offspring of the tuberculous parents, by removing them after birth and keeping them from chance of infection. A very interesting experiment in this connection has been made under way at the Woburn Experiment Station in England, and the results so far corroborate emphatically the conclusions of Dr. Bang, the Danish Scientist. A farm of fifty acres was taken over for this purpose three years ago. The Royal Agricultural Society under whose direction the experiment is being conducted, obtained cows that were known to be tuberculous, that had reacted to the test and were very miserable specimens. When they calved the offspring were brought straight away without getting a drop of their mother's milk, to this farm, where they were fed on sterilized milk and cooked foods, and kept apart from other stock. The man in charge did not go to the main farm at all, and did nothing but look after the animals. Fifteen calves, nine bullocks and six heifers were raised. These were fed until just over two years of age, and on May 24th last the steers were killed. They had previously been tested for tuberculosis, and in no case was there any sign of the disease, and when killed at Islington market were found entirely free from it. The heifers were served by bulls previously tested, and all were put in calf. Three calves have already been produced. The calves will be kept for a month and slaughtered with their parents. If they turn out to be free from the disease it will be conclusive proof of the efficacy of this plan of eliminating tuberculosis from herds of cattle.

Clipping the Horse.

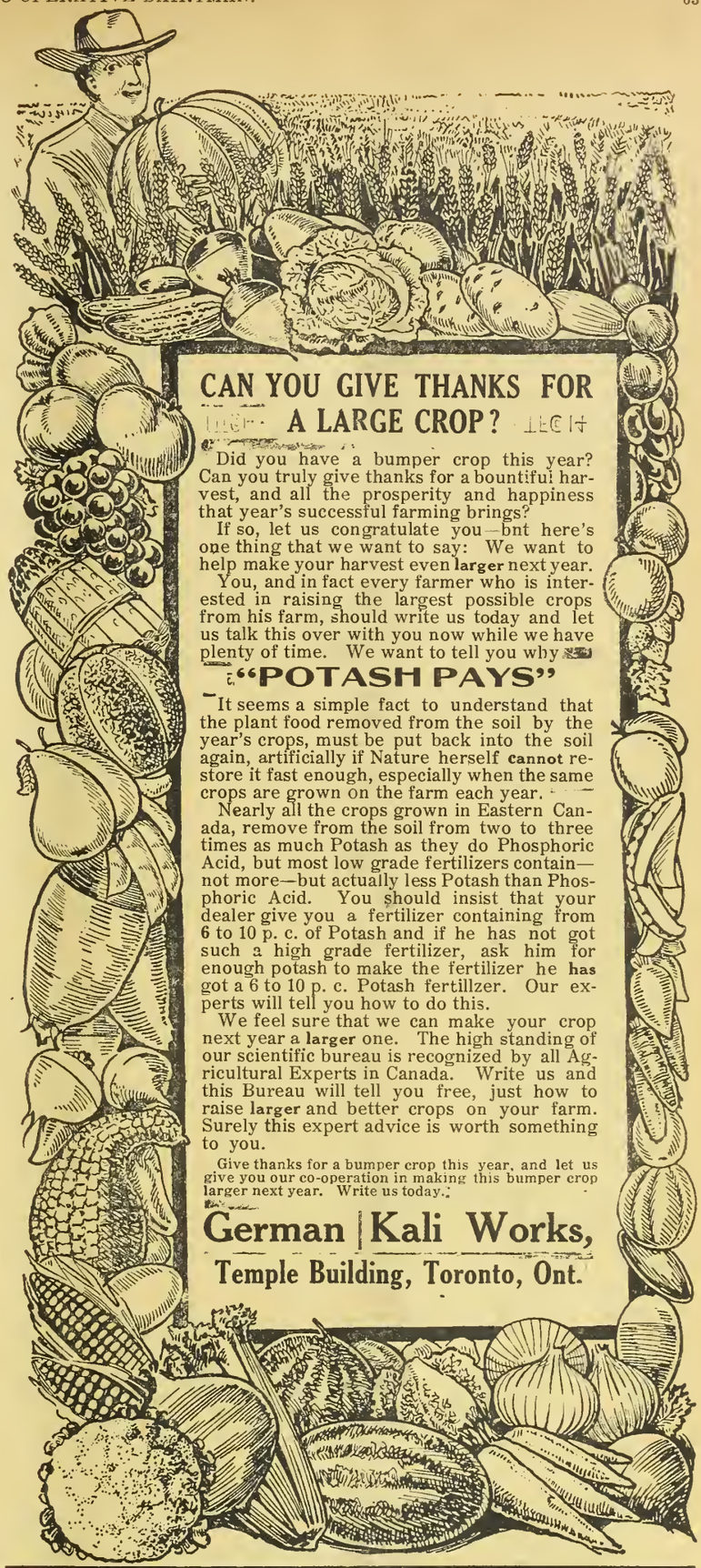
The subject of clipping the horse is a matter of considerable discussion at this time of the year. The following suggestions may be of benefit to those who are contemplating clipping their horses. In the first place, never clip a horse that has a fine coat of hair, as it will then be necessary to clip it every fall and spring thereafter, writes C. H. Barnes of the Colorado College. The only horses that should be clipped are those with heavy coats, that can be cared for during the winter, such as blanketing warmly in the stable and covering with a canvas sheet during severe storms while at work. The advantage in clipping a horse is that the long-haired horse, after sweating profusely, will not dry off during the night. This condition will cause the horse to take cold, the inflammation being located in the nose, throat, or lungs. It would not be a good policy to clip a horse and then turn it out to a straw pile for the winter. Clipped horses should never be allowed to stand uncovered, as they chill quickly. A clipped horse dries off readily, mud is easily removed from the legs, and there is no disagreeable hair flying during the period of shedding. In the fall clip as soon as the flies do not bite the animal, while in the spring, clip before the horse begins to shed.

Clydesdales for Canada.

Under the above caption a recent issue of the Scottish Farmer says:—

"The Letitia, which sailed a week ago, had on board a superior selection of big, useful Clydesdales stallions of approved merit and reputation as stock-getters. They were purchased from Messrs. A. & W. Montgomery, Kirkcudbright. Mr. R. A. Snowball, Chatham, N. B., had a remarkably well-bred two-year-old colt, bred at Harviestoun, and got by the champion sire Baron's Pride (9122), out of Minnehaha (1 756), a granddaughter of the celebrated champion mare Sunray, which in the later eighties and the earlier nineties was one of the greatest show mares of her time. The sire of Minnehaha was the world-famed champion Hiawatha (10067), and her dam was Merry Sunshine (13953), by the Prince of Wales horse Queen's Own (7176). This colt is bred for weight, size, and quality. His breeding is the most fashionable combination of recent years, and he is likely to prove a valuable sire."

The incessant drain on a sow that is sickening to a litter of pigs sharpens her appetite amazingly and she will need liberal feeding.



CAN YOU GIVE THANKS FOR A LARGE CROP?

Did you have a bumper crop this year? Can you truly give thanks for a bountiful harvest, and all the prosperity and happiness that year's successful farming brings?

If so, let us congratulate you—but here's one thing that we want to say: We want to help make your harvest even **larger** next year.

You, and in fact every farmer who is interested in raising the largest possible crops from his farm, should write us today and let us talk this over with you now while we have plenty of time. We want to tell you why

"POTASH PAYS"

It seems a simple fact to understand that the plant food removed from the soil by the year's crops, must be put back into the soil again, artificially if Nature herself **cannot** restore it fast enough, especially when the same crops are grown on the farm each year.

Nearly all the crops grown in Eastern Canada, remove from the soil from two to three times as much Potash as they do Phosphoric Acid, but most low grade fertilizers contain—not more—but actually less Potash than Phosphoric Acid. You should insist that your dealer give you a fertilizer containing from 6 to 10 p. c. of Potash and if he has not got such a high grade fertilizer, ask him for enough potash to make the fertilizer he **has** got a 6 to 10 p. c. Potash fertillzer. Our experts will tell you how to do this.

We feel sure that we can make your crop next year a **larger** one. The high standing of our scientific bureau is recognized by all Agricultural Experts in Canada. Write us and this Bureau will tell you free, just how to raise **larger** and better crops on your farm. Surely this expert advice is worth something to you.

Give thanks for a bumper crop this year, and let us give you our co-operation in making this bumper crop larger next year. Write us today.

German Kali Works,

Temple Building, Toronto, Ont.

"ORANGE LILY SAVED MY LIFE"

These words or expressions having the same meaning are contained in hundreds of the letters I have received during the past year. Many were from women who had suffered agonies from falling of womb; others from women who had escaped dangerous surgical operations, as the tumors and ulcers had been removed by the action of Orange Lily; and others who had suffered from suppressed menstruation, leucorrhoea, painful periods, etc. For all these and the other troubles known in general as Women's Disorders, Orange Lily furnishes a positive scientific, never-failing cure. It is applied direct to the suffering organs, and its operation is certain and beneficial. As a trial actually proves its merit, I hereby offer to send, absolutely free, a box worth 35c., sufficient for ten days' treatment, to every suffering woman who will write for it. Enclose 3 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

Was Subject to Hot Flushes,

PALPITATION OF THE HEART, SHORTNESS OF BREATH.

Mrs. J. Carrol, Mount View, Ont., writes:—"I am an elderly woman now, and about two years ago I became faint, was subject to hot flushes, palpitation of the heart and shortness of breath. I went to a doctor but seemed to remain the same, until one of my neighbors recommended Milburn's Heart and Nerve Pills. I gladly followed the advice, and am to-day a strong, robust woman, and I thank Milburn's Heart and Nerve Pills for my present state of health, and have recommended them to all who I have learned of suffering from heart trouble."

Price 50 cents per box or 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.

Direct Parchment Importers, Sussex, N. B.

When you have a bad cold you want the best medicine obtainable so as to cure it with as little delay as possible. Here is a druggist's opinion: "I have sold Chamberlain's Cough Remedy for fifteen years," says Enos Lollar, of Saratoga, Ind., "and consider it the best on the market." For sale by all dealers.

Farmer Ads Are Business Getters

Prize-Winners at the Yarmouth Exhibition.

(Continued from page 61.)

shears and over, 1, Alvin W. Robbins —Ewe 2 shears and over, 1 and 2 Henry McKenna.—Ewe, shearling, 1, Alvin W. Robbins; 2, Ray McKenna.—Ewe lamb, 1, Henry McKenna; 2, Ray McKenna; 3, Alvin W. Robbins.

Cheviot, Pure Bred—Ram, shearliug, 1, Alvin W. Robbins.

Dorset, Pure Bred Ram, 2 shears and over, 1, Alfred Servant; 2, Miss Fannie Lewis.—Ram lamb, 1, Alfred Servant.—EUe, 2 shears and over, 1, 2 and 3, Alfred Servant.—Ewe, shearling, 1, 2 and 3, Alfred Servant.—Ewe lamb, 1, 2 and 3, Alfred Servant.

GRADES AND CROSSES.

Leicester—Ewe, 2 shears and over, 1 and 2, John F. Palmer & Sons; 3, Geo. W. Churchill.—Ewe lamb. 1 and 2, Ruth N. Robbins; 3, Austin L. Robbins.

Cotswold—Ewe, 2 shears and over, 1, Hazel Churchill; 2, Geo. W. Churchill; 3, Emerson Servant.—Cotswold ewe, yearling, 1, Fred L. Rose; 2, Emerson Servant; 3, Fred L. Rose.—Ewe lamb, 1, Alvin W. Robbins.

Shropshire ewe, 2 shears and over, 1, 2 and 3, Chas. H. Butler.—Ewe, yearling, 1 and 2, Chas. H. Butler; 3, Ruth H. Robbins.—Ewe lamb, 1 and 2, B. B. Killam; 3, J. E. Golden.

Cheviot ewe, yearling, 1 and 2, Alvin W. Robbins; 3, C. R. Golden.—Any other breed ewe, 2 shears and over, 1 and 2, Alfred Servant.—Any other breed ewe, yearling, 1, Alfred Servant; 2 and 3, Miss Fanny Lewis. —Any other breed ewe lamb, 1 and 2, Miss Fanny Lewis.—Fat wether or ewe, 1, 2 and 3, Chas. H. Butler.

SPECIAL.

Pen lambs, 1, Clarke M. Killam; 2, J. E. Golden.

SWINE.

Poland China boar, 1 yr. and over, 1, Alfred Serpant.—Berkshire boar, 1, J. Munro Cook.—Chester White Boar, 1, H. W. Corning.—Yorkshire Boar, 1, W. A. Churchill.—Poland China Sow for breediog, 1 yr. and over, 1 and 2, Alfred Servant; ditto, 1 yr. and under and over 3 mos., 1 and 2, Alfred Servant.—Chester White Sow, 1 yr. and over for breeding, 1, 2 and 3, H. W. Corning.—Yorkshire Sow 1 yr. and over for breeding, 1, W. A. Churchill; 2, John C. Corning; ditto, 1 yr. and under and over 3 mos., 1 and 2, W. A. Churchill.—Berkshire Sow, for breeding, 1 yr. and over, 1 and 2, H. W. Corning, 3, J. C. Corning.

Grade Sow, aoy breed, over 1 year, 1, Alfred Servant; 2, James V. Purdy; 3, John C. Corning; ditto, under 1 yr. and over 3 mos., 1, Lenley E. Porter; 2, S. A. Cook; 3, Fred L. Rose.—Spring pig, 1, Adolphus Corning; 2, Fred L. Rose; 3, Wm. O. Porter—Litter spring pigs, 1 and 3, H. W. Corning; 2, Jas. N. Purdy.

The 1913 Maritime Winter Fair.

The price lists of the Maritime Winter Fair are now in the hands of the stock breeders.

The dates on which the Fair will be held are December 8th to 11th inclusive. Col. H. Montgomery Campbell, the President, and F. L. Fuller, the Secretary—Manager are still at the helm and associated with them on the managing committees are the foremost agriculturists of the Maritime Provinces. Entries for the Fair close on November 20th. The Winter Fair is the most educational event in the series of fall fairs and exhibitions. Plan to make an exhibit in one or more of its departments and be present with your progressive fellow citizens on December 8th to 11th.

HIGHEST PRICES PAID FOR LIVESTOCK FED ON

MOLASSINE MEAL

Made in England

ROYAL WARRANT

After supplying the Royal Stables for several years, His Majesty King George V has granted a Royal Warrant to the makers of MOLASSINE MEAL

FINE TRIBUTE FROM MESSRS. PENNISTON:

Molassine Co. Ltd.
402 Beard of Trade Bldg.
Montreal, Que.

Dear Sirs—We have been feeding your "MOLASSINE MEAL" since last September to our Milch Cows and we must say that after feeding your Meal about three weeks the flow of milk was increased and also the quality, and all during the Winter and Spring months the yield was uniform.

At our recent sale, held a short time ago, we received the very highest price for our stock and contribute it to our regular feeding of your Meal.

Yours truly. (Signed) PENNISTON BROS.

No one can doubt that it pays to feed "MOLASSINE MEAL" after reading the above testimonial. Therefore, why not have the same results? Begin to feed your live-stock to-day and enjoy the same high prices.

Look for this Trade Mark

on every bag.

"MOLASSINE MEAL" is put up in bags containing 100 lbs. Ask your Dealer for it or write directly.

MOLASSINE Co. OF CANADA LIMITED

934 ST. JOHN, N.B. MONTREAL TORONTO

High Quality Builds Big Telephone Business

THIS business was organized to manufacture telephone equipment for independent local and municipal systems. Right from the start our equipment made records for efficiency. It did not take long for our goods to acquire a reputation for quality and reliability. As a result our business has grown by leaps and bounds.

It is a well known fact that we have been securing over 80 per cent. of the new telephone business in Ontario. The business, too, has been secured with less effort than business secured by competitors. The satisfaction our telephones and equipment have given under all conditions has paved the way for easy business getting.

To judge how fast our business is growing, yov'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the local telephone business, that we are the legitimate people to deal with. There are those in the local telephone business who are interestsd in depreciating the success of the independent telephone movements and the development of municipal systems. On the other hand, our business lies wholly and directly with the independent systems and it is to our own best interests to look after these systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten, are using our telephones and equipment.

You are absolutely safe in equipping your system with our telephones. We guarantee them as regards material and workmanship. In fact we guarantee all our equipment and materials. And in addition, we offer to send our telephones for **Free Trial**, so you can test and compare them with others right on your own lines before risking a dollar.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—also No. 4, describing our magneto telephones is free on request.

Send for a Copy-

Canadian Independent Telephone Company, Limited.

1820 Duncan St., - - Toronto, Canada.

"Also manufacturing agents for the Magnaphane Co., under Mr. George R. Webb's Canadian Patents No. 123363, No. 124537, No. 131145."

Uses for Sawdust.

(Continued from page 57.)

pressed into a cylindrical tube where it is cut into short lengths by a revolving knife, emerging in the form of small round briquets. These briquets are clean to handle, easy to kindle, and leave very little ash.

In England sugar is manufactured on a commercial scale by treating sawdust in closed retorts with weak sulphurous acid under high pressure. In Austin, Texas, also a plant is being built to manufacture stock food from sawdust, by a somewhat similar process. The tar, pitch and turpentine are removed from the sawdust leaving only sugar and fibre to which is added forty per cent of cottonseed meal. The mixture is sold for fattening cattle.

Two and one-half parts of clean sawdust mixed with two parts sand and one part cement make a warm long-wearing and sound-proof floor, to which carpets can be tacked with less injury than to a board floor, and which has the advantage over a cement floor in being more elastic. These qualities should win an extensive use for this form of flooring, which has the additional advantage that it can be stained to harmonize with interior finishings by the addition of color to the mixture while in a semi-liquid state.

The sawdust of certain kinds of wood is used in considerable quantities by manufacturers for metal polish, for packing, for meat curing, for making safety explosives, and composition novelties, and for fibre and pulp manufacture. Patent cleaning powders for use on carpets and rugs consist principally of sawdust, lightly moistened by some cheap mineral oil.

New Method Moth Control.

How to rid the country of the tent caterpillar and brown-tail moths is a problem. I have a method that has been tried for two years and works to perfection. It should be put in operation and it will surprise all who try it. Here is the way:

Take a large washtub and get it three-fourths full of water. Set tub outdoors away from all lights. Take a lantern and hang over tub so the bottom of lantern will come within 1 inchof the water. Have lantern near center of tub. Light it and let burn with a small blaze. Start the light as soon as dusk. Add to the water one-fourth cup of coal oil.

In the morning you will have in trap from 100 to 500 millers, which are the source of the next year's crop of tent caterpillars and brown-tail moths. I started my trap July 2. First catch was 150 with an increase each night. On the morning of July 7 I had over 700 and the catch will increase as the cocoons hatch. Try it and you will be convinced. No one is too poor to put out a trap. If all will do this the country and world will be rid of these pests in a few years.

Mr. Joslyn is on the right track. This summer Auburn and Lewiston, Me., were the centers of similar experiments, conducted by several leading entomologists of New England. Their traps were suspended below the strong arc lights of the cities. The device used was large, round, shallow pans of sheet iron with edges turned in at top. These were nearly filled with water. The moths attracted by the light above the trap fell in and in attempting to crawl out were stopped by the turned over edge. They fell back again, wings became wet and they sank. Females sank more quickly than the males. No poisonous substance or compound was used about the trap. It is believed that had every arc lamp in Auburn alone been supplied with these traps the catch of moths would have been upward of 25 millions this season.

The night of July 21, 35 traps were in operation in Auburn. From those were taken about 100 quarts brown-tail moths. Of course, according to the estimate based upon the count made by Prof. Woods, of the experiment station, fully 40 per cent. were fmales.

But this was not all. Another night over 45 quarts, or as it is estimated, nearly 900,000 codling moths were caught in the traps. This was probably the third flight this year of the codling moth. These moths are very small, and judging from the count of the number of brown-tails per quart they will run from 15,000 to 20,000 to the quart. The United States department of agriculture estimates the annual damage by the codling moth at $12,000,000.

The Maine experiments rather discount the heretofore accepted statement of the New York station at Cornell that only 4 to 5 per cent of moths trapped by light would be females. Of course, the latter, carrying the millions of eggs, are what moth exterminators wish to get. Who will say that this simple, inexpensive method may not lead to the goal which millions of dollars in appropriations have failed to reach? If effective, it will be much satisfaction to Mr. Joslyn to realice he solved the problem many months in advance of trained entomologists. Incidentally, it indicates what keen observers there are among our farmer folks. N. E. Homestead.

J. W. Copeland, of Dayton, Ohio, purchased a bottle of Chamberlain's Cough Remedy for his boy who had a cold, and before the bottle was all used the boy's cold was gone. Is that not better than to pay a five dollar doctor's bill? For sale by all dealers

Regularity

of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

Dr. Morse's Indian Root Pills 60

Dates to be Remembered

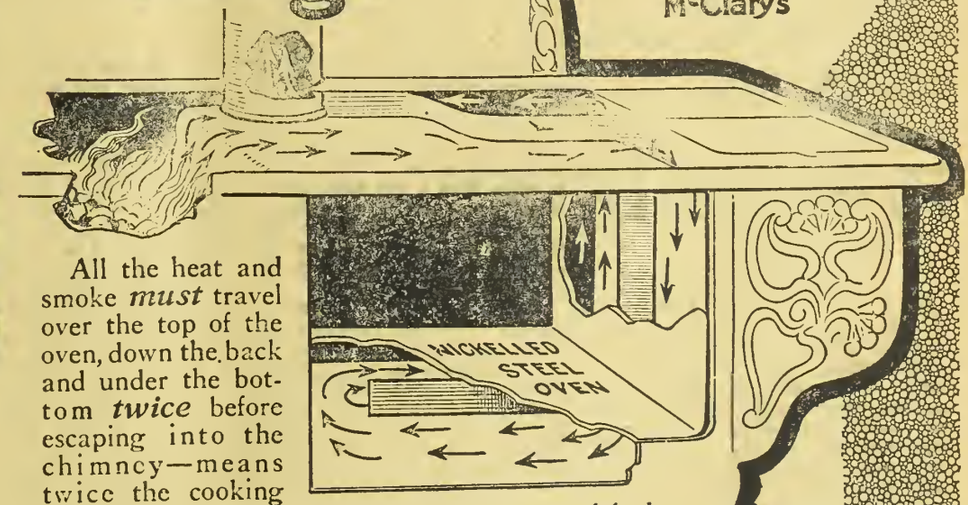
Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Westmorland Poultry and Pet Stock Exhibition at Moncton, N. B., January 13th to 16th, 1914.

McClary's Pandora Range

Pandora Ranges are sold everywhere by good dealers who back up our guarantee on this splendid range—McClary's



All the heat and smoke *must* travel over the top of the oven, down the back and under the bottom *twice* before escaping into the chimney—means twice the cooking and baking powers from the same amount of fuel as given by the ordinary range.

See this patented feature, the ventilated oven and many other exclusive ones before buying your range.

London Toronto Montreal Winnipeg Vancouver
St. John Hamilton Calgary Saskatoon Edmonton

326

Scrub and Pure Bred.

Said the scrub-cow to the high-bred cow,
"Say, you are an easy mark, I vow.
You eat no more than a scrub like me
You're treated no better that I can see,
Yet you give the farmer three times as much
In payment for board and room and such;
Three times the milk, and it's better too:
I'd hate to be such a fool as you."

Said the high-bred cow to the scrub-bred cow,
"I'd like to shirk, but I don't know how;
I'm not intending to pay so well,
And why I do I cannot tell;
I reckon it isn't for me to say;
I guess I was simply born that way;
No matter how hard to stop I try.
I keep on boosting the milk supply."

Said the scrub-bred cow to the high-bred cow,
"You're up against it, I allow;
You're padding the farmer's increment,
While I'm not making the dub a cent.
I know this much—if I were he,
I'd banish all scrawny cows like me,
Who eat as much as their betters can
And bunco their board from the farmer man.
"But I'm not the farmer, and so I'm here,
Eating my head off year by year.
And I'll do it as long as I can, I vow,"
Said the scrub-bred cow to the high-bred cow.

FLORICULTURE.

Paeonies

One of the chief points in favor of the Paeonie is its hardness in the severest climate. The plants require no protection. They have a vigorous habit of healthy growth. After planting they require no further care and each succeeding year adds to their size and beauty. The foliage is rich and glossy and of a beautiful deep green color—thus making the plants highly ornamental even when they are not in flower. The Paeonia can be planted either singly on the lawn or it can be used to excellent advantage to plant as a border line between lots. A large bed makes a most magnificent appearance. The Paeonia is the flower of many colors and a selection of sorts will give continuous bloom from May to July and in every shade of color, from pure white to dark purplish crimson. We have a large and fine line to select from.

Paeonia Mountain (Tree Paeonia)—Flowers of enormous size; color, a rosy pink, very effective.

Fringe Leaf Paeonia (Paeonia Tenuifolia)—A remarkable and striking beautiful variety with delicate fern-like foliage and double scarlet crimson flowers, very brilliant and satiny, perfectly hardy.

One of the many Roses that have bloomed in abundance in my garden is the Paul Neyron—Flowers of immense size. This is one of the finest roses grown and one of the finest color, deep, shining rose; very fresh and pretty. It is a strong grower, and is a remarkably free bloomer. Mine bloomed the last of July, having eight or ten big blooms on young bushes, two feet high, with long stems from new sprouts, starting from the ground, as well as the side branches. Near the middle of September, they are loaded again with beautiful buds.

It will soon be time to plant all hardy shrubs, for spring blooming, and get your Tulips and bulbs ready to be planted the last of October and first of November.

Hyderangea Paniculata Grandiflora is a shrub I would recommend for fall blooming. It begins blooming the last of August and lasts all through September as it takes a heavy frost to kill it. Both my tree Hyderangeas and the low shrubby variety are a sight of bloom. They are hardy in our climate and one of the free bloomers. They can be transplanted as well in the fall as in the spring, and all the protection they need is a little manure placed on the top of the ground in the fall.

O. A., St. John, writes:—I want to get a lot of Hyacinths this fall as I did last year. Will you tell me what the matter was with two of those I had last year? They grew splendidly at first, the blooms came on all of them, but seemed to stop on these two at half grown. The foliage grew on as high as fourteen inches and most of the blooms have wilted and died about half grown. I am afraid the bulbs were old. How do you grow new bulbs?

If the bulbs were forced last season they would be apt to produce stunted and deformed bulbs and the foliage would grow as described. We never force Hyacinths more than one season, but get new bulbs from Holland every fall. You can get new fresh bulbs that will bloom well from your florist next October and you had better throw the old bulbs out. They do not pay to bother with. We have all the forcing bulbs—Tulips, Hyacinths, Crocus, Narcissus and Daffodils at the Sussex greenhouses arriving the last of September and October. Nothing is prettier than a few bulbs for home in winter or for a bed in early spring.

Tulips are so tough and hardy and will bloom long before anything else and last so long are only 35 or 40 cants a hozen.

Primrose, Hampton, writes:—Is the Lavender colored Primrose with the round leaf poison to touch or only to eat. If poison to touch what would it do and is there any remedy? I have a fine plant that is a most satisfactory bloomer and I hate to throw it away. I have had it for a year and was just told that it was poison and not safe to handle. What had I better do with it?

The Primula Obconica is poisonous to some people but it is rather a rare case to find any one that is seriously affected. However, there are some in St. John even, that are affected by a mere touch, but such is uncommon. I would certainly not put it near my mouth. I have handled thousands, and sold as many and have never seen a case of poisoning. If it has not bothered you in the past year I would think you were quite safe in keeping the plant, as it is certainly a beautiful house plant and there are such a lot of beautiful colors in that line and with a little care will bloom the year round. A little baking soda water will heal all the itching in a short time.

During the month of October and the first of November, all bulbs intended for winter and spring forcing should be potted or boxed. The earlier this is done the better for results obtained as the bulbs, if kept in the air later have a tendency to grow up and throw imperfect flower stocks. White Roman Hyacinths and Paper White Narcissus, if potted or boxed then, can be had in bloom at Christmas. For Hyacinths and Narcissus, use 4 or 5 inch pots, according to the size of bulb, even with the soil will do, but never use soil containing any fermenting material, for bulbs, if any fertilizer is used, it should be old, well-rotted manure, and more than one quarter to three-quarters soil have the pots thoroughly drained. Tulips need a four inch pot. Freesias can be grown in any size pot, Place the bulbs two inches apart in the soil. Harresii, (Easter Lilies) and other Lilies need six or seven inch pots, for each large bulb. Plant these so an inch of soil will be over top of the bulb.

If you use boxes let them be shallow; three inches of soil is enough. Bore holes in bottom of boxes and cover them with drainage material. After bulbs are potted or boxed, water thoroughly and place them away in a coold, dark position free from frosts to form roots. Let them remain until the soil in pots or boxes is matted with roots, then they can be brought to the light for forcing. Give sun and air and keep moderately moist. The great secret of successful forcing for spring blooming bulbs is having them thoroughly rooted before top growth is established this being their natural method of growing in the open ground.

The Chinese Sacred Lily can be forced into bloom in from six to seven weeks in ordinary house temperature if grown in water and sand or gravel and is fine for Christmas bloom. It usually takes from seven to eight weeks for Hyacinths and Narcissus to become well matted with roots. Freesias and other small bulbs can be grown without placing away to form roots, but are better by being kept cool and dark for a time before forcing. Crocus and Scillas can be easily forced, but need a cool temperature to do their best are fine for outdoor beds for bordering.

Nothing is finer for spring blooming than Tulips, Crocus, Scillas as they will last so long.

FOR SALE - Yorkshire boar one year old, in splendid breeding condition and gets good stock. Forty-five dollars at barn. BOYD A. WETMORE Bloomfield Station, N. B.

Big Ben

To wake up on the installment plan

Big Ben gets you up *on the installment plan*, a little at a time, by ringing every other half minute for ten minutes, so you'll wake up *gradually*. Or he'll do the whole job all at once, with one long, straight, five-minute ring.

You can set him to do it as you choose, and *shut him off short* in the middle of his call either way.

That makes him *two good clocks in one*, to suit everybody's taste in early rising.

He plays no pranks. He won't go off before it's time and rob you of your full measure of sleep. He won't go off behind time and rob you of your work time. It's Big Ben's business to run on time, to ring on time and stay on time.

Big Ben attends to his own business and helps you attend to yours by getting you and the farm hands out early.

Then he sticks around the house and keeps time all day for the women folks so they can have your meals on time.

There never was a clock that fitted in better with farm work.

He's triple-nickel plated and so handsome you'll want to keep him in the parlor instead of a bedroom.

Stands seven inches tall from the top of his head to the tip of his toes; has big, easy-winding keys, large hands, and big figures that you can read at a distance on dark mornings, and is built of good implement steel so he'll last for years. He's doing this kind of work in 3,000,000 American homes today.

Six thousand Canadian dealers sell him—his price is $3.00 anywhere. A community of clock-makers stand back of him. Their imprint, "Made in La Salle, Illinois, U. S. A., by Westclox," is the best alarm-clock insurance you can buy.

THIRTEENTH ANNUAL
MARITIME
WINTER FAIR
AMHERST, Nova Scotia

December 8, 9, 10, 11, 1913

EVERY
FAIR
GETS
BETTER

¶ Greatest Live Stock and Poultry Show in Eastern Canada. You cannot afford to miss it.

Exceptionally Low Rates on all Lines of Transportation.

Exhibits Returned Free

F. L. FULLER, AMHERST, Sec'y-Mgr.

Gas Engine Troubles.

One mistake commonly made by the beginner is to use too much gasoline and lubricating oil, says F. Webster Brady, in The Country Gentleman. The tendency of the older operators is to use too little lubricant. The first indication of these excesses is a smoky and ill-smelling exhaust. Perfect combustion gives an almost odorless and colorless exhaust. Excess of lubricant or a poor quality will change a perfect combustion exhaust to a foul one, giving a blue, yellow or whitish smoke. With too much fuel the smoke is black and bitter.

INTERNAL TROUBLES.

But the smoke nuisance is a trifle as comapred with the internal troubles that follow the waste of fuel and lubricant. A clean cylinder, valves, and sparking points or contacts with a smooth and free working piston, are prime necessities in successful gas-engine operation. The overfeeding produces hard and gritty deposits of carbon, which increase the piston friction, score the surfaces, prevent the valves' seating tightly, and foul the spark-plugs or the make-and-break contacts. The carbon is incombustible, but on any high spots it will become highly heated by the compression, which will sometimes fire the charge before the piston gets to the end of the stroke. This "chucking" of the engine by premature explosions has resulted in bent connecting rods, split guide barrels, and other serious damages.

If a hot tube igniter is used the fouling of the tube prevents any fresh charge from entering the heated tube, and misfires will result. With the make-and-break igniter the wiping action of the contacts scrapes them clean to some extent and the spark is kept operative. This spark systen is a specially good one where there are any carbon troubles. The jump spark systems however, can be knocked out completely by carbon deposits, as they short-circuit the spark-plugs or cause leakage enough to weaken the spark below its strength to fire the charge.

The only remedy for carbon deposits—those already made—is to open the cylinder and scrape off the carbon. As this is neither a pleasant nor an easy task, therefore try to avoid the necessity of it. A kernel of prevention will save you a bushel of trouble.

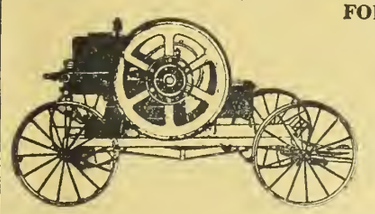
However, it is best to clean the spark-plugs frequently. Have two or three extras on hand and in good order to replace defective ones instantly. A spark-plug short-circuited from dampness can be restored by baking it in a hot oven or by heating over a clear gas flame. This refers particularly to plugs having mica insulation. One time I saw three men spend a whole day trying to get a gas engine started before they discovered that the trouble was due to the dampness in the spark-plug. And then they purchased a new plug because they did not know that the other could be restored to usefulness.

EVERY OIL HAS ITS PLACE.

In case too little lubricant is used the symptoms show in the groaning and halting action of the engine, caused by its overheating and loss of power. Sometimes the piston become stuck from lack of lubricant. A dry and scored cylinder allows the gas to blow through, and the escape of the smoke as seen about the connecting rod gives a warning of the internal condition. In one case I found that the engine would not run with a load.

For the bearings get a reliable oil or grease—not the lowest-priced, but standard goods for high-grade bearings. This is not the stuff, of course, that is so generally used on cultivators, mowers, and so forth. Some farmers don't seem to appreciate the need of shed protection and the use of grease, oil and paint for their farm machinery, and hence they are liable to slight their gas engines. An oil that runs off too fast and one that gums are both undesirable, because either overheated and melted bearings or stuck shafts will probably result. The lady who used hair oil on her sewing machine had good intentions, but the shaft stuck so fast that a powerful grip on the fly-wheel could not turn it, and it took me over two hours to wash the bearings with gasoline and put the machine in order. Examine the shaft bearings and the crank-pin of your engine frequently. Test their temperatures by touching them, and see that the oil flows freely and steadily. A grease-cup makes a very handy lubricating device. Keep the bearings sheltered from dust and grit If a bearing gets hot flood it with oil, and if possible take off the load for a while. As soon as practicable, remove the cap and clean the shaft and bearing thoroughly, taking special care to see that the oil holes and channels are open. Scrape off any burnt Babbitt metal and burnt lubricant that may be adhering to the shaft. Gasoline makes a good wash for cleaning bearings and shafts.

FOR YOUR FARM, YOUR HOME, YOUR FACTORY
FOR EVERY POWER PURPOSE, A



GILSON
"GOES-LIKE-SIXTY"
ENGINE
MORE VALUE, MORE POWER, MORE SERVICE, MORE SATISFACTION

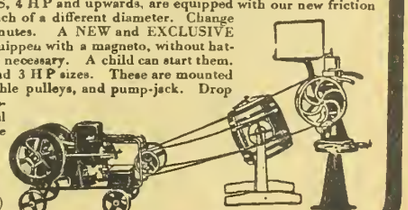
Does satisfaction mean anything to you? Does money saved in fuel, in time, in repairs and expense bills appeal to you? Get Gilson Facts, and find out how the Gilson 60-SPEED engine does the greatest variety of work—how it gives the maximum satisfaction—saves money in equipment, and yields 100% service at lowest cost. Every engine covered by a cast-iron guarantee.

NEW FEATURES AND LATEST IMPROVEMENTS

The new Gilson 100% SERVICE ENGINES, 4 H P and upwards, are equipped with our new friction clutch pulley with five interchangeable rims, each of a different diameter. Change to the proper speed for every job in a few minutes. A NEW and EXCLUSIVE GILSON FEATURE. These engines are also equippen with a magneto, without batteries or coil, with spark retarder,—no cranking necessary. A child can start them.

We also make 60-SPEED engines in 1½ and 3 H P sizes. These are mounted on truck, with line shaft and five interchangeable pulleys, and pump-jack. Drop us a card to-day, and we will send you full descriptive literature. We are making special prices to the first purchaser of one of these engines in every locality. Write NOW.

Agents wanted.



GILSON MFG. CO., LTD.
1607 YORK ST., GUELPH, ONT. (975)

Prize Winners at the Nova Scotia Horticultural Exhibition.

(Continued from page 45.)

1c, 1h; C. A. Dill, 2c, 2 and 3h, 2r, 2p; Isabelle Aylward, 3r, 3p.

Black Minorcas—W. J. Aylward, 1c, 1h, 1r, 1p.

Pair Houdans—1, L. E. Healey; 2, Wm. Bacon; 3, Wolfville Poultry Yds.

Pair Game—1, A. W. Smith, 2, Geo. W. McCully; 3, A.W. Smith.

Pair Bantams—1, Wiley Davison; 2, Beatrice Fullerton; 3, W. P. Davison.

Pair Bronze Turkeys—1, Fred Haley 2, R. B. O'Brien; 3, W. F. D. Bremner.

Pair White Holland Turkeys—1, R. E. Dill; 2, Myrtle Anderson; 3, V. Aylward.

Pair Tolouse Geese—1, C. W. Dill & Sons; 2, Fred Haley; 3, Geo. O'Brien.

Pair Embden Geese—1, Geo. O'Brien Pair African Geese—1 and 2, E. Cl Griffin.

Pair Rouen Ducks—1, Edson Eagles; 2, A. Eagles; 3, Fred Haley.

Pair Pekin Ducks—1, Hugh McKenzie; 2, C. G. Watkins; 3, R. B. O'Brien.

Pair A. O. V. Ducks—1, Fred Haley; 2, R. E. Dill; 3, J. S. Johnson.

Pair Guinea Fowl—1, Hugh McKenzie; 2, C. W. Dill & Son; 3, V. Aylward.

Best Breeding Pen Poultry—1, Palmer Bros.; 2, Mason Bros.; 3, R. B. O'Brien.

Best Breeding Pen, any laying variety—1, Miss R. Anderson; 2, R. E. Dill; 3, C. G. Watkins.

ROOTS AND VEGETABLES.

Collection 8 Varieties Potatoes—1, A. B. Graves; 2, Arthur Sangster; 3, B. F. Chesley.

Best Collection 4 Varieties Potatoes—1, Arthur Sangster; 2, A. B. Graves; 3, Palmer Bros.

Best Collection Tomatoes, Standaed—1, Maurice Armstrong; 2, H. Loomer; 3, Mrs. Eliza Fritz.

Best Collection Tomatoes, Small Fruited—1, H. Loomer; 2, B. F. Chesley.

Best Collection Field Roots—1, B. F. Chesley; 2, Palmer Brfis.

Best Collection Garden Vegetables—1, H. Loomer; 2, C. F. Elderkin; 3, B. F. Chesley.

Best Collection Ensilage Corn—1, Fred Haley; 2, H. Loomer.

Best Bull, any age—1, L. A. Armstrong; 2, Geo. O'Brien.

Best Cow, any age—1 and 2, L. A. Armstrong.

Best Pair Oxen—1 and Silver Cup—1, McNeil Bros.; 2, Fred Smith.

Best Dairy Cow, any age—1, Wm. Kehoe.

GRAINS.

Best Winter Wheat, White—1, V. Aylward; 2, Thos. Aylward.

Best Winter Wheat, Red—1, W. J. Aylward; 2, V. Aylward; 3, Thos. Aylward.

Best Spring Wheat, White—1, O. N. Fullerton; 2, Allen Bezanson.

Best Spray Wheat, Red—1, Geo. A. Frame; 2, Thos. Aylward; 3, A. J. Smith.

Best 2 rowed Barley—1, H. Smiley; 2, B. F. Chesley; 3, L. Jones.

Best 6 rowed Barlsy—1, Sharp & McNeil; 2, B. F. Chesley; 3, Robt P. O'Brien.

Best Black Sats—1, V. Aylward; 2, Allen Bezanson; 3, Palmer Bros.

Best White Oats, Long—1. H. Smiley; 2, A. J. Smith; 3, B. F. Chesley.

Oats, White, Short—1, Geo. McConechy; 2, Sharp & McNeil; 3, B. F. Chesley.

Rye—1, V. Aylward; 2, T. Aylward; 3, W. J. Aylward.

Buckwheat, Rough—1, H. Smiley; 2, A. Bezanson; 3, A. Gormley.

Buckwheat, A. O. V.—1, A. Bezanson; 2, A. Hanson; 3, L. E. Healey.

Field Peas, Large—1, Geo. Healey; Field Peas, A.O.V.—1, Geo. Healey.

Peck Beans, White—1, B. S. Vaughan; 2, B. F. Chesley.

Seans, Colored—1, Geo. O'Brien; 2, B. S. Vaughan; 3, Geo. Haley.

Beans, A. O. V.—1, H. Smiley; 2, R. E. McDonald; 3, A. Bezanson.

Hops—1, T. E. Smith; 2, Mrs. C. M. Dickson.

Sheaf Wheat—1, W. H. Lawson; 2, B. S. Vaughan; 3, John T. Collier.

Sheaf Barley—1. H. Smiley; 2, T. Smith; 3, Leonard Harvey.

Sheaf Oats—1. H. Smiley; 2, B. F. Chesley; 3, W. J. Aylward.

Dozen Ears Indian Corn—1, E. Young; 2, K. Young.

J. McDonald; 2, H. Smiley; 3, V. Aylward.

Style 110

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Autumn and Winter Feeding of Dairy Cows.

By J. H. Grisdale, B. Agr., Director Dominion Experimental Farms.

COWS are fed in the stable during one half of the year or more, and feeding during this period may through ignorance or on account of using unsuitable forage, voluntarily, or involuntarily, be made very expensive. The profits from the herd will of course depend to a large extent on the economy of the methods of winter feeding followed. Economical feeding does not mean scant supplies, but the using of the kinds of feeds and feed combinations that will be likely to produce the best results at the lowest cost.

As the milk produced depends upon the quantity and quality of the food consumed, every effort should be made to supply the cow with all she will eat of a ration combining palatability, easy digestibility, and suitability in composition for the milk flow.

Observation and experimental work here during the past twelve or thirteen years lead the writer to consider succulence, variety, and regularity in hours of feeding as the most important factors making for palatability and high digestibility of a ration.

SUCCULENCE INCREASED PALATIBILITY.

By succulence is meant juiciness or a high percentage of water in the feed. Giving an abundant supply of water for use along with a dry feed will not have the same effect as causing the cow to take the water as a part of her food. To illustrate:—100 lbs. of fresh pasture grass may include as much as 85 lbs. or more of water and only 15 lbs. or less of dry matter. This 100 lbs. of pasture grass fed green is, however, as proven by experiment, worth considerably more than the same 15 lbs. dry matter fed in the shape of 15 lbs. dry grass and the cow allowed to drink all she will of water along with the dry grass. Further, the cow will take considerably more of almost any kind of dry matter, and digest it more readily and more completely when fed as a succulent than when fed as a dry food.

Succulence in the winter ration may be secured in several ways. The most common, and the most advantageous from the standpoints of low cost of ration and convenience of handling, is the use of ensilage. Roots of various kinds are however largely used and are very valuable for the purpose. Where both the above are lacking, succulence may be secured by cutting the straw or hay and sprinkling freely with water a few hours or even a couple of days before feeding. Adding about 20 per cent. of feed molasses to the water used for sprinkling improves the palatibility and effectiveness of such a ration very greatly. Where ensilage is available, it is well to mix from 8 to 12 lbs. chaff with each 100 lbs. ensilage. This should be done some little time before feeding to insure the chaff being moistened.

VARIETY INCREASES PALATABILITY.

Variety in the ration fed the dairy cow adds greatly to its effectiveness by rendering it more palatible. Variety in this connection, however, must not be taken to mean feeding one kind of feed to-day, a different feed or combination of feeds to-morrow and still another ration the next day. Variety in feeding the dairy cow must be secured by combining in the ration, which should be the same or practically the same from day to day, as many different kinds of roughage and meals or concentrates as it is found convenient or possible to include. Feeding a meal mixture made up of oats, barley, bran, oil-cake meal and corn is likely to give better results than a meal mixture of similar feeding value from a chemical standpoint including, say, only bran and barley and much better results than feeding bran alone. The mixture of meals improves the flavor thus rendering the meal more palatable and hence more digestible. Palatability in a ration adds greatly to digestibility. Improved digestibility means increased effectiveness. The value of variety in the feed is thus apparent.

These remarks must not be taken to mean, however, that a mixture of roughages or a meal mixture once compounded, no other may be fed. It is possible to have two or three quite different mixtures on the go at the same time, provided always that the same feed be fed at the same hour each day. That is, one might feed ensilage, straw and meal in the morning, and roots, straw, hay and bran in the evening or vice versa. It will not do, however, to feed ensilage in the morning one day and in the evening of the next. It or any other feed should always be fed at the same hour.

SOME IMPORTANT MINOR AIDS TO PALATABILITY.

The stage at which the various forage crops are harvested has much to do with their flavor and aroma. Early-cut hay is not only superior in composition to the late-cut article, but is much more pleasant in aroma same may be said of most forage and more acceptable in flavour. The same may be said of most forage crops, the early-rut, well-cured forage plant of practically every description is much superior to the late-cut badly-cured plant of the same species.s, the early-cut, well-cured forage

Freshly-ground grain is always more palatable than long-ground material and will give better results.

Feed the best feeds, that is, the most palatable feeds, in the morning. Give less acceptable feeds at night or outside in racks or in some such way as will leave the eating of the same a matter of amusement or a pastime, as it were, rather than a duty or a necessity. The cow eats such things best when she really does not need to eat them and, what is more, shows results for the extra feed consumed even though it be inferior in quality.

HOW OFTEN TO FEED.

Some feeders claim it to be necessary to feed several times each day. A common practice is to feed morning, noon and night. A satisfactory method as tried here have been to feed as follows: Succulent roughage mixture and meal mixture first thing in the morning, hay after that is cleaned up. This is repeated for the ensilage and meal mixture about 3 p. m. The hay is fed after the cows are all milked about 5.30 p. m.

Experiments standing over some years to determine the relative merits of dividing the ration into two or into three or more portions seemed to indicate that when the same amount of the same kinds of feed was fed in two portions it gave just as good results as when fed in three or more portions.

REGULARITY IN FEEDING.

A certain hour should be chosen as the time to feed each portion and that hour should be adhered to most strictly. Any temporary variation is sure to result in a falling off in milk. Anything likely to irritate the cow or render her uneasy is almost certain to injuriously affect the milk flow.

WATER.

The requirements of the milch cow in the way of water are very considerable. The more milk produced and the more feed consumed, the greater is likely to be the amount of water required. This amount may vary from, say, 75 pounds up to even 300 pounds water in a single 24-hour period. The problems of how to water, when to water and how much water to give, can best be solved by allowing the cow free access to water at all times. The water had better be warmed in winter, but, if it is not convenient to store it in a warm place, it will not pay to warm it artificially.

The individual drinking fountain is probably the best method, but the trough filled periodically and washed out frequently has many advocates. The using of the manger for watering purposes after feeding is practised in some stables, but our experience would lead us to condemn the system as troublesome and less satisfactory from the standpoint of comfort to the animals than the individual bucket. But of one thing care should be taken, no matter what the system adopted, that is, to keep the cups or troughs of water supply clean and sweet.

SALT.

Salt is necessary to the comfort and health of the dairy cow. The quantity to feed will vary from an ounce to three or four ounces a day. It might, as in the case of the calf, be given in the form of rock salt in the manger, but had better be fed daily in the food. It adds to the palatability of a food, hence is valuable as an appetizer, as a food and as a stomachic.

EXERCISE.

Exercise when taken by the dairy cow is not immediately conducive to milk production. On the contrary, anything that might be called exertion is practically certain to lower the milk flow temporarily. It would, however, be unwise to say that the dairy cow should have no exercise while producing milk. It is probable that the allowing of a moderate amount of exercise will have a beneficial effect upon the health of the animal and al-

most certain that such exercise will advantageously affect the offspring. Turning the cow out in cold winter weather, however, to shiver, if only for half an hour a day, in the winter winds, is likely to prove anything but healthful to the cow, economical to the farmer or advantageous to the breeder.

A Minature Demonstration Hay Farm.

Editor Maritime Farmer;

About fifteen miles from St. John is a small pot of dry side-hill hungry land—gravelly loam—clear of building grounds and roads, scarcely two acres in extent, most of which has not been plowed in thirty years; whose owner's business is other than farming.

This land has been brought up in condition by it present owner, from a very low impoverished state of former years, to a first class hay-growing lot.

The improvement has been made by topdressing with manure from the stock on the place, usually a cow and horse. No manures purchased excepting commercial fertilizer for a small patch of potatoes in the kitchen-garden corner.

Of late years the yield of hay must have averaged three tons or more per acre, mixed grasses, couch predominant, but an excellent standard of hay.

The topdressing is done, as much as practical, immediately after haying, but also some in the spring.

What amount of hay is now cut on the lot may be judged from the fact that about two tons of it are sold or disposed of yearly, besides feeding a cow through the winter, as well as at times of slack pasture during the summer and a horse all the year round.—W., Kings Co., N. B.

Forests and Rainfall

It is commonly thought that the moisture which forms clouds and falls as rain is almost entirely evaporation from the ocean, but scientific investigations show that seven-ninths of the rain which falls over land areas is supplied by evaporation over such areas, the ocean supplying only two-ninths of such precipitation. Dr. Raphael Zon, one of the foremost investigators in America, states that 'the forest evaporates more water than any vegetable cover and much more than free vegetable surfaces.' In fact, it has been estimated by Dr. Fernow, of the University of Toronto Faculty of Forestry, that 75 per cent of the rain-fall over forested areas is returned to the atmosphere as watery vapour, which does much to increase the amount of moisture carried by air currents passing over the forests.

In Canada, the prevailing winds blow from the west and the provinces of Alberta and Saskatchewan are largely dependent for their rain-fall on air-currents which come over the Rocky Mountains. It is a well known fact that winds passing over high mountains became cooled to such an extent that they lose most of their moisture, which falls in the form of rain, and hence the land areas for many miles to the leeward of such mountains receive so little rain-fall that they are often arid. But if the leeward slopes of these mountains are covered with forests, as is the case in the Rocky Mountains, these forests will evaporate and render again available a large amount of the rain-fall over these mountains, which might otherwise pass off through underground channels, and by reloading with moisture the winds blowing over the prairies, such forests make possible a much greater rain-fall than might otherwise occur. Should the east slope of the Rocky Mountains become denuded of tree-growth, it is likely that much larger areas in Alberta and Saskatchewan would be arid than is now the case.

This is but one of the many reasons why the Dominion Government are preserving the forests on the east slope of the Rockies by the creation of a forest reserve now nearly 21,000 square miles in extent.—Forestry Branch Dep. of the Interior Canada.

Judging by the excessive quantities of rain that fell recently tnere can be nothing wrong with the avaporating machinery of our Maritime forests.—Ed. Note.

We Need Parcel Post.

For the past few years farmer's conventions in Canada have passed resolutions calling upon the Federal Government to extend the scope of the post office service to carry parcels of a reasonable size at a fair charge. From time to time we have had reports that the present postmaster-general will institute such a service, and such news is always most welcome. There are, however, powerful interests opposed to the extension of the parcels post service, and these will use their influence to have the present arrangements continued. In face of such opposition the individual usually feels helpless, but as a matter of fact by writing to his member and by using the influence of the organizations to which he belongs he may bring so much pseasure to bear that the end will be reached in a short time. It should be insisted, in fact, that the necessary legislation be passed next winter.

In the United States the post office has been carrying parcels of eleven pouds for some mdnths now, and so satisfactory has been the service that it has been extended to carry parcels up to twenty pounds. This permits of economically marketing eggs, butter and other farm produce in a fresh condition direct from producer to consumer, and breaks the monopoly of the express companies in the parcels carrying business. In such a rational matter as making the fullest possible use of the government machinery Canada should not lag behind any of her neighbors.

There is a prospect of the parcels post service being inaugurated in Canada early in the year.

Storing Seed.

The curing and storing of seeds is a matter of vital importance because of its influence on the germinating quality. Seed should be thoroughly ventilated in the process of curing or they will mould and sprout, either of which seriously injures their value. Seeds of some kinds will sprout several times before entirely losing their germinating capacity, but they lose much of their vitality by once sprouting. Moulded seeds may sometimes retain their vitality unimpaired, but if they be offered for sale their dark color is objectionable, for it must be always regarded as an evidence of neglect in curing. It is also essential to prevent seeds, especially tropical seeds, such as melons, corn, cucumfully dry. The freezing of green or half cured seed injures its vitality bers and tomatoes from freezing until and often destroys it.

Seeds are much influenced by the temperature and humidity of the place in which they are kept. A dry place is absolutely necessary for keeping garden seeds successfully, and if warm, so much the better for the tropical seeds. The temperature and condition of a good living room are almost ideal for storing all kinds of garden seeds. Most, if not all our garden seeds are unimpaired by even severe freezing, while perfectly dry. In a moist place, they lose their germinating qualities quickly.

The Root Cellar.

The root cellar needs ventilation in order to prevent mold and decay. In cold climates is not feasible to admit outside air direct to the cellar because it would be too cold in winter; the result would be a lot of frozen roots. The air must enter the root cellar either through the barn or through a conduit built below frost line so that the temperature of the air will be modified in passing through. There should be a shaft in the ceiling, opening above the barn or building in which the cellar is located, just the same as the ventilating shaft in a King system of barn ventilation.

The underground conduit spoken of may be made of 8-inch glazed tile laid below frost line and should extend from fifty to a hundred feet in this position so that the air may get warmed up by the warmer soil before it reaches the entrance of the cellar. The opening into the outside air may be a vertical shaft to the desired depth below frost and then continue in a horizontal direction under the cellar opening into the floor. If the cellar is large the tile should run the full length of the cellar with two or three openings. All openings both inside and outside should be covered with a wire screen strong enough and fine enough to keep out all small rodents and the like. The tile should be drained at its lowest point to take care of any water that may condense in its interior.

Such an arrangement w ll help to keep the cellar cool in summer.

Measuring Hay in Stack.

For obtaining the number of tons of hay in a stack, the first step is to measure the width and length with a tape line, and then what is known as the overthrow, that is, pass a tape line from the bottom of the stack on one side to the bottom of the stack on the other side, and divide this measurement which is called the overthrow by three, then multiply the length by the width, and this by one-third of the operthrow—this gives you the number of cubic feet in the stack. Of course, if the stack is different widths or different heights you will have to take the measurements in several places and obtain the average of these by adding them together and dividing by the number of measurements made.

The number of cubic feet of hay per ton varies considerably with the length of time that it has been stacked. With newly stacked hay it will take about 500 cubic feet to equal a ton. If it has been stacked for two to three months, from 350 to 408 cubic feet will equal a ton. After you have obtained the number of cubic feet in the stack, divide by the number of cubic feet in a ton, taking into consideration the length of time that the hay has been stacked.

Maple Sugar Adulteration.

To the Editor, The Maritime Farmer.

In a recent official declaration, the Chief Chemist of the Dominion stated that out of 128 samples of Maple Sugar analyzed by his department, 45 were found to be adulterated, and he gave his opinion that he saw no reason why the mixing of white sugar or spruy with the pure article should be prevented. In Government Bulletin 258 he also says that it is a palatable article and no ground for complaint can be found for its appearance on the market.

This statement coming from a Government official is strongly to be deprecated. The Chief Chemist may say that oleomargine is a palatable article and that no ground for complaint can be found for irs appearance on the market with far better reasons to back up the attitude, but nevertheless there are very severe and stringent laws on the statute book dealing with its sale or manufacture in Canada. There are wheels within wheels in this Pure Food Legislation Game. On one side are the manufacturers able and ready to jump into the market with a "new article" or a substitute so like the original in appearance and flavor that it is very difficult to detect any difference without careful analysis. On the other side are the farmers with their natural food stuffs and the "name" of those natural food stuffs have through centuries of use become associated with them so that they have acquired a selling value. The farmer is entitled to the "names" of his plants, fruit, vegetables and produce from inherent right he should not have to copyright the word "turnip" ever although a manufacturer could make and sell an article so like it that the purchasing public could not tell the difference.

Now, while the manufacturer has got to make a living as well as anybody else, so has the farmer. Here's a case in point, if any citizen chose, he could sit down to a meal of 'near' bread made from potatoes and bran, oleomargarine and "maple" flavored glucose instead of wheat bread, butter and Maple Syrup. The first articles are substitutes more or less, they imitate, and imitation is the sincerest form of flattery. They really sell because the real articles made the demand and were first on the market. As long too, however, as they market themselves under their own names and openly and fairly put their claims before the consumer under distinct 'names' it is really the affair of the consumer who buys them. It is open and square selling. There is no attempt to sneak in under the name or guise of the real article. While the sale of oleomargarine hurts the butter trade to a certain extent, as long as it is sold as oleomargarine, not as butter, there is no fraud practised on the consumer.

But can this be said of maple substitutes. There are none of them that do not offer themselves for sale under the guise of the word "maple" in some shape or form. It is the word 'maple' that sells the goods. They may not have the smallest percentage of maple in their composition they may be a compound of birch bark, hickory and glucose, but nevertheless theywant to be sold as maple, maple flavor, and other names containing the word maple. The word "maple is wanted on the label more or less prominent. Why? The reason is obvious tne consumer wants maple, he does not want hickory or birch or glucose, he wants maple.

There is going to be some stiff fighting when the Canadian farmer wakes up to tne true aspect of the case. Here is a great Canadian natural product. The maple will be identified for all time with Canada. From the standpoint of patriotism alone, the produce of the maple tree should be as pure as the most stringent government regulations with properly enforced penalties can make it. Many farmers are cutting down their trees and depleting their groves, the sale of substitutes has grown so enormously. Another result is that the consumer to-day is sceptical even when buying the purest goods. A bad state of affairs surely. We have very keen laws about grading our fruit and other products, shipping them to for-

eign countries for fear any injury is done Canadian trade by getting our goods a bad name. It would be a calamitous thing for the good name of Canada to suffer in the markets of the world. In what position does the maple product stand in this respect?

The argument advanced that the farmer does not make enough pure goods to meet the demand would be legitimate enough if the full resources of the maple supply were tapped, but as a matter of fact there are thousands and thousands of groves lying idle, and that too with a price of $1.25 per gallon for Maple Syrup being paid by the consumer. The real fact of course is, if there were less adulteration and selling under the cover of the word "maple" there would be more of the genuine article produced, and many a farmer would have a little gold mine in his maple grove, but when improper, half-hearted legislation allows the adulterated and cheaper articles to compete with the genuine, under more or less misleading labels the former gives it up as a bad job and the industry naturally suffers in consequence. The more adulterated syrup is sold, the less of the pure will be sold.

Another argument is that a lot of stuff made by the farmer is so poor that it has to be mixed up, clarified, and of course adulterated to make it saleable at all. This is a handy sort of an argument, but when it is examined it won't hold water. The farmer makes the poor stuff for the simple reason that the adulterator is ready to take his course flavored, burnt syrup and sugar and tone off the flavor with glucose or cane syrup. Would the Government encourage the farmer to make rank butter so that the manufacturer could doctor it up to make it palatable, and put it on the market with the word "butter" in the forefront. Yet to be consistent the Chief Chemist's opinions should be along these lines.

Let us keep this great natural product as pure as possible, teach the farmer to make as high a grade as possible, and we shall be educating the farmer upward instead of downward. It is a good Government that makes its' laws to educate upward instead of downward.

JOS. LEFEBRE,
Secretary Pure Maple Syrup and Sugar Co-operative Agricultural Society.

Feeding Cabbage.

When there is an unprofitable market for cabbages in the fall or spring a desirable way to dispose of them is by feeding them to the stock. Cabbage is a succulent feed, highly relished by cows and is an excellent milk producer. It is rich in protein.

The only objection to feeding cabbage to milch cows is the flavor imparted to the milk. When fed under certain conditions this, however, can be avoided, so that the milk will have just as desirable a flavor as when cabbage is not fed. If one can keep from tainting the milk, butter also will be free from a high flavored cabbage taste.

One of the first precautions to observe is to keep cabbage away from the stable at milking time. Milk absorbs an odor quickly, and if cabbage odors are near the milk, it will be tainted. If cabbage is in the barn while the milking is being done, the milk is apt to be tainted, whether or not the cows eat the cabbage.

Another precaution to observe is not to feed the cows any just before milking time. If they are fed cabbage or for that matter any high flavored feed, such as turnips, an hour or two before milking, a taint will be imparted to the milk.

The best way when cows can be let out in the pasture is to give them the cabbage there. While this causes more or less fighting among the stock, it is the best way to keep from having cabbage tainted milk or butter. This also should be done several hours previous to milking time. When cabbage is to be fed in the stable, the quantity to be fed should be brought in each day and by no means stored in the barn. A desirable way to do this is to do the feeding at the noon hour, or each morning and evening after the milking has been done.

Cabbage should be fed in rather limited quantities. It is best to begin with a rather limited quantity at first and gradually increase the allowance from day to day as the stock gets used to the feed. One bushel at a feed can be given safely when the cabbage is fed twice a day. The cabbage should be reasonably clean and free from rot. The precautions to observe in feeding cabbage to milch cows, of course, do not apply in feeding to young stock. It is an excellent feed for them and should be profitably utilized for this purpose.

Thorough aeration and cooling of the milk immediately after milking will help to remove not only the cabbage odors, but all other taints to which milk is subject. The milk should not be left sitting around in pails or cans, but taken to the milk house at once, carefully strained and run over the cooler.

Even where there is a sale of cabbage, there generally is quite a lot of waste in the trimmings and bursted or soft, unsalable heads. While this stuff may be spread on the land, it makes a cheap, profitable feed and can be made to answer both purposes by first feeding to stock. In the fall it is a wise plan to gather the stalks from the field for feed after the cabbage has been cut. In the spring when the market is dull, a total loss can be avoided by feeding to stock.—L. H. Haynes, of Pennsylvania, in Hoard's Dairyman.

Soil-Potash

To what extent is the stock of natural potash in the soil available for plant nourishment? This is a very difficult question to answer. In a clay soil there is almost always a large quantity of the constituent, but is a sufficient proportion of it in a condition soluble enough to be absorbed by the growing crop? Sometimes the addition of potash salts to such soils has been found to produce profitable results, at other times the outlay would appear to have been useless. On sandy and chalky soil, it may be taken as an axiom that, in the absence of liberal dressings of farmyard manure, it is essential to apply potash. Some useful experiments have been made to test the proportion of solubility of the potash present naturally in different kinds of soil. A crop of rye grass was sown for three consecutive years in six different kinds of soil. The soils were first carefully analysed for potash, and at the end of the third year, the soil was again carefully tested for the constituent. Of the stock originally in the soils, it was found that the crops had absorbed the following percentages:—

Soil	1st Year	2nd Year	3rd Year	T'tl.
Sandy, rich in humus	48.7	7.0	10.3	66.
Sandy	44.2	6.3	4.7	55.2
Sandy loam	42.9	10.5	3.6	57.
Loam	24.2	4.5	4.1	32.9
Clay	12.5	4.0	2.2	18.7

From these results it would appear that the solubility of the soil potash in different kinds of soil is very different. It is greatest in soil of a light character naturally deficient in potash, and in which, therefore, the natural supply is quickly exhausted. Hence such soils are much benefited ash salts. In the heavy soils, containing a much greater natural supply, it is much less available, and often is not sufficiently soluble to supply the needs of the crop. In such cases additional supplies produce good results. It is never safe to assume that there is naturally in the soil a sufficient supply of available potash. Trials should be made to rest it.

Rotation vs Disease

The accumulation of noxious weeds, diseases, and insects on the farm, is one of the most serious sources of loss. This results as a rule from the constant growth or too long continued culture of the same crop or class of crops on the same land. Wilt in various crops, bacterial diseases, grain rusts, and weeds and insects too numerous to mention all accumulate in the soil under the one-crop system.

These pests often multiply to such an extent that ultimately it becomes impossible to secure profitable returns from land thus infested. Resistant varieties must then be secured or be avoided and the fertility of the crops cultivated on land not subject to these pests. All these troubles can soil greatly improved by intelligent systems of rotation. The most profitable systems for any locality or type of farming, so far as they have been developed, can usually be obtained from the nearest Experimental Stations.

Fruit Trees, Spraying Materials and Utensils at Cost

The Association continues to do good work for the fruit growers and is creating a steady interest and increase in co-operative effort. During 1912 and 191 the Association supplied its members with nearly 30,000 fruit trees, most of which were sold at 22c, 23c, 24c, and 25c per tree, and also with several thousand small fruits. The nurseries in New Brunswick and Nova Scotia have been supplied by the Association with scions and buds taken from good bearing trees of the varieties most in demand in the provinces and consequently the supply of Maritime grown trees of the best varieties true to name available for planting in New Brunswick in the spring of 1914, is practically twice as large as three years ago. As the bulk of the trees placed throughout the province annually by agents are sold at prices ranging from 30c to 45c and even to 50c per tree, it is easy to see that the Association is saving its members hundreds of dollars in the purchase of their fruit trees. By ordering nursery stock in large quantities, the Association gets the very best the nurseryman has to offer and gets it at wholesale or the lowest possible price, as the agent's commission and expenses are omitted. In a similar manner, a large quantity of spraying materials consisting of lime-sulphur and lead arsenate were purchased from Nova Scotia by the Association and distributed to its members at cost price. Other supplies such as pruning tools and packing appliances and materials, etc., are secured at cost price on request.

For full information and annual reports, write to: The Secretary, New Brunswick Fruit Growers' Association, Fredericton.

New Dairy for Pictou County

A new Dairy Company has been organized in Pictou County for the purpose of carrying on a dairy and creamery business among the farmers along the main line of the I. C. R. between Truro and Mulgrave, also the Sunny Brae and Pictou branches. This company also proposes to deal in feeds, agricultural implements, fertilizers, etc., which they will sell to the farmers in car lots at wholesale prices, thus saving the middleman's charges. It also proposes to sell for the farmer anything he may have for sale such as potatoes, grain etc. The head office and plant is located in Stellarton and the company has just let the contract for the erection of a factory 25x75 with an ell, engine and boiler room, 18x23, to be built of brick veneer roof covered with steel shingles. As this is purely a Farmers' Co-operative Joint Stock Company, the company is not selling any of the stock in the town, although they are receiving inquiries for the same almost daily in amounts ranging from $100. to $5,000.00.

—M—

Sheep Sorrel

Sheep sorrel grows most abundantly in thin or worn out meadows. Breaking the meadow and raising corn or some other cultivated crop will usually subdue the weed. The land should be enriched with barnyard manure before re-seeding to grass, and an effort should be made to secure a thick stand. On meadows or pastures that cannot be plowed, top dressing with manure and sowing additional grass seed will be beneficial. The addition of lime to the soil is also said to aid in thickening the grass and crowding out the sorrel.—Andrew B oss, University Farm, St. Paul, Minn.

Big Attendance in Agricultural College

Truro, Nov. 4.—The Provincial Agricultural College opened on Nov. 4th for the regular winter course, with an enrollment of upward of eighty.

Of these a few have come from Prince Edward Island, and quite a number from New. Brunswick. All the Counties of Nova Scotia are represented, siff coming from Cape Breton.

This attendance will be augmented within a few days, and the College course class to number over one hundred.

Education Needed for Farming

While, of course, there is much the farmer can learn only by experience, there are many things essential to his success that the mere performance of the necessary farm operations will not teach him. Spreading manure will never teach him that stable manure should be supplemented with phosphoric acid to get the best results. The growing of clover will not teach him that mineral fertilizer may keep up the fertility of the soil where clover grows luxuriantly and occurs in the rotation at definite intervals. Feeding cattle will not teach him that a good ration for milk cows is one containing one pound of digestible protein to seven pounds of digestible carbohydrates, provided it it palatable and at least two-thirds of the total ration is digestible. Nor will the feeding of such a ration teach the farmer how to calculate the most economical ration from feeding stuffs at current prices.—Thomas F. Hunt.

The boy's appetite is often the source of amazement. If you would have such an appetite take Chamberlain's Pablets. They not only create a healthy appetite, but strengthen the stomach and enable it to do its work naturally. For sale by all dealers.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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NOVEMBER 11, 1913.

DATES OF ISSUE.

November 25
December 9-23

RETURNS PLANT FOOD.

Only a comparatively small proportion of the mill feed is actually utilized by the cow. Practically all of its plant food may be returned to the soil if it is properly conserved. Herein rests a very important factor in the operation of the dairy.

AN IMPORTANT ITEM.

Available plant food upon a dairy farm is an important item. It means a much larger production of various farm crops and a consequent increased value of the farm. In older farmed sections where land has been unwisely robbed of its fertility the purchase of concentrated feed is often made with a view to its value in restoring the land.

A MARITIME PUBLICITY ASSOCIATION.

"Resolved that this gathering here assembled form ourselves into an organization to be known as the Maritime Publicity Association, the object of this Association to be the publishing and advertising at home and abroad of the resources and opportunities of the Maritime Provinces."

Following the passing of the foregoing resolution by a representative gathering of Maritime publicity men recently in Moncton the following officers were appointed:—President, C. L. Martin, Amherst, N. S.; Vice-President, for P. E. Island, J. E. B. McCready; Vice-President for New Brunswick, Henry T. Hoggs; Secretary, Edgar E. Kelly.

The general plan is to inaugurate a central bureau to supplement the publicity work already being carried on, this is a mutual co-operative way. A fund will be raised by direct appeal to the towns and cities of the Provinces and to the Federal and Local Governments, the railways, etc. It it proposed to place a competent publicity man in charge of the work, a man thoroughly in touch with Maritime affairs and conditions.

The Maritime Provinces have never received advertising commensurate with their resources and it is the aim and object of the new Association to proclaim upon the housetops and byways and highways of the world the various attractive features of Maritime Canada.

INCREASING THE SUPPLY OF LAND.

Some time ago Mr. W. M. Lea, of Prince Edward Island, writing in the columns of the Maritime Farmer on the question of intensive cultivation pointed to the fact that although Prince Edward Farmers and those of the other provinces as well could not increase their farm holdings in point of acerage they could increase their farms by following a judicious system of intensive cultivation and a well planned rotation harvest many times the amount they do at present from their farms. The following abstract from Conservation is to the point.

"Is the amount of land in the world a fixed "quantity? 'How absurd!' one may be tempted "to exclaim. 'Of course you may dyke here and "drain there, and turn a little stretch of water "into land, but what does that amount to? For "all practical purposes, certainly the amount of "land in the world is fixed.'

"But it is precisely for practical purposes "that it is not fixed. Thirty years ago vast "areas in Western Canada for all the good they "were, might as well have been on another plan-"et, simply because there were no means of "bringing to a market the crops, which they "were capable of producing. The development of "transportation facilities has made these lands "accessible and has thus, for practical purposes, "increased the supply of land in the world.

"Land, i. e. available land, can, however, be "increased in other ways. We cannot perform "miracles and add to its area, but it is impor-"tant to remember that area is not the only "quality we regard in considering the worth of "land. Though an acre is a measure of surface, "we assuredly do not think merely of its length "and breadth, without regard to its thickness, i. "e. the depth of soil. If, by deep cultivation, we "bring untouched layers into use, we have again, "for practical purposes, increased the supply of "land.

"Moreover, we cannot think of the value of "land in terms of its quantity merely, without "regard to its quality. When we purchase a "farm we acquire not simply a volume of soil "with a certain cubic content, but soil posses-"sing certain valuable physical and chemical "properties. If we deyned accurately what we "mean by the 'land' we are buying, we should "certainly include these properties, and their im-"pairment through poor methods of tillage is a "direct loss of the commodity we have paid good "money for. On the other hand, we may in-"crease its amount by intensive cultivation, "which, again, is another and most important "way of augmenting, for practical purposes, the "supply of land."

TILE DRAINAGE AND EARLY VARIETIES OF SEED.

The necessity for a more genuine use of tile drains and the sowing of the earlier varieties of grain was very forcibly brought home to the farmers of many sections of the Maritime Provinces this year.

The prolonged periods of damp, dark weather was not conducive to the early maturing and ripening of grain, particularly of the late varieties. Hundreds of bushels of grain were badly damaged in the making on some farms while some of the neighboring farmers had their straw stored and grain threshed several weeks before.

Why such a variation of dates of ripening on two adjoining farms? On the one farm where there is good natural drainage or where an efficient system has been tried, the land is what is commonly called in every day parlance "early." As soon as the frost is out of the ground in the spring it warms up readily and it may be worked even immediately after a heavy shower of rain. Vegatation comes on very rapidly in this land and grain getting an early start has ample time to grow and ripen during the hot sunny weather of July and August. On this kind of land a late variety of grain will ripen ahead of an early variety growing on colder, damper soil. If an early variety of grain is grown on this well drained soil it will ripen and be ready to cut early in August. On the other hand the farm that is badly drained remains clammy and cold and cannot be worked to advantage should a showery season prevail previous to and during seeding time. The seeding is late, vegetation is late and consequently unless there should chance to be an abundance of hot sunny weather the ripening will be so late that the straw will have to be cut green or run the risk of getting it damaged with rain or frost. If a late variety of grain is sown in this "late" soil so much later will the harvesting season be.

If obliged to sow grain in "late" soil next spring strive to have a sufficient quantity of early grain for seeding purposes and ere you are obliged to again til the field plan to have that particular lot of land underdrained, then the seed may be sown earlier than it can be now, and then the water will not lodge on the surface of the land as it does now. Then the growth of the grain will be unimpeded, and then the harvest will not be late.

MAKING THE LIVE STOCK COMFORTABLE.

Jack Frost's little nips these nights should be a reminder that the long cold winter is again with us. What have you done or what are you going to do before the steady cold weather arrives to make your live stock as cosy and comfortable as possible during the season when they must of necessity be confined for hours, days or perhaps weeks at a time?

Are your stables well lighted? If not, are you going to rest contented while your stock is, as it were, in a dungeon where dirt and disease germs breed and multiply directly to the detriment of your stock's health and indirectly to the impairment of your own and your family's good health. If you are at all handy with tools the expense of putting a few extra window panes where they will admit the most light into your stables will be nominal. Don't put off a matter of this kind. Get at the job some mild day and you will be delighted with the transformation. Are the stable windows so covered with dust and cobwebs that they will hardly admit any light. Take a lesson from the good housewife in window washing and apply yourself and the lesson learned to cleaning the stable windows.

Are there chincks in the walls that admit the cold winds to circulate beneath the floors? A few minutes work with pieces of board, hammer and nails or with stone and mortar or some other material will fill the openings so that the cold will be excluded.

What about bedding? If you have a sufficient quantity of straw or swale hay to do for bedding, you can spend a day very profitably before the snow flies gathering and storing the fallen leaves in your wood lot, or it may be that you can get all the sawdust you require at a neighboring mill, for the hauling.

Are the floors rough or uneven? Punch the nails or spikes and smooth off the lumps with axe or adze and if a plank is badly worn or decayed take it out and replace it with a new one.

Plan to have your stables properly ventilated; but do not ventilate by means of direct drafts.

Having made your live stock comfortable outwardly do not neglect to feed and water regularly. We are firm believers in having water within reach of stock at all times. A system of that kind will pay for its instalment many times in the course of a few years. You have often seen a cow turned out to water on a cold, stormy day, return with a rush to the stables without taking more than a sip or two when she would be so thirsty that she would drink several gallons if offered to her a few minutes after returning to her stall. Have you ever considered the torture that such a cow would undergo before watering time next day unless given some water in the meantime?

What applies to one line of stock in the foregoing applies to all classes of farm stock. The good stockman will always be careful to see that his stock is as comfortable as he can make them. Some of the things we have mentioned are only trifles; but it is the small things that count in the race for success.

Look for motives before you condemn the acts of your neighbors; if motives are good, overlook faults.

* * * *

The only sure way to keep out of trouble is never to get into it.

* * * *

A close observer is usually a good farmer. The student of nature often makes a successful cultivator of the soil. Plant producers, like animal raisers, should study their plants and learn how to treat the soil to benefit the most.

Women's Institutes in Nova Scotia.

No one in Nova Scotia can conscientiously deny that the Farmer's Association have been of immense benefit to the farms of the Province. Aided by the Department of Agriculture, no effort has been spared to obtain the best methods in all kinds of farm work and that those efforts have been successful is readily demonstrated by the improved farms and the larger yields. Better methods mean in every line of life better results.

There is no gain saying the importance of the work of the farmer, but the work of the farmer's wife is equally important, and while only a favored few can follow the profession of farming, what a tremendous following the profession of the farmer's wife can boast. Perhaps the profession of the farmer's wife covers more outdoor work, but there is not a house in Nova Scotia in which some woman does not follow the best profession of all—that of homemaking.

The woman in the home has been allowed to ge) along on any little tap ends of imformation she could gather from newspapers and home journals— many of the articles none too reliable. No organized effort was made in her behalf. The home could be comfortable or uncomfortable according as the ability employed, or interest taken in the task permitted. Any work done outside the home as poultry raising, fruit and flower growing, bee keeping could be done in anv primitive style desired unless she could gather some information from a meeting of the Farmer's Association, in which those subjects had been taken up. The highest standards in farming are only reached through education, and it is a simple deduction that the highest standards of home life can only be gained by education.

It is an oft quoted saying that "the farm feeds the teeming millions," but the home goes one step farther, and produces the people, who go to make up the teeming millions. In Nova Scotia, our homes produce only a small unit of the millions but it behooves us to see that the standards of these homes are as high as education can raise them.

Just how or in what way that education could best be afforded the homemakers, was a problem that presented itself to a few ladies in the rural districts of Ontario, some fifteen years ago. Improved methods were being imparted to their husbands, fathers and brothers, through the various avenues of learning, leading from the Department of Agriculture. Why not have any information that interested them about the farm and additional, having more direct reference to home life, brought directly to them? To that end they asked the Department of Agriculture to organize a few institutes for women in the interests of homemaking and housekeeping, and those portions of agricultural pursuits more readily suited to women.

With rather a dubious forecast as to its ultimate success the Department acceded to the request, and gave permission for the formation of a few women's institutes. From those few institutes has sprung that huge organization, which to-day numbers in Ontario alone some eight hundred branches with a membership of over twenty-five thousand.

From Ontario the movement has spread westward to the Pacific Coast and eastward to Nova Scotia, achieving a fine growth in Quebec and New Brunswick and just starting to grow this past summer in Prince Edward Island and Nova Scotia. Eight institutes were organized in July in Pictou, Colchester and Cumberland counties, and the reports received from these institutes since their inauguration have been most encouraging.

At the present time meetings are being held in Hants, Kings and Annapolis counties and while some districts are rather conservative in their reception of the institute, others take it up readily recognizing the good that must follow. To many, the idea is such a new one that the aim of the movement is not fully understood. Others dislike taking up a new idea unless they feel assured of its success. Others urge lack of time and the present overplus of work. As a usual thing it is found that the busiest woman who is readiest to take up an new idea and carry it to success because as a rule she has more time for the simple reason that she understands how to value and make the most of each move ment. When "lack of time" is urged as an excuse, it is very often the lack of energy to put the time at one's disposal to its best use. If more women recognized the good to be gained by change of occupation and atmosphere and an exchange of ideas with a group of women, there would be healthier women and happier homes as a consequence.

The work of making an institute a success should not be minimized but is anything worth while that can be gained without an effort? The mere fact of working to attain an object makes that object double dear and gives that glow of satisfaction that comes from successful effort. The slightest effort to attain meets its attendant satisfaction, how much greater satisfaction where the effort is greater? In joining an institute they join with the idea of helping to the best of your ability. Out of your experience you may bring the very ideas that are needed most and will do the most good. No woman knows so much that she cannot learn more, and no woman knows so little that she cannot help in some way.

While the institute deals principally with the home or rather the home causes first with the institute, there are many things done for the community. The motto is "For Home and Country" and it would be a poor homemaker, indeed, who could but do some work for the community outside the home. Homemaking does not only include house-keeping and cooking. Good house-keeping and good cooking are necessary adjuncts of every home, but many good housekeepers and many excellent cooks have not even the first idea of the rudiments of homemaking. A good homemaker does not only see that the conditions in the home are the best for the growth, development and happiness of the inmates of the home, but one sees to it that conditions in the community are fresh and wholesome. That is the art of homemaking in the highest development and to render assistance to that development is the aim of the Woman's Institute.

It is not to a few women here and there, then, that the institute should appeal, but to every woman, for than all else the welfare of the hone and its inmates. While the growth may be slow, it will be sure and steady and as its object becomes understood and appreciated its membership will increase and its beneficial results will be felt.—Miss Jennie A. Fraser, Supt. Women's Institute for Nova Scotia.

Recommendations of Forester Re Brush Disposal.

The following is a summary of the conclusions reached in report to the Commission of Conservation by Clyde Leavitt,, Forester to the Commission. The conclusions apply to conditions in Canada the results of an investigation into the brush disposal situation in the Adirondack region of New York, where conditions are closely similiar to those in a large portion of Eastern Canada. The conclusions are as follows:

1. Increasing stumpage values render fire prevention and control essential from the point of view of the timber owner. Decreased in wood supplies render it still more essential from the point of view of the general public, and, in particular, of the communities and business interests directly dependent upon the manufacture of forest products.

2. Logging slash constitutes the most serious fire menace in existance.

3. Brush disposal is a practicable and feasible method of minimizing fire danger, though secondary to pa. trol.

4. The method of brush disposal to be adopted in any particular case can be determined only by careful consideration of all the surrounding conditions. It is desirable that the adminstrative officers have a reasonable degree of discretionary authority.

5. Where brush-burning is practicable both financially and silviculturally, this is tht most efficient means of reducing the slash menace.

6. Where brush burning is not practicable for any reason, the lopping of tops may be advisable. In case tops are lopped, financial and silvicultural considerations will determine whether the material should be piled or scattered or left without further attention. The necessity for lopping may under some circumstances be obviated by some other fire-protective measure, such as the construction of firelines, etc.

7. The lopping of tops does materially increase the amount of debris which reaches the ground or forms piles resting on the ground in sufficiently compact form to absorb and return moisture; the time required for decay is thus lessened by one half to two thirds. The slash menace as an element of fire danger disappears in direct proportion to the rapidity and completeness of this process of decay. Piling or scattering, following lopping, is desirable, but is generally considered to be impracticable in the Adirondacks on account of expense. This would apply also to a large section of Eastern Canada, under a Government license, and allowance is made for the added cost in the dues to be paid.

8. With closer utilization, the relative efficiency of top-lopping as a fire protective measure decreases. In other words, lopping is much more necessary in an old-time lumbering operation and will have a greater relative effect in decreasing the fire danger, than in the case of a pulp operation, where a far larger percentage of the branches will in anv event be brought into contact with the ground, as a necessary part of the operation.

9. The beneficial effects of top-lopping far outweigh the disadvantages due to any possible injury to soil, reproduction or old growth.

10. Lopping to only a 3-inch diameter limit in the top materially decreases the cost of the operation. The law has recently been changed to require lopping only to a 3-inch diameter limit. This is a result of the report of the State Forester, following the field investigation of last fall. The general consensus of opinion is that the average cost of lopping under the original law was approximately 15 cents per cord for pulpwood or 30 cents per cord for saw timber. Under the law as it now exists, the cost should be very materially less than this.

11. The question of brush disposal and of fire prevention in general should be given much more careful attention in Canada by all concerned than has been the case in the past. This is entirely practicable in the case of issuance of new licenses by Dominion or Provincial Governments, as well as in the case of renewals of existing licenses.

12. Patrol is the most important and the most essential element in any plan of fire protection. This must be provided, regardless of what other methods are adopted. The construction of roads; trails, telephones, look out stations, and other permanent improvements of a similiar character is essential to an efficient patrol system.

Storing Potatoes.

In storing potatoes two main factors must be considered, temperature and ventilation. The storage cellar should not be warmer than 33 degrees if possible. Of course, it may go a few degrees above this and make very little difference in the final results, but if there is any thought whatever of any danger of freezing, a thermometer should be placed in the cellar and a very careful watch kept of the mercury. Do not be afraid to burn a little kerosene in an oil heater if there is any danger of the temperature going below freezing. This may save many dollars' worth of potatoes.

Be sure to make a thorough provision for ventilation. It is absolutely necessary that the warm air be carried out and that the cool air be carried in when potatoes are first placed in the storage cellar. If the cellar under the house is to be used for storage, it is best to have the potatoes perfectly dry and clean when put in. If potatoes for the family use alone are stored, they can usually be placed in one bin.

Early Maturity.

Editor Maritime Farmer:—

In the Maritime Farmer of September 30th, there appeared a short article under the heading "Early Maturity," signed by one Alfred McPherson, River Dennis, N. S., in which the writer claimed to have the youngest cow on record. I can tell him that his cow is eclipsed for early maturity by a heifer owned by R. H. Smith, Hilden, Colchester Co., N. S. The heifer dropped a calf when about two weeks over twelve months. The writer himself has one if bred whe she first came in would be a cow before she was fifteen months.—H. C., Truro, N. S.

Early Maturity.

Editor Maritime Farmer:—

I noticed an article in your columns in which a Mr. McPherson, River Dennis, N. S., gives an instance of early maturity in his herd. I have a heifer that was calved on the first of May, 1912, that dropped her first calf on July tenth, 1913. She therefore became a cow when fourteen months and ten days old. She three-quarter Holstein blood.—C. E. Foley, Wilmot, P. E. I.

"It is a pleasure to tell you that Chamberlain's Cough Remedy is the best cough medicine I have ever used," writes Mrs. Hugh Campbell, of Lavonia, Ga. "I have used it with all my children and the results have been highly satisfactory." For sale by all dealers.

HORTICULTURE.

Fertilizing Apple Orchards.

The experiments have shown that the fertility needs of an orchard may be the most important check on production. Variations in fertilization alone have resulted in average differences ranging from 50 to 460 bushels an acre annually for the past four or five years, depending on the experiment. These results were accompanied by similiar differences in the growth and general vigor of the trees.

A recent bulletin by Prof. J. P. Stewart of Pennsylvania, who so acceptably addressed the Nova Scotia Fruit Growers at Middleton last winter, indicates briefly the methods and conditions under which some of these results have been obtained. It outlines a simple method of determining whether or not similiar results can be secured in any particular orchard. It also considers the total plant food requirements of a productive orchard, and indicates the more important effects that follow the application of the various fertilizer elements.

The total plant-food draft of a mature and active orchard is greater than that of a 25-bushel crop of wheat in every important constituent except phosphorus. It is practically inevitable therefore, that sooner or later the output will be reduced or off seasons will be developed in any productive orchard because of a lack of sufficient plant food.

MINERAL REQUIREMENTS OF TREES.

The mineral requirements of wood are comparatively low. This largely accounts for the fact that young trees usually do not make a profitable response to fertilizer applications, although they frequently respond well to manure or to other methods of conserving moisture.

The relative amounts of the various food elements required by the other interest, but as a rule they are not especially reliable at bases for making fertilizer applications. The latter are best determined experimentally, as there seems to be very little relation between tne response and the total chemical requirements of the trees.

Applications of nitrogen and phosphates and also of manure have been very beneficial in the Johnston and the Brown orchards. In those orchards, potash has been of little or no service. These results are reversed at the present time in the Tyson orchard, so far as yields are concerned.

The time required for results to appear has been surprisingly short in all cases where fertilization has proved to be really needed. In such cases, both the value of fertilization and the kinds needed were clearly evident by the middle of the second season, and no material changes have occurred since.

SMALL FERTILIZERS FAIL.

Neither acid phosphate nor "floats" when applied alone, have resulted in any important benefit. We are therefore "completing" the fertlization of their plats by the addition of nitrogen and potash, in order to test further their relative values as carriers of phosphorous for trees.

Lime also has failed in most cases, though it may have some value in aiding growth. In addition, it may have some direct value in facilitating the growth of leguminous intercrops, and also in correcting a possible toxic action possessed by the basic radicals of a number of salts, some of which are present in commercial nutrients.

At present the high-grade sulphate in our experiments is showing no superiority over the muriate as a carrier of potash, but the reverse is usually true. Lower cost and easier handling therefore give the latter the preference. It is possible that the low-grade sulphate, or the 24 p.c. "double-manure salt," as it is often called commercially, may be superior on account of its magnesia content, but this has been fully demonstrated.

The influence of proper fertilization is not transient. The gains from it have been greater in the sixth and last year some of our experiments than at any time before. In one case, these gains have exceeded 1100 bushels an acre. Where the crops of the full years are not too high, the yields usually have been greatly steadied by proper fertilization.

In all our experiments the action of manure has proved to be practically identical with that of a commercial fertilizer rich in nitrogen and phosphorous. There successes and failures have coincided with but two exceptions, and in those cases moisture rather than plant food was apparently the controlling factor. The commercial nitrates and blood have acted more quickly than the manure, and the potash in the latter has apparently been less effective than that in the commercial forms.

In general, the influences that have materially increased the yields have also increased the growth. This is true generally, unless either occurrs to an abnormal extent. The phosphates seem to be a partial exception to this rule, and mild injuries also may stimulate yield at the expense of growth.

Manure and potash are the only fertilizing materials that have shown a consistent benefit on the average size of the fruit. This is doubtless associated with their favorable relations toward available moisture, which is the chief determiner of fruit size. Above a rather indefinite point, however, the size of the crop on the tree becomes the dominant influence on fruit size. Proper thinning and moisture conservation, therefore, are the most important means of improving the average size of fruit.

COLOR OF FRUIT DUE TO LIGHT.

The red colors in apples cannot be increased materially by any kind of fertilizer applications, though potash and possibly phosphates may be of some slight assistance. These colors are directly dependent upon sunlight and maturity, with the latter occurring preferably on the tree. Late picking, open pruning, light soils, sod culture and mildly injurious sprays, therefore, tend to increase the reds in fruits, while opposite conditions decrease them.

The retarding influence of nitrogenous fertilizers or manure on color makes it advisible to use them freely on some of the red varieties, especially those in which the color comes on rather tardily, such as the York Imperial. On the lighter soils, or in localities with the longer growing seasons, this precaution is less important.

In one experiment, no form of fertilization has yet shown a profitable response, and in two others such responses have come only from manure and mulches. It is evident, therefore, that the actual fertilization of a given orchard is still largely a local problem. It is possible, however, to indicate the more prominent characteristics of orchards in need of fertilization, and to formulate a general fertilizer, based on present experimental results, that nay be used in such orchards until more definite local data can be secured.

Pruning For Tree Peculiarities.

Rhode Island Greening and Roxbury Russet tend to spread and come to the ground; they may be started with an upward shoot to the branches and allowed to grow comparatively thick for the first few years; they will open up quickly enough. It is possible to grow an excellent Greening tree without any leader, provided the branches are started properly. I am inclined to leave this tree thicker than I would a Baldwib, except when it is being grown on the soil well suited to it, such as Dundirk clay loam, because under such conditions we are almost always assured of green fruit with little color, which is desired.

I have had no experience with Wealthy on light land, hut on Dunkirk clay loam it tends to grow too thick, which is an advantage because it can be corrected and the size of the fruit maintained by judicious pruning. I have particular reference to trees which are at this time almost 30 years old. Twenty Ounce seems to do very well on sandy loam soils, and on such it does not make too much wood, so that the fruit colors well. Duchess of Oldenburg bears young and naturally tends to grow open, so that comparatively little pruning is required. It seems to delight in rich, sandy loams and good loam soils.

Wageners on account of its tendency to bear early and heavily, requires little pruning until the tree begins to show decay, then I believe it can be aided by a vigorous pruning and the formation of new wood. I saw some trees which were severely pruned when they began to show signs of decay and were much benefited by it. Since the tree is short lived anyway and is nothing but a filler, it has its place.

McIntosh tends to grow open with us after it begins to bear, although the trees grow thick while they are young on the Dunkirk loam, making

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BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

Flour trial is essential but— it is not your work!

Flour varies from time to time in baking quality. This is because wheat continually varies according to soil conditions, etc.

Therefore, if baking results are to be constantly high, baking tests are essential. It is unreasonable to expect you to make these tests at your expense.

So from each shipment of wheat delivered at our mills we take a ten pound sample. This is ground into flour. Bread is baked from the flour. If this bread is high in quality and large in quantity, we use the shipment. Otherwise we sell it.

By simply asking for PURITY FLOUR bearing this name you can always be sure of more bread and better bread.

"More Bread and Better Bread" and "Better Pastry Too" 523

a wonderful amount of hood, yet I believe they will not make so much when they begin to bear. My judgment is based on trees which have been bearing 10 years, but which, unfortunately, are in sod.—In N. E. Homestead.

Combines Bees and Fruit.

Thomas S. Williams of Sturbridge, Mass., is one of those who was obliged to seek health in outdoor employment. It may be said that he has found it, and a good living as well, on his small farm. He has three separate lines of work which he finds go well together, and without conflicting. The first is the culture of small fruits. This year, though late frosts spoiled the first strawberry blossoms, he still had a fine crop. He has a half acre set to cantoloups that promise well.

For quite a number of years he has kept bees and year by year intends to increase. He began by following the wild bee, and learned much that has contributed to making him the intelligent, patient worker that he is among these insects. During the season of swarming he is never found very far from his apiary, and any unusual commotion brings him on the scene at once ready for necessary work. So interested is he in his bee colonies and so intent that no matter what else he may be doing, his friends say you can almost "hear him listen" as he looks in their direction. He not only finds bee keeping fascinating, but profitable as well.

In the late fall he devotes a couple of months to trapping the small fur-bearing animals, and says the financial returns from these compare very favorably with any other like period of the year.

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Protecting Your Apple Trees.

Editor Maritime Farmer:

Winter will soon be here. What is being done to protect the young apple trees during the long cold winter?

Last winter quite a lot of trees were killed by having the roots frozen. This was due to the excessive moisture in the soil and exposure to severe freezings.

Where there is no underdrainage, the surface should be ridged by running a furrow every 15 or 20 feet and rounding up between the furrows as much as possible. This will allow a good surface drainage.

Since there has been so much rain this fall the trees will be more or less weakened, consequently something should be done to prevent winter killing. Where apple trees are subject to severe exposure, a mulch of barnyard manure will serve as a good protection.

Young trees should be wrapped with building paper or wood veneering, to protect them from the ravage of mice and from sun scald. This covering is fastened quite tightly around the tree 12 to 18 inches high. A little earth is put around the bottom to prevent mice crawling under.

The first cost of the veneering is a little greater than the paper, but is easier handled, will last longer, and therefore is cheaper in the long run. It will cost about ½ cent a tree not including labor, and is good for several years.

The coverings should be left on in the spring until danger from severe frost is gone.—D. B. F.

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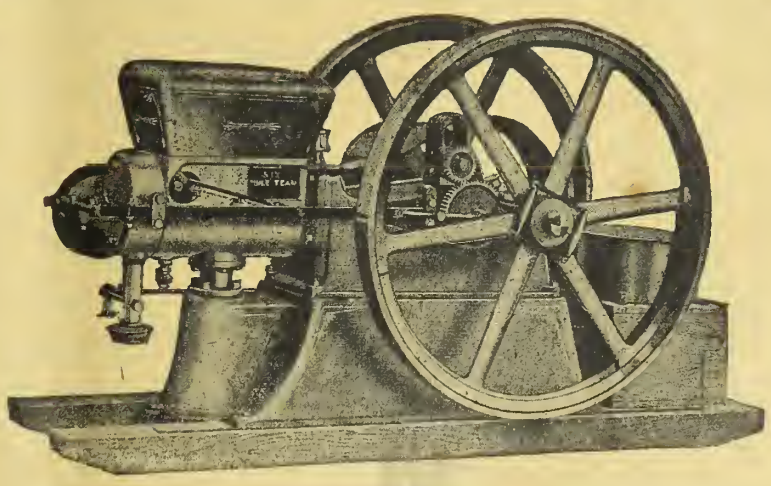

ways be relied on for a full days work. It is easy on fuel, simple to handle, long lived and low priced.

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DAIRYING.

Holding Back the Milk.

Pateley Bridge, a noted English writer on dairy subjects, writes as follows on this subject in the Farm and Home, an English agricultural Journal:

"Cows will sometimes refuse their milk to strangers, and a rough milker will often upset a herd. The reremedy in these cases is to get rid of the offending milker, for among dairy cows gentleness and kindness should always rule. If a cow evinces a dislike for one milker or a preference for another, it is best to humor her and hand her over to the care of the favored individual entirely. The superiority of women as milkers is generally admitted by all experienced cowkeepers, and the obstinate retainer of her milk will often prove tractable with a woman while obstinately refusing it to a man. Unfortunately female milkers are scarce, and year by year become more difficult to obtain.

"A common remedy is to attempt to distract the attention of the cow from her milking by providing some tempting food. The question of feeding at milking time is a debatable one, and we are familiar with the arguments against it, but nothing makes cows so much at home in the milking shed or brings them home to it so cheerfully as what the Yorkshire man calls a 'bit o' licking.' As a general rule, the relationship between cow and milker is good in dairies where feeding at milking time is in an institution. In some cases with a strange cow patience wins, and if the milker sticks to his stool and keeps rubbing the udder and stroking the teats, he will tire out the most wilful of cows. In other cases it seems a better plan to leave the cow for a time and return to her a half an hour later. In extreme cases it may be found more effective to refrain from milking until the distension begins to cause inconvenience, but there are drawbacks to this, and carried too far there may be a case of garget or a bad quarter. Putting a weight over the loins is a favorite remedy with some, and we have seen heavy chains and bags of sand, earth, or wet brewers' grains employed in this way. The idea is that the weight on the loins has an effect on the ability of the cow to control the voluntary muscles of the udder, which, under normal conditions, there is no doubt she can, but such measures are calculated to upset a nervous cow, and can never conduce to a big yield of milk. Teat tubes, or milk syphons effectually negative the cow's efforts at retention, but these are no more to be recommended, unless as a last resource, than weighting the loins. The udder is not simply a resevoir for storing milk which can be emptied by overcoming the resistance of the sphincter. Secretion goes on while milking is in progress, and is favored by the gentle stimulus of the calf's tongue and palate or the hand of the milker. Moreover, this is the richest milk. Kindness, patience and perseverance are the most rational, as they are the most successful means to overcome a disposition to 'hold' the milk."

Feed Rape After Milking.

Essex rape is a crop that is being much grown for forage purposes throughout the entire country. It is best adapted to cool, moist climates, but does exceedingly well under a wide range of conditions. The greatest growth can be expected on rich, moist, soil suitable to other farm crops. Rape is a very heavy producer and requires lots of moisture. It takes considerable nitrogen from the oil as well as mineral plant food. It can well be compared with the corn crop in this respect. It is better to follow a crop of rape with wheat or some other small grain for this reason.

In sowing rape, the ground must be plowed and a good seed bed prepared. There are several ways of growing the crop, either drill rows or broadcast, depending upon the conditions. The method commonly used is to broadcast early in the season on especially prepared land, or else it is sowed in the growing grain field. Four or five pounds to the acre is sufficient for a good stand. If conditions are at all favorable, rape will do to pasture in from 50 to 70 days after sowing; sometimes even less time than that.

Rape has a high feeding value. It has been fed to milch cows with some degree of success. It increases the milk flow remarkably, but many object to the taint it gives the milk. This trouble can be overcome by feeding the rape after milking. Where the crop is fed to hogs or sheep, they may be turned right in and allowed to pasture on it.

However, if it is fed to cattle and horses, it should be handled as a soiling crop. In a number of different places, rape is sown with other crops for forage purposes. In some cases it is sown 15 days after the oats or grain crop and makes considerable growth for pasture after the oats crop has been harvested. If the season is very favorable, with plenty of rainfall, the rape has a tendency to grow up and interfere with the harvesting of the grain crop.

Dairy thoughts.

The droppings from the cattle will benefit the pasture more if they are spread or broken with a spike tootb harrow. This prevents the grass from being killed out and weeds coming in where the droppings have lain.

The most important business of the dairyman is to increase the amount of manurial substances and apply them where they will do the most good to the growing crops.

He is no wise a public benefactor who keeps two cows to do the work of one.

A poor milker is one of the surest ways of diminishing the milk flow.

Too many dairymen are conducting their business as a side issue when they should be making it the leading feature of their farming.

The new cow has an individuality of her own and the feeder should become acquainted with her as soon as possible after she is brought into the herd.

Go you limit on a good bull. If your cows are deficient in the flow of milk, buy a sire that will make up the quality. If their milk is deficient in butter fat, breed from a sire whose tendency is to build up along that line.

Feed records are just as essential as milk records. It is the profits we want rather than the phenomenal milk yields that are made by feeding large quantities of expensive concentrates.

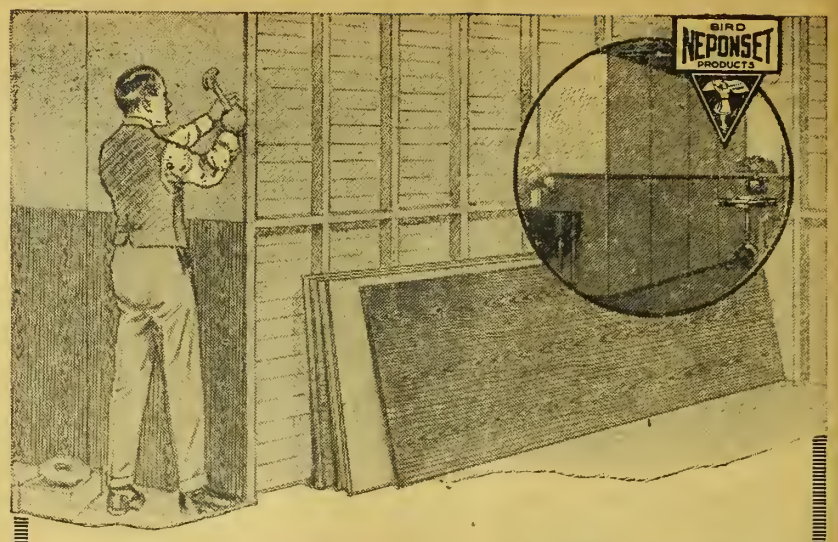
Proper feeding determines the amount of gain in the dairy business.

Milk records and feed records make knowledge definite.

If we are to make a success of the dairy business we must put thought behind and into our everyday work.

A cow will never do her best unless she has perfect confidence in you.

The modern dairy cow must be handled with understanding and her owner must have a knowledge of her wants and make every effort to supply them.



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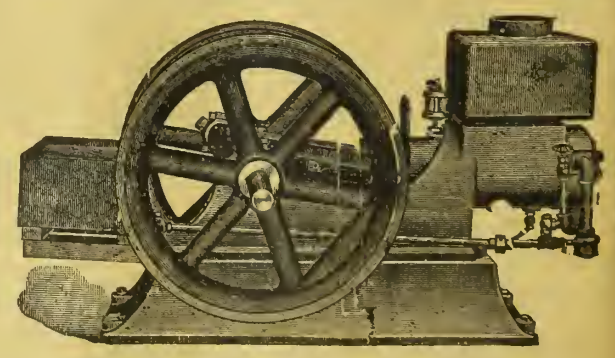

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Not JUST ONE convenient feature, but ALL of them stored up in an engine that a child can start and run.

The Price? Just as reasonable as a good engine must cost because it takes care and time and expense, as well as good materials to build a good engine—such as true economy should demand. Not the false economy that makes you suffer trouble and annoyance and delay and expense.

The Sussex Motor Co. engine is easy to try — easy to buy. Satisfy yourself that it is the one best bargain. Built for Kerosene, Gasoline or Gas. Write for Catalogue and Prices.

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It is always the same in quality, dissolves evenly, gives a delicious flavor — and makes the butter keep.

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Variation of the Composition of Cow's Milk.

The Irish Homestead publishes the following. Some carefully conducted experiments in connection with the variation of the composition of cow's milk with the advance of lactation have been conducted at the Garforth farm of the University of Leeds. The records extended for three years and include 70 completed periods of lactation (34 cows), of which 57, each extending over six months or more, have been used in compiling the tables given later. Careful analyses were made. The following is the summary arrived at:—

With regard to the rate at which the milk yield falls with advance of lactation our records indicate that after the first two or three months this is much more rapid in the case of cows calving in the months March to June than in the case of cows calving at other times of the year. The greatest average yield for the whole period of lactation was obtained with cows calving in January and February.

With regard to changes in the composition of milk our tests have brought out very clearly the fact that the variations in the composition of milk with advance of lactation may differ greatly in the case of the different cows so that no precise generalization upon the subject can be formulated.

Roughly speaking, however, the milk is richest in total solids, fat and albuminoids in the earliest and latest stages of lactation and poorest about the second or third month. The sugar content tends to decrease steadily with advance of lactation after the first month or so, but the proportion of ash remains approximately constant.

A Millstone Around his Neck.

That is what the "boarder cow," the "robber cow," the unprofitable scrub cow is to the farmer. Go where I will for my figures, I find the average production so low that those cows that go below the average must be losers to the keepers.

Just lately I got figures from several creameries and then ascertained the number of cows that contributed to the center of manufacture and was not surprised to learn that the average production per cow was from 156 to 184 lbs of butter. I was not surprised because I have been meeting the same results in almost every investigation I made where a considerable number of cows was concerned. The man with the average cow was not holding his own and how did the man with those below the average fare?

The price of butter will never be high enough to make a 125 lb. cow profitable. The only way that cow can be of any use to the world is to furnish prime extra choice beef for the hotel and restaurant table. The farmer who keeps and feeds her is getting poorer every day and so is his farm. If you come to my place I will show you some of both but you need not come—you have them right at home.

That poor fellow slaving year in and year out, working hard and long never thinking a thought but faithfully feeding a herd of "boarder cows!" And some of you fellows who want to be pretty wise are doing it, in fact I care not how wise you are, if you have not kept an account with your cows with scale and pencil, you are feeding some "robber cows."

Why men should persist in such work may seem a mystery to some, but it is quite natural. They are in a rut and it is easier to run along in the rut than to turn out on unused and unworn ground. It takes nerve to be laughed at and be given the guffaw and that is what always happens to the man who turns out of the rut in word, thought and action. But had no one tried new ground and defied the "standpatter" we would still be dwelling in caves and cooking meat by dropping hot stones in a pot. Time was when a man who defied fixed customs was declared a heretic and put in a dungeon but now the world only haw haws at him.

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Means a Gain of One to Three Quarts of Milk Every Day

Thousands of Farmers and Dairymen have proved that this wonderful cattle tonic increases the milk flow increases the butter fat, keeps the cows vigorous and healthy, insures sturdy, well nourished calves, and saves practically one-fourth the grain feed.

Owing to the tremendous success of International Stock Food all over the world, the country is flooded with imitations and substitutes. Be on your guard. Insist on having the genuine—sold by dealers everywhere. If you will write and tell us how many head of stock you own, we will forward to you free our $3,000. Stock Book.

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The Choice of Generations.

Sixty-two years ago your Grandmother kindled the fire with the "Eight-day" sulphur—the first EDDY product. To day most of the nine million Canadians favor the new silent "Ses-qui" non-poisonous matches, or one of the many other brands made by EDDY. Ask your dealer.

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What's YOUR idea of a GOOD Stanchion?

Isn't it one that will never bulge or sag, one that will last you a lifetime, one that will lock and unlock as easily a year from now or ten years from now as on the day you bought it—and one that holds the cattle surely?

The O. K. Canadian Stanchion comes up to all these requirements—because we've been making Stanchions so long that we're on to every wrinkle in the business and we know just how to make every part best and what to make it of.

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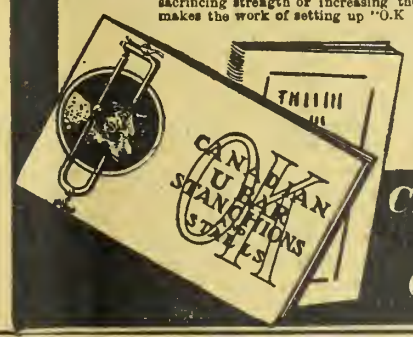

We have a couple of booklets that are chock-full of interesting points for dairymen and they'll show you how to figure just what an "O.K Canadian" equipment will cost for Your barn whether you want just the Stanchions or whether you want to put in complete metal stalls. They're yours if you'll ask for them. Department C

CANADIAN POTATO MACHINERY CO LIMITED GALT ONTARIO

22

"There could be no better medicine than Chamberlain's Cough Remedy. My children were all sick with whooping cough. One of them was in bed, had a high fever and was coughing up blood. Our doctor gave them Chamberlain's Cough Remedy and the first dose eased them, and three bottles cured them," says Mrs. R. A. Donaldson, of Lexington, Miss. For sale by all dealers.

LIVE STOCK.

The Gilt's First Litter.

Most of those among us who are interested in pigs have noticed the fact that pig-breeders, as a rule, regard it as part of their system of manage ment to take a first litter from the gilts which they save for stock at the end of a year from their birth. I remember how much I was struck with the diminutive size of a Jersey heifer —the first I ever bred, if I am not mistaken—which came into season and was served at the end of about sixteen months. She never seemed to grow, but matured early, and remained an abnormally small cow. Growth is not always impeded to this extent by service at an early age, but the lesson had its influence. All experienced breeders of pigs are aware that a pig will continue to grow, as a rule, and develop after she farrows for the first time, and that at the age of eight months, when service is necessary if it is intended that she should breed at the end of her first year, she is still growing. To check her growth at this time is to spoil her for good. Take a gilt of a large breed, the pick of a litter of the highest type, and assume that she is intended for exhibition. Her chance of success depends practically upon her size other points being equal, but if she is put to the boar at the age of eight months, the size which she might be expected to attain in due course will never be reached, owing to the demand made upon her by the pigs which she carries and ultimately produces. A large sow produces large pigs, and the most careful observations have shown that both the size and the weight of a litter are in proportion to that size, tempered with age, for a mature sow produces more and larger pigs than a gilt. A gilt invariably produces a smaller litter of smaller pigs than when she is older. Thus if age and size both influence results we cannot doubt what is the best course to pursue. Common-sense alone, once the question is thought out, will indicate the desirability of deferring the period of service, and in consequence the date of the first litter, so that more time may be devoted to untrammelled growth.

It is probable that there are some who believe that to defer the first litter means a direct pecuniary loss. After feeding a gilt for a year they regard it as the proper course to obtain a speedy return. It is obvious, however, that if the value of a gilt, which may be kept for breeding for years, is permanently reduced for this purpose, the loss of profit will be largely increased. A gilt allowed to grow to full size will make a better and more certain return than would be possible under other conditions. She will, moreover, make that profit twice a year, while her value will be distinctly increased. However well a gilt may be bred she is immature and imperfectly grown when she produces her first litter at the age of twelve months.

A sow intended to farrow early in March must be served by the middle of November; at that date a gilt farrowed early in March is thirty-six and strong. If she is served the deweeks old, and should be growing fast mand upon her resources is not immediate, and it is not long postponed, but she gradually matures, which is disadvantageous, as the roundness of maturity should be deferred. If, however, we wait until April arrives we give the gilt an extra twenty weeks for growing and developing, in which case she may be allowed to farrow early in August, when the weather is fine, so that her first litter will obtain the full benefit of the mild temperature of late summer and Autumn before they are fat and sold. Can it be doubted that under such conditions a young sow will be much superior to what she would have been had she littered in March, and that her pigs will be finer specimens, and realize more money? In the ordinary course of pig management a sow littering early in March should litter at a similar date in September, and so her pigs growing, fattening, and being weaned in time, she will come into use with November, and be so mated again for March farrowing. In the case of the gilt, which has produced her first little family in August, extra time is advantageously allowed; she may retain her pigs a little longer, and, with her liberty, rest as long as it is safe to allow her before she is again mated with the boar to come in with her second litter in March.—Jas. Long.

Bacon Curing on the Farm.

When thoroughly stiff and cool, the head should first be removed and the carcass cut into two sides by sawing down the back from the tail to the neck. There are many different methods of cutting up a pig, however. In the south it is usual to take out the belly piece first; in Cumberland the spine is generally removed in one piece, accompanied by the breast bone and the two small ribs nearest the shoulder; the old Ayrshire curers split the carcass down the middle and afterwards hang up the two sides by hooks thrust through the gammon hocks. In the ordinary way, when the head has been removed, the "chines" or backbone, should be cut out, and removed very carefully so as not to take too great a proportion of lean meat; if thick chines are taken much of the lean meat of the back is removed at the same time, so that the fat rasher is produced as compared with that from a medium pig, where there is a fair proportion of fat and lean. Afterwards the hocks and forearms may be removed, and also the spare ribs, if the pig is a large one. The fillets, or "lean meats," are cut from the flitches, and the ham cut out at about the third joint from the tail. From the head can be cut jowls or cheeks, eye pieces, tongue, ears, and nose pieces. These pieces, together with the heart, liver, lights, etc., can be made into brawn, collared head, potted pork, and tongue, etc. The leaf and other spare fat can be rendered into lard, while sausages can be made from other spare parts. When well cleaned and boiled the stomach and the chitterlings can be used as tripe, while the spare ribs may be roasted, and then the lean meats used for pies.

CURING.

The curing of bacon should be conducted in a moist atmosphere at a temperature of from 40 degrees to 42 degrees Fahr. The meat may be either dry-salted or pickled, and although the former is certainly the more convenient and less troublesome method, a very large number of curers have now adopted the use of the pickle pump or syringe for injecting a suitable preparation into the meat. The carcase must always be thoroughly drained of blood and of all impurities before any attempt is made to salt or pickle it, the large blood veins being carefully removed beforehand and the carcase neatly trimmed.

A simple recipe for dry-salting the meat is to rub both the skin side and the inside with a mixture consisting of equal proportions of salt and brown sugar, with ½ oz. saltpetre to each 1 lb. of the mixture.

Another recipe is:—14 lb. coarse salt and 1 lb. saltpetre to a 10 score pig. For a small pig not weighing more

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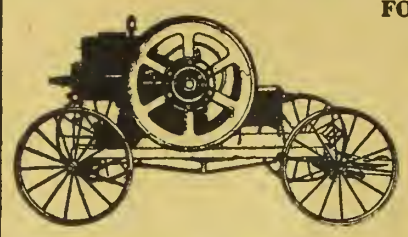

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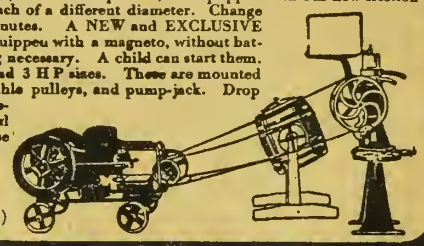

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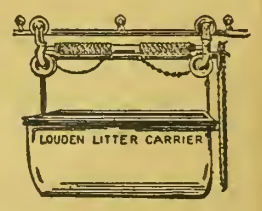

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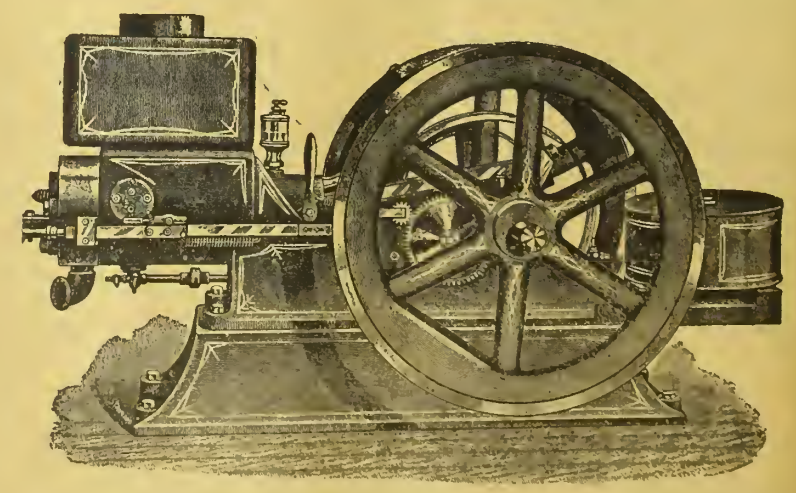

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than 8 score the carcase may be cut into four quarters, the bones removed, the forelegs cut off close up the side, and the shank bones removed from the hind legs. The four quarters are next sprinkled with 2 oz. of saltpetre, and from 3 to 4 lb. of common salt. Then they may be piled up one on top of the other and left for ten to twenty days, rolled up (Ayrshire fashion) and tied with twine, placed in muslin bags, and stored in a cool place. The quarters may be numbered according to the degree of curing, and in this way it will be possible to secure various degrees of mildness in the curing process for short or long keeping, as the case may be.

PICKLING BACON.

A really good qnality mild-cured bacon can never be obtained unless the brine or pickle is injected into the side with the brine or force pump, after which operation all that is necessary to complete the pickling is a sprinkling of dry salt, the hams being turned at intervals for about two or three weeks, when they will be ready for smoking.

Pickling ensures that the meat is salted more uniformly than in the case of dry salting. A good pickle for the purpose is composed of 1 lb. of saltpetre, 1 lb. of dry antiseptic, 1 lb. of black sugar or one pint of treacle, and 11 lbs. of common coarse salt with water to make up four gallons. This pickle is a suitable one for hams. For bacon, the following ingredients may be boiled together and the concoction afterwards skimmed quite clear before using:—13 lbs. of salt, 1¼ lb. of saltpetre, 1¼ lb. of dry antiseptic, and 1½ lb. of cane sugar with water to make up three gallons. A salinometer, which is a modified form of hydrometer, is necessary when using a pickle for bacon; otherwise it is impossible to tell whether the mixture is at the right strength. The salinometer should be registered 100 degrees; if it registers less than this more salt should be added.

Shorthorn Color Here and There.

North America is the only country in which the Shorthorn has ever held its own colors. In all the countries of continental Europe the descendants of animals imported from Britain have taken on more or less of the form, character and color of the native stocks—environment being stronger than heredity in those cases. For instance, the "Durhams" bred in France, and just as well bred as many in their native habitat, are quite different from those produced in Russia, and both differ materially from the parent stock. Of course there is a racial resemblance, and the roan colored and its derivatives only, but or perseveres as characteristic of the the general style and contour rapidly undergo changes.

In Argentina the tendency of all cat-hammed and yellow after the pattern of the old Spanish stock. This supplies the reason why importations of fresh blood must constantly be made, and the Argentine preference for reds of rich, dark roans is also explained by the persistent washing out of the coat toward the yellowish tinge. In Australia the same tendency has to be overcome, but as practically all the breeders in the Island Continent are of British extraction, their more careful methods have to a large extent counteracted it, rendering infusions of fresh blood in great and frequent volume less necessary than in the instance of the instance of the Argentine Republic.

In New Zealand conditions affecting cattle, their conformation and their color are second only to those prevailing in Britain and the northern half of the American continent. In South Africa it is relegated, the breed seems to include an undue proportion of red-and-white among the native pure-bred cattle—what may properly be called spotted ones—but whether this is a result of climatic and other regional influences or because of an effort on the part of importers to get cattle mostly red but with some little white about them, we have not heard explained. One peculiar variation from the parent stock, we are told, in South Africa is a tendency of cattle either pure-bred Shorthorn or largely of that blood, to become broken-colored about the foreparts and particularly the head and neck, a rim of dark color invariably showing around the eye. Possibly this tendency to broken color—red and white—in the grades has been handed down by the Africander shestock with which the pure-bred hulls have been mated, but that would not offer any explanation of any similar phenomena in the instance of cattle of uncontaminated lineage. We are not aware whether this tendency to assume a parti-color is general all over the vast grazing lands of South Africa, but it has been noticed by more than one observer.

In Chili and clear over to the other coasts of South America in Brazil, Paraguay and Uruguay the tendency of the grade cattle is always toward the light red or yellow mentioned in connection with Argentine breeding operations, degeneration in this respect being much more rapid when any very close breeding is tolerated. In fact it seems that the more promiscously the cattle are permitted to breed, the quicker is the descent toward the detested colors of the old Spanish sorts. Research suggests also that when moved to Oriental countries Shorthorns take on the light red-and-white speckled coat so common in almost every land, this being true in countries where cattle of the species to which all the improved breeds belong are not indigenous.

There must be some good reason for this change. What is it? Why is it that when turned out and left to themselves, the roan color is the first then the white to disappear among cattle of Shorthorn extraction?

These are matters of speculation, of course, and without real value to the breeder. After all though, it is rather more than strange that only in the islands of Britain and in Canada and the United States—with the possible addition of New Zealand distant thousands of miles—should the original colors of the Shorthorn persevere without the constant injection of fresh blood. Why is it, also, that in realms so widely separated geographically as Japan and South Africa the same tendency to assume a light red-and-white, spotted hue should appear? Why is it that in some countries the birth of a white calf becomes so great a rarity as to be an event of local importance, whereas, in other countries it is absolutely impossible to prevent such occurences, no matter how religiously white or light-colored parents are tabooed?

It may be again that some of the data presented, as already suggested, are representative of local rather than general conditions in some of

(Concluded on page 201)

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Feeding Colts For Growth.

The problem of wintering colts in an economical manner is before many farmers at this season. The man who is in the horse business in a large way realiles the importance of keeping the colt at a high point of thrift and growth throughout the year. Many men, however, who raise but one or two colts a year are prone to let the youngsters take pot luck with the work horses out in the stalk fields or on the sheltered side of the straw pile.

This is perhaps the cheapest way of carrying them through the winter, but it is false economy which redounds to the detriment of the colt, his development, and his final value. Size is fundamentally essential in the draft horse. It cannot be obtained to the maximum unless the animal is supplied with sufficient feed of proper quality throughout its growing period.

The needed nutrients are found in a ration of oats three parts, bran three parts, corn three parts, and oil meal one part, together with alfalfa hay and whatever straw, stalks, and similar roughages the colt's appetite leads him to consume.

Stinting the feed stunts the foal. Fifteen bushels of grain feed will generally add $25 or more to the value of the colt in the spring over his value, had he been merely "carried" through the winter.

Exercise in the open is essential. Observation of the hoofs, seeing that they are growing normally and trimming when necessary should be attended to religiously. The quarters in which the colt is sheltered should be light and clean. A lousy colt in a dark dungeon of a stall is an object for pity and will not be worth much more in the spring than he was in the fall. Often he will be worth less.

Feed and care for the foal so that you do not have to apologize for his appearance. Watch him grow. Take a pride in his development. Don't feed him so that he becomes a ball of fat, but see that he is developing muscle and bone. Don't let him become pot-bellied by eating unpalatable non-nutritious roughages, but feed him enough of palatable nutritious feed to give him the stretch that is necessary to rapid development.

Do the right thing by the youngsters and they will surprise you in the spring; more than that they will repay you highly should you care to dispose of them.—D. O. Thompson.

Causes of Corns in Horses.

Some feet are predisposed to corns, and causes are narrow, deformed hoofs, deformity of the limbs, bad trimming, wide, flat feet, excessive weakening of the sole bars and frog, permitting the toe to grow too long, shortening one quarter too much, so that the foot is unbalanced, shoeing a heavy horse with too light a shoe, thus permitting the shoe to spring down on the heel. Permitting the feet to become too dry and brittle, thus reducing the elastic properties of the horn, and nailing the shoe too far back, thus preventing the natural spread of the hoof when placed upon the ground, applying the shoe too hot while being fitted, and other causes. Horses which have never been shod rarely have corns, thus proving that corns are due to errors in shoeing.

TREATMENT.

First remove the cause by paring the hoof to the proper angle; shorten the toe and cut down the quarters if too high. Put on a level shoe. If calks must be used, use both toe and heel calks, never toe without heel, nor heel calks without toe, unless for a special purpose. A leather sole should always be used under the shoe and place a dressing over the sole of the following mixture:—Pine tar, 8 oz.; Venice turpentine, 1 oz.; spirits camphor, 1 oz.; compound tincture benzoin, 2oz. Mix and smear plentifully over the sole, after which apply oakum and the leather pad. When there is a suppurating corn, the shoe should be left off for several days and drainage for the pus established. Poultices of flaxseed should be applied in which has been placed creoline, about 2 oz. When the lameness has been removed, the horse should be carefully shod, using a bar shoe with a leather sole, and the above dressing. The after-care of the hoof consists in keeping it cool, moderately moist and pliant.—San Francisco College.

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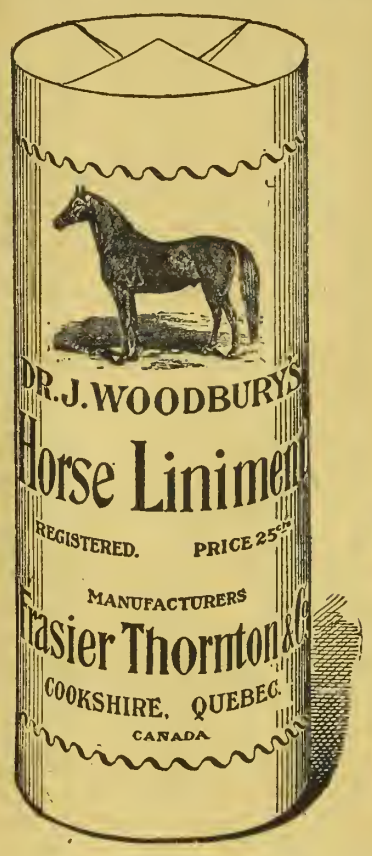

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Examination of Stallions.

Regulations for the examination of stallions have for some years been in force in New Zealand, but they are not wholly effective, because while they grant certificates to sound stallions they do not prohibit the use of those that fail to pass the veterinary examinations. It is only to be supposed, however, that some of the owners of disqualified horses take the veterinary's decision very badly, and as it is possible that veterinaries may sometimes err, regulations regarding appeals are as follows:—

Any owner of a stallion who is dissatisfied with the refusal of a government certificate in respest of his horse may appeal against the Minister at any time within thirty days of the examination, under the following conditions:—

(a) That the appeal be in writing and be accompanied by the lodgment of £5, such amount to be forfeited in the event of the appeal not being upheld, unless the board shall for good cause otherwise direct.

(b) That the appeal be accompanied by an undertaking to pay railway fares and hotel expenses incurred by the Board of Appeal in connection with the settlement of the appeal.

(c) That, in the event of refusal having been on the ground of unsoundness, the appeal be accompanied by a certificate from the veterinary surgeon setting out that the horse has been found by him on examination since the refusal appealed against to be free from all the unsoundness set out in Part II. of the regulations:

(d) That, in the event of the refusal having been on the ground of below standard for Government approval, the appeal being accompanied by a certificate from the president and two members of the committee of the society under whose auspices the parade was held, setting out that in their opinion the horse is of fit and proper type, conformation, and breeding to be approved as a stud horse.

On receipt of notice of appeal in proper form, and with the above conditions complied with, the Minister will appoint a board of appeal, which shall consist of—

(a) In the case of appeals against refusal of certificate on the ground of unsoundness, the chief veterinary officer and two practising veterinary surgeons.

(b) In the case of appeals against refusal of certificate as being below standard for Government approval, the chief veterinary officer and two horsemen of repute and standing.

Such board shall act and decide on the appeal, and its decision shall be final, and not subject to review.

Casting a Horse.

The most simple and inexpensive methon of casting a horse requires only a soft, strong rope 50 feet long. The addition of hobbles, to which iron rings are attached, eliminates the chance of rope burns about the fetlocks of the hind feet, but hobbles cannot be used on unbroken horses.

Knot the rope at the middle of its length so as to make a loop, which, when passed over the horse's head, will fit the neck like a collar. The knot is placed lowermost and each end of the rope is now pasted backward outside of each foreleg and then between the hind legs and around the respective pasterns.

Before running the free ends through the loop collar pass each end over the backward length of the rope. This holds the rope more snugly about the pasterns and lessens the chance of the animal stepping out of the rope. A steady pull by assistants on each side will throw the animal. The hind legs may be drawn to the horse's sides and securely fastened.—O. L.

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Schirrhous Cord.

O. K.—Four year old gelding, castrated when a yearling, developed a lump. It was hard and about the size of a nutmeg when first noticed. It seemed to be attached to the cord in the scrotum. Within four days the lump increased to the size of a man's head. The whole of the scrotum became inflamed, which was a hard, hot mass, painful to the touch, and leaving dents for a short time after being pressed on with a finger. After eight days from commencement the swelling gradually descended into the sheath. At the same time the inflammation itself in the scrotum seemed to go down a little. The sheath increased in size every day, till inside of two weeks it was hanging down about one foot, with a width of eight inches. The inflammation went out of the sheath after 12 days, and a small bag about the size of a stallion's purse remained, in which one can feel a hard lump on each side. They are hard, flat, and seem to be on the cord. When touched, the horse will draw it up, at the same time drawing up the whole bag, the lower skin of which is attached to the lumps. After four weeks one side of the bag broke at night, and must have discharged some matter. It healed up immediately. There is no inflammation whatever now, but the bag with the lump remains. The general health of the horse was in no way impaired, and he has actually increased in weight. He was worked regularly before becoming afflicted, but not during illness; only exercise was given. The swelling was bathed three times daily with hot water. 1. Was this dropsy? 2. Is this a rupture? 3. If the horse needs operating upon, when is the best time to do so? he being urgently needed for spring work on the farm. 4. Should he be worked now?

Ans.—Your horse has what is known as "Schirrhous Cord," sometimes seen after castration; may appear soon after or may not be noticed for a considerable time alter. It frequently suppurates and has a tendency to increase in size, the only treatment is an operation to remove the schirrhous end of the cord, and the sooner it is done, before it attains too great a size, the simpler the operation and the quicker the recovery. It is claimed by some that one drachm doses of iodide of potash will cause absorption of the enlargement, but I have never seen any treatment that proved satisfactory, but the entire removal of the diseased parts under strict antiseptic precautions and antiseptic treatment offers complete recovery in about three or four weeks.

Breeding Age.

As a general rule it is not wise to breed mares until they are about three years of age, as early breeding tends to stunt the growth of the animal. In the case of very large strong draft fillies that will wiegh 1,400 lbs. at two years of age, there is no objection to breeding, providing special care is taken to feed more liberally than usual. Breeding large draft fillies seem to broaden them out, and if they are permitted to skip breeding the following year, they will be fully as heavy at five years as the mares that were not bred until three years of age. This plan often gives advantageous results in fillies that are overgrown, awkward and lacking in good proportions.

Early education for the colt; nothing like it.

* * * *

After all what good ever came from shouting and swearing at the horse.

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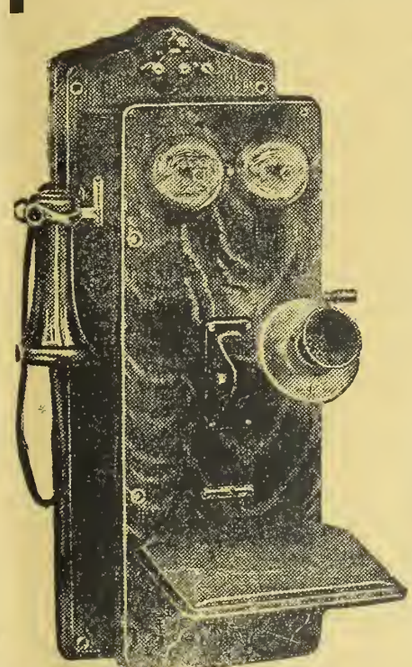

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POULTRY.

Prime Poultry, What Does It Mean?

The "Jersey Brand" of dressed poultry has probably a better commercial record than poultry from any other section of the country. It stands well to the front, and commands the highest prices, especially in the New England and New York city markets. In these markets it is known as "Philadelphia poultry," although the product is not grown in Phildelphia, but principally comes from the southern part of New Jersey.

There is a reason for this popularity, and the secret in the preparation of this class of goods might profitably be observed in other sections of United States and Canada.

Philadelphia poultry is not free range stock. This makes it more tender. Poultry allowed to roam all over the fields while growing, have hardened muscles and the meat is more or less toughened. Philadelphia poultry is raised by poultrymen who confine the stock to limited quarters, and feed such foods as will the most quickly properly fit the stock for market. Philadelphia poultry is quickly grown. The farmer's fowls at nine months of age are more tough than fowls twice the age from the yards of practical poultrymen.

The South Jersey poulterers stall-feed to a certain extent. They give only the purest of food, do not allow too much exercise, and two weeks before marketing the stock is placed in fattening pens and thus put into a condition where the meat is soft and tender, and the carcass plump and fat. That is South Jersey's secret, and that is what made "Philadelphia poultry" famous.

It is a fact that the meat of yarded fowls is more juicy, which, as a rule, is not the case with the free-range stock. It is not alone that the violent exercise that they receive while out on the range, but rather upon the food they secure that adds a taint to the flavor. Such articles as onions, too much grass, decayed stuff, manure piles, etc., are not calculated to improve the taste of the meat.

But, notwithstanding the good name Philadelphia built up for her poultry shipments, quite a different state of affairs existed up until a year or two ago with the product consumed at home. The choice stock was sold to the first class trade at home, and the poorer classes of people had to be contented with inferior stock imported from some of the big Western packing houses.

About a year or so ago Dr. A. F. Schreiber, chief of the Philadelphia corps of meat inspectors, began war against this class of goods, declaring that "the imposition practised upon the public by the big Western packers was just as great as the frauds in their beef and other meat trades."

He continued: "The stuff they get comes from the storage boxes of the big Western packing houses. It has been kept here in many instances for more than a year."

It is certain that such stuff is unfit for food. When exposed to the summer air the skin is apt to turn black in places, and the carcass has a characteristic musty odor. When cooked, the flesh has a reddish tinge, and the meat is tasteless.

The writer has always held that the refrigerator stock shipped east is unfit for food. It would be a God-send if all cities would follow the plan act by Philadelphia to drive out all such stuff. If the Board of Health of each city will adopt strict rules in this particular, and have their inspectors keep a close watch on the poultry sent in, it would not only prevent much sickness, but would be of great benefit to honest poultrymen who supply choice fresh stock.

An inspection could also be made of the poultry hanging up in the markets. Some of it has a very suspicious look, indicating that when alive it was not in the best condition. No honest poultryman or farmer will send to market carcasses that they would hesitate to use on their own table.

Where the attention of the male becomes a perfect harassment, the nervous derangement may decrease the egg record. It is, therefore, safest to have not less than ten females mated to each male bird, and after breeding season it is best to remove the male from the flock altogether. Hens will lay just as well without the attentions of a male as with them.

A broiler should be short in head; broad, deep and full in breast; small in comb (rose or pea); and a pound and a-half to two pounds in weight. The body should be short, deep and well rounded; the back short, broad and flat at the shoulders; and the skin of a rich yellow. The legs short, and the thighs stout; the color of a bright yellow.

The spring chicken is one hatched not earlier than February, nor later than May, and is of market weight at two or three pounds.

Some tell the sex of the Guinea fowl by its wattles. Those of the male are double the size of those of the female.

There is practically no danger of overfattening the laying hen. It is almost impossible for her to make eggs and fat at the same time.

It is doubtful if caponizing will ever gain a foothold in this country. The difference in price between a capon and a properly fed soft roaster is so little that it is not profitable to take the risks.

The breast of the Indian Game is very much like that of the pheasant or the Prairie chicken. The heft of the meat lies on the breast.

Fowls should be deprived of food from 14 to 16 hours before killing. If this is not done, and they are full of food when killed, the carcass soon decomposes, turns the bird green and renders it comparatively worthless. Wegemeir says that even if the food has passed out of the crop into the bowels the fowls will not keep long, as the half digested food in the interior causes them to spoil and gives an exceedingly unpleasant flavor.

Pet ducks are scarce; it is a fact that they rarely make friends.

In turkey culture, a single union of a male and female fertilizes all the eggs the hen will lay in one season; hence, one gobbler should be enough for twenty or more hens.

About 70 years ago, prizes were offered at the dairy shows of England for the best and largest poultry. Noblemen of the highest rank became competitors at these exhibitions. In 1832 Earl Spencer carried the highest prize for a turkey which weighed 20½ pounds. One capon was exhibited which weighed seven pounds and fourteen ounces; one pullet, six pounds and three ounces; one goose, eighteen pounds and two ounces; one pair of ducks, ten pounds and ten ounces. In December, 1822, two turkeys were sent to Cork, one weighing 33 pounds, and the other 34 pounds. In December, 1833, three turkeys were sold at Leadenhall market, which weighed ninety-one pounds, and brought three guineas each. One 18 months old, and weighing 34 pounds, was sold at the same price.

Turkey tail and wing feathers are made into feather dusters, and "feather bone" manufacturers give from 15 to 25 cents a pound for them. Body feathers, used for cheap pillows and mattresses, bring from two to three cents per pound. No one who

In Convalescence

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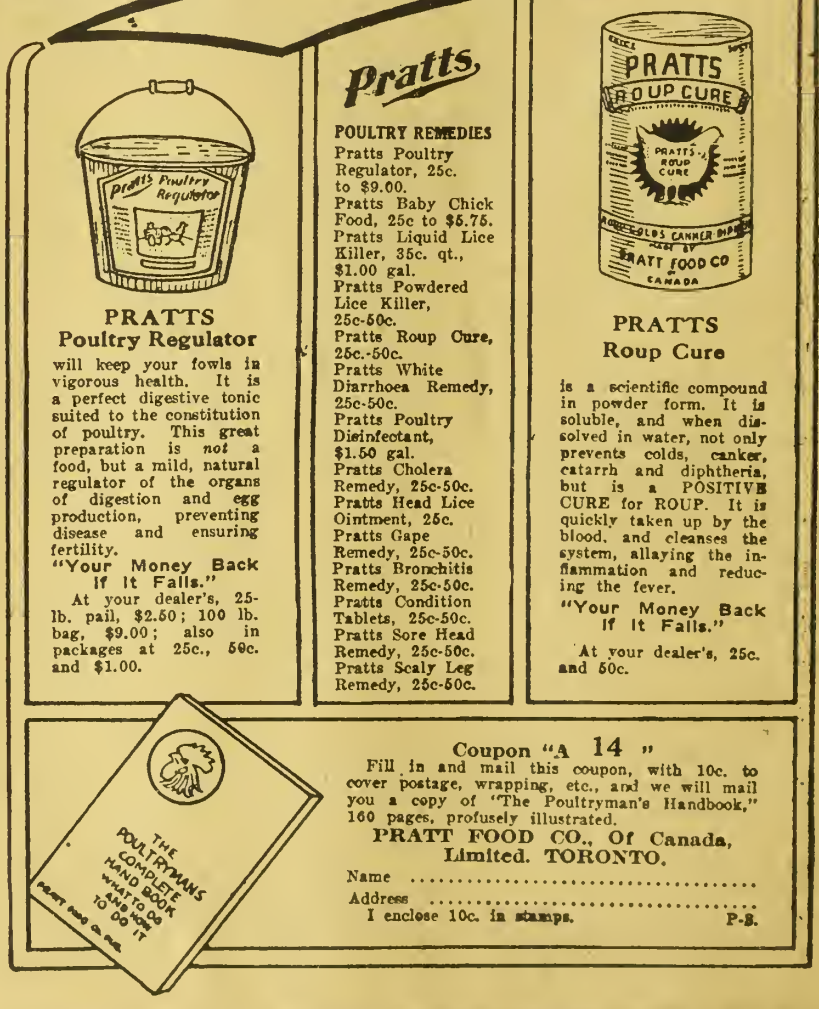
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will keep your fowls in vigorous health. It is a perfect digestive tonic suited to the constitution of poultry. This great preparation is *not* a food, but a mild, natural regulator of the organs of digestion and egg production, preventing disease and ensuring fertility.

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Pratts Cholera Remedy, 25c-50c.
Pratts Head Lice Ointment, 25c.
Pratts Gape Remedy, 25c-50c.
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uses scalded water to remove the feathers should expect to get the best price. They bring more if carefully sorted and shipped in bags or shoe boxes.

George Tucker, of Rhode Island, probably grows more turkeys than any other person in the State. His records show 225 young from 22 hens; 306 young from 28 hens; 240 young from 30 hens; 322 young from 36 hens; and 425 young from 35 hens. In order to feed and look after this number of turkeys, one of Mr. Tucker's daughters has to go about three miles to go the rounds.

Along the shores of Naragansett Bay and Sound, and especially about Little Compton and Tiverton, geese are more generally kept than in any other part of New Eng,and. In the region of Naragansett Pier, Point Judith, and on Black Island, many farmers raise geese. The young geese are bought in large numbers by dealers who fatten them and prepare them for market with such success that Rhode Island geese bring more in Boston and New York than those from any other part of the country. In fact, the home supply is not equal to the demand, and to prolong the season and fill their orders, dealers are obliged to secure geese in Canada, Prince Edward's Island and other sections of the country.

Cottonseed meal should not be fed too liberally, as it then acts rather disastrously on the productive organs. It is really not advisable to add it to the bill of fare for laying hens.

A series of experiments undertaken at the New York Experimental Station, made it very conclusively appear that where hens were kept without a male, eggs were produced at about 30 per cent. less cost than exactly similiar pens where cocks and cockerels were kept. In some pens, too, the production of eggs was nearly a third larger in pens where no males were kept than in others of precisely of the same kind, managed in the same way, except that the presence of no male was admitted.

Taking up separate branches of poultry culture and depending upon them for a living, it about as risky as the man on the farm, who would devote all his land, time and money to a single crop.

The Egg Circle Movement.

Following a series of lectures given in various parts of Prince Edward Island, Mr. T. A. Benson, Dominion Poultry Representative, working in co-operation with the Provincial Department of Agriculture, has for some weeks been engaged in practical field work, with a view to demonstrating along the lines of his lecturing, and the question of marketing eggs has been given first place. Those who have given the matter even a passing thought have long recognized the evils arising from the present methods of marketing as ordinarily practised, and the urgent need of some remedial measures being taken; in fact, public feeling in many sections has been so strong as to constitute a demand for a betterment of conditions. Under present methods, speaking generally, an egg is an egg, providing the shell is intact, and what is known as the "flat rate" system prevails; all eggs, good, bad, or indifferent, commanding the same price, which methods of breeding, feeding and caring for poultry and market eggs, are means that those practising careless on an equality with those who adopt correct methods with the one exception of course that the farmer class of poultry keepers obtain a smaller production of eggs. It may, in fact, be said that a premium is placed on slovenly methods. All this results in a loss of not less than 17 per cent. of the total egg production of the Dominion of the value of five dozen eggs in every thirty marketed, nearly all of which loss is preventable. This heavy loss must of necessity fall principally upon the producer and in part on the consumer. Another bad feature of present conditions is the great difference between the price realized for eggs by the producer and the prices paid by consumers by reason of there being too many handlers of the product, which considering its extremely perishable nature should reach the consumer in the shortest possible time. The object in view in organizing co-operative egg selling associations, known as egg circles, is to eliminate those evils and place a premium on good methods and good eggs, thus giving encouragement to those wishing to be honest and do the right thing. There is room for much greater profit to the producer without increasing the cost to the consumer if the present waste and some of the unnecessary handling are eliminated. There is a great and ever increasing demand for the good article and it is for the producer to co-operate more closely with the consumer and see to it that this demand is satisfied.

Two of these associations known as Egg Circles are already doing business on the Island; one in New London, and another at Kensington, having between them a memberehip of upwards of 150 to date and applications for membership continually coming in. It is the intention as far as possible to obtain the assistance of those engaged in handling eggs in each district where these associations are to be organized, but the merchants and dealers appear to view the enterprise from varying view points. Some are opposed to it, declaring they will put up their peices for any kinds of eggs to fight the movement down and this has already been done. Which is it, have these merchants been paying too little in the past, or are they losing money to keep the farmers in the old rut to-day, and stand in their way? It is pleasing to note, however, that other local merchants view the matter differently and are glad to cash the cheques of the associations which the farmers are offering in doing business with these merchants.

If the methods and working of the egg circles are considered without bias, and false reports which have been circulated, investigated, it will be found that nothing but good can result from this work. The merchant will be benefited more by the farmers' cash than by the eggs; and they will get the farmers' cash if they offer good quality in all departments and there are evidences that the larger dealers will welcome anything which will improve the quality of eggs and be willing to pay in accordance with quality.

It is hoped that Mr. Benson will receive the unqualified support of all in the good work which he has been appointed by the Department of Agriculture to carry on, and which will undoubtedly result in more and better eggs on the market without increased price to the consumer, and a fair profit for the legitimate middleman.

The farmers of P. E. I. will do well to carefully consider this movement and ask themselves why there should always be strong opposition when they attempt to stand together. This is an opportunity for the building up of one of the most important farm products, and elevating the industry to such a level as to wipe out the suspicion of eggs which is one of the greatest factors in curtailment of consumption. Why should the farmers' right to manage their own affairs be disputed? And why should they not stand together in this matter as they did in the question of creameries, and secure an equal or even greater advantage?

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Mrs. Geo. Murphy, Spence, Ont., writes:—"I have had occasion to use Dr. Wood's Norway Pine Syrup, and can say it most certainly is a wonderful medicine. Last winter my little girl, just a year old, took a severe cold which settled on her lungs. I tried everything, and was almost in despair, when by chance I read of Dr. Wood's Norway Pine Syrup, and decided to try it. I got two bottles, and as soon as I started to use it I could see it was taking effect. I gave her three bottles in all, and they completely cured her."

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

"Shall I go away, aunt?" I asked, trembling.

"No, sir," said my aunt. "Certainly not!" With which she pushed me into a corner near her, and fenced me in with a chair, as if it were a prison or a bar of justice. This position I continued to occupy during the whole interview, and from it I now saw Mr. and Miss Murdstone enter the room.

"Oh!" said my aunt, "I was not aware at first to whom I had the pleasure of objecting. But I don't allow anybody to ride over that turf. I make no exceptions. I don't allow anybody to do it."

"Your regulation is rather awkward to strangers," said Miss Murdstone.

"Is it?" said my aunt.

Mr. Murdstone seemed afraid of a renewal of hostilities, and interposing began:

"Miss Trotwood!"

"I beg your pardon," observed my aunt with a keen look. "You are the Mr. Murdstone who married the widow of my late nephew, David Copperfield, of Blunderstone Rookery?—though why Rookery, I don't know."

"I am," said Mr. Murdstone.

"You'll excuse my saying, sir," returned my aunt, "that I think it would have been a much better and happier thing if you had left that poor child alone."

"I so far agree with what Miss Trotwood has remarked," observed Miss Murdstone, bridling, "that I consider our lamented Clara to have been, in all essential respects a mere child."

"It's a comfort to you and me, ma'am," said my aunt, "who are getting on in life, and are not likely to be made unhappy by our personal attractions, that nobody can say the same of us."

"No doubt," returned Miss Murdstone, though, I thought, not with a very ready or gracious assent. "And it certainly might have been, as you say, a better and happier thing for my brother if he had never entered into such a marriage. I have always been of that opinion."

"I have no doubt you have," said my aunt. "Janet," ringing the bell, "my compliments to Mr. Dick, and beg him to come down."

Until he came, my aunt sat perfectly upright and stiff, frowning at the wall. When he came, my aunt performed the ceremony of introduction

"Mr. Dick. An old and intimate friend. On whose judgement," said my aunt, with emphasis, as an admonition to Mr. Dick, who was biting his forefinger and looking rather foolish, "I rely."

Mr. Dick took his finger out of his mouth, on the hint, and stood among the group, with a grave and attentive expression of face. My aunt inclined her head to Mr. Murdstone, who went on:

"Miss Trotwood. On the receipt of your letter, I considered it an act of greater justice to myself, and perhaps of more respect to you—"

"Thank you," said my aunt, eying him keenly. "You needn't mind me."

"To answer it in person, however inconvenient the journey," pursued Mr. Murdstone, "rather than by letter. This unhappy boy who has run away from his friends and his occupation—"

"And whose appearance," interposed his sister, directing general attention to me in my indefinable costume, "is perfectly scandulous and disgraceful."

"Jane Murdstone," said her brother, "have the goodness not to interrupt me. This unhappy boy, Miss Trotwood, has been the occasion of much domestic trouble and uneasiness; both during the lifetime of my late dear wife, and since. He has a sullen, rebellous spirit; a violent temper; and an untoward, intractable disposition. Both my sister and myself have endeavored to correct his vices, but ineffectually. And I have felt—we both have felt, I may say; my sister being fully in my confidence—that it is right that you should receive this grave and dispassionate assurance from our lips."

"It can hardly be necessary for me to confirm anything stated by my brother," said Miss Murdstone; but I beg to observe that, of all the boys in the world, I believe this is the worst boy."

"Strong!" said my aunt, shortly.

"But not at all too strong for the farts," returned Miss Murdstone.

"Ha!" said my aunt. "Well, sir?"

"I have my own opinions," resumed Mr. Murdstone, whose face darkened more and more, the more he and my aunt observed each other, which they did very narrowly, "as to the best mode of bringing him up; they are founded, in part, on my knowledge of him, and in part of my own knowledge of my own means and resources. I am responsible for them to myself, I act upon them, and I say no more about them. It is enough that I place this boy under the eye of a friend of my own, in a respectable business; that it does not please him; that he runs away from it; makes himself a common vagabond about the country; and comes here, in rags, to appeal to you, Miss Trotwood. I wish to set before you, honorably exact consequences—so far as they are within my knowledge—of your abetting him in his appeal.

"But about the respectable business first," said my aunt. "If he had been your own boy, you would have put him to it, just the same, I suppose?"

"If he had been my brother's own boy," returned Miss Murdstone, striking in, "his character, I trust, would have been altogether different."

"Or if the poor child, his mother, had been alive, he would still have gone into the respectable business, would he?" said my aunt.

"I believe," said Mr. Murdstone, with an inclination of his head, "that Clara would hape disputed nothing, which myself and my sister, Jane Murdstone, were agreed was for the best."

Miss Murdstone confirmed this with an audible murmur.

"Humph!" said my aunt. "Unfortunate baby!"

Mr. Dick, who had been rattling his money all this time, was rattling it so loudly now, that my aunt felt it necessary to check him with a look, before saying:

"The poor child's annuity died with her?"

"Died with her," replied Mr. Murdstone.

"And there was no settlement of the life property—the house and garden—the what's-its-name Rookery without any rooks in it—upon her boy?"

"It had been left to her, unconditionally, by her first husband," Mr. Murdstone began, when my aunt caught him up with the greatest irascability and impatience.

"Good Lord, man, there's no occasion to say that. Left to her unconditionally! I think I see David Copperfield looking forward to any condition of any sort or kind, though it stared him point-blank in the face!

Of course it was left to her unconditionally. But when she married again—when she took that most disastrous step of marrying you, in short," said my aunt, "to be plain—did no one put in a word for the boy at that time?"

"My late wife loved her second husband, madam," said Mr. Murdstone, and trusted implicitly in him."

"Your late wife, sir, was a most unworldly, most unhappy, most unfortunate baby," returned my aunt, shaking her head at him. "That's what she was. And now, what have you got to say next?"

"Merely this, Miss Trotwood," he returned. "I am here to take David back; to take him back unconditionally, to dispose of him as I think proper, and to deal with him as I think right. I am not here to make any promise, or give any pledge to anybody. You may possibly have some idea, Miss Trotwood, of abetting him in his running away, and in his complaints to you. Your manner, which I must say does not seem intended to propitiate, induces me to think it possible. Now I must caution you if you abet him once, you abet him for good and all; if you step in between him and me, now, you must step in, Miss Trotwood, for ever. I cannot trifle, or be trifled with. I am here, for the first and last time, to take him away. Is he ready to go? If he is not—and you tell me his not; on any pretense; it is indifferent to me what— my doors are shut against him henceforth, and yours, I take it for granted, are open to him."

To this address, my aunt had listened with the closest attention, sitting perfectly upright, with her hands folded upon her knee, and looking grimly on the speaker. When he had finished, she turned her eyes so as to command Miss Murdstone, without otherwise her attitude, and said:

"Well, ma'am, have you got anything to remark?"

"Indeed, Miss Trotwood," said Miss Murdstone, "all that I could say has been so well said by my brother, and all that I know to be the fact has been so plainly stated by him, that I have nothing to add except my thanks for your politeness. For your very great politeness, I am sure," said Miss Murhstone; with an irony that no more affected my aunt than it decomposed the cannon I had slept by at Chatham.

"And what does the boy say?" said my aunt. "Are you ready to go David?"

I answered no, and entreated her not to let me go. I said that neither Mr. nor Miss Murdstone had ever liked me, or had ever been kind to me. They had made my mamma, who always loved me dearly, unhappy about me, and that I knew it well, and that Peggotty knew it. I said that I had been more miserable than I thought anybody could believe who only knew how young I was. And I begged and prayed my aunt—I forget in what terms now, but I remember that they affected me very much then—to befriend and protect me, for my father's sake.

"Mr. Dick," said my aunt; "what shall I do with this child?"

Mr. Dick considered, hesitated, brightened, and rejoined, "Have him measured for a suit of clothes directly."

"Mr. Dick," said my aunt triumphantly, "give me your hand, for your common sense is invaluable." Having shaken it with great cordiality, she pulled me toward her and said to Mr. Murdstone:

"You can go when you like; I'll take my chance with the boy. If he's all you say he is, at least I can do as much far him then, as you have done. But I don't believe a word of it."

"Miss Trotwood," rejoined Mr. Murdstone, shrugging his shoulders,

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Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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Another Case.

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as he rose, "if you were a gentleman—"

"Bah! Stuff and nonsense!" said my aunt. "Don't talk to me!"

"How exquisitely polite!" exclaimed Miss Murdstone, rising. "Overpowering, really!"

"Do you think I don't know," said my aunt, turning a deaf ear to the sister, and continuing to address the brother, and to shake her head at him with infinite expression, "what kind of a life you must have led that poor, unhappy, misdirected baby? Do you think I don't know what a woeful day it was for the soft little creature when you first came in her way—smirking and making great eyes at her, I'll be bound, as if you couldn't say boh! to a goose.

"I never heard anything so elegant!" said Miss Murdstone.

"Do you think I can't understand you as well as if I had seen you," pursued my aunt, "now that I do see and hear you—which I tell you candidly, is anything but a pleasure to me? Oh yes, bless us! who so smooth and silky as Mr. Murdstone at first! The poor, benighted innocent had never seen such a man. He was made of sweetness. He worshipped her. He doted on her boy—tenderly doted on him! He was to be another father to him, and they were all to live together in a garden of roses, weren't they? Ugh! Get along with you, do!" said my aunt.

"I never heard anything like this person in my life!" exclaimed Miss Murdstone.

"And when you had made sure of the poor little fool," said my aunt—"God forgive me that I should call her so, and she gone where you won't go in a hurry—because you had not done wrong enough to her and hers, you must begin to train her, must you? begin to break her, like a poor caged bird, and wear her deluded life away, in teaching her to sing your notes?"

"This is either insanity or intoxication," said Miss Murdstone, in a perfect agony at not being able to turn the current of my aunt's address towards herself; "and my suspicion is that it's intoxication."

Miss Betsey, without taking the least notice of this interruption, continued to address herself to Mr. Murdstone as if there had been no such thing.

"Mr. Murdstone," she said, shaking her finger at him, "you were a tyrant to the simple baby, and you broke her heart. She was a loving baby—I know that; I knew it years before you ever saw her—and through the best part of her weakness you gave her the wounds she died of. There is the truth for your comfort, however you like it. And you and your instruments may make the most of it."

"Allow me to inquire, Miss Trotwood," interposed Miss Murdstone, "whom you are pleased to call, in a choice of words in which I am not experienced, my brother's instruments?"

Still stone-deaf to the voice, and utterly unmoved by it, Miss Betsey pursued her discourse.

"It was clear enough, as I have told you, years before you ever saw her—and why in the mysterious dispensations of Providence, you ever did see her, is more than humanity can comprehend—it was clear enough that the poor soft little thing would marry somebody, at some time or other; but I did hope it wouldn't have been as bad as it has turned out. That was the time, Mr. Murdstone, when she gave birth to her boy here," said my aunt; "to the poor child you sometimes tormented her through afterwards, which is a disagreeable remembrance, and makes the sight of him odious now. Aye, aye! you

(Continued on page 5)

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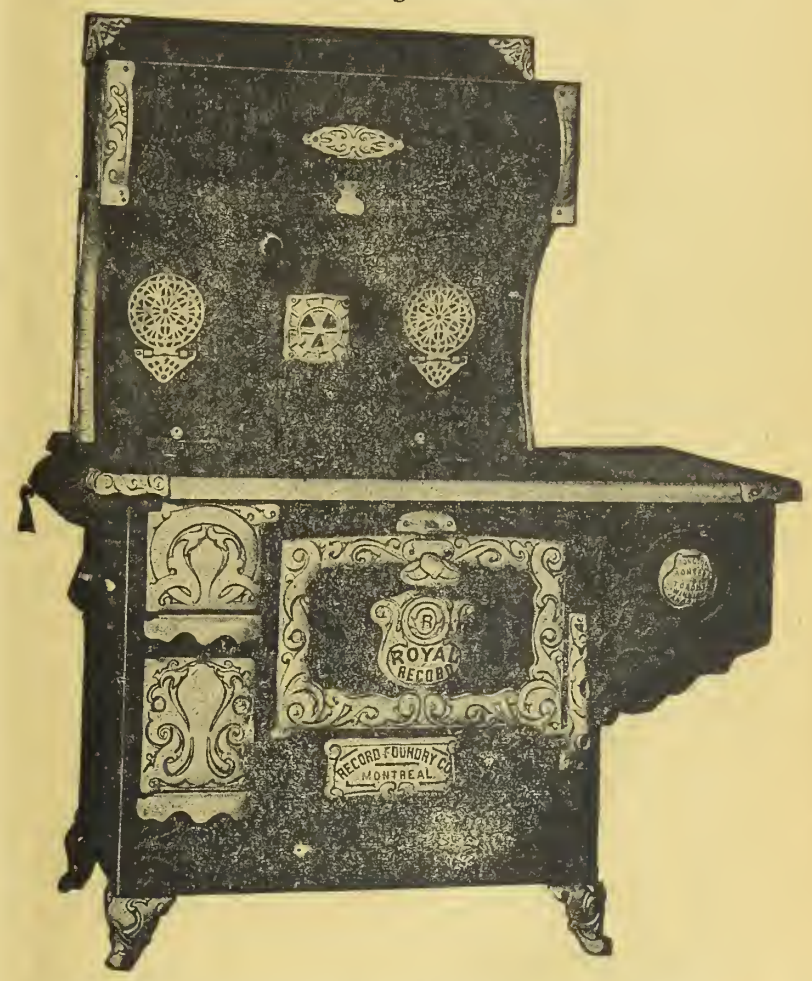
You'll Like the Flavor

35¢-40¢-50¢ Per Pound

Royal Record Steel Range

With Steel Warming Closet and Reservoir.



These ranges are made from the best quality blue polished steel, lined with asbestos millboard, and reinforced with the finest quality of fire-resisting cast iron wherever necessary to protect the steel.

The trimmings are finished with the finest quality nickel-plaiting, as shown in the cut. The top is made in sections, removable anchor plate style, 50" long x 28" wide, with pouch feed and broiler door. The fire-box if fitted for coal and wood, with duplex and flat grate combined, having corrugated sectional ventilated linings. The oven, made from first quality heavy steel, asbestos-lined, and properly braced with cast iron to prevent warping. The back flue or smoke box is made of cast iron, full length, to catch soot and prevent rusting.

SATISFACTION GUARANTEED.

Ask your dealer for Royal Record Range, or write the

Record Foundry & Machine Co., Moncton, N.B.

A Clean Collar in A Minute

For The Man Who Works

CHALLENGE BRAND WATERPROOF COLLARS

Appearances count a lot, these days, especially for the working man.

"Challenge" Collars give the clean, dressy appearance of linen — in fact, they look exactly like linen.

But—here's the point—

No matter how soiled and grimy they get, you can clean them in a minute with soap and water—and look neat and tidy all day. Sold at all Men's Furnishing and Dry Goods Stores—or send 25c. for sample collar. 5

Absolutely the best Waterproof Collar Made.

THE ARLINGTON COLLAR CO. OF CANADA, LIMITED
TORONTO, CANADA.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.
Direct Parchment Importers, Sussex, N. B.

Farmer Ads. will Bring Results.

Shorthorn Color Here and There

(Continued from page 87)

the countries mentioned. Admitting, however, that such is the case enough is positively known regarding changes which take place over very long areas when fresh blood is witheld for many generations, to prove the truth of the statements made in a very general sort of way. Now, even if there is no money in such speculations," it is interesting to discover reasons for just such changes. Can any one shed light on this subject?—J. V. Abingdon, Bexar County, Texas.

A few Facts About Sheep.

Sheep are practically immune to tuberculosis.

About fifteen different breeds of sheep are now recognized.

The nutritive value and digestibility af mutton rank quite high.

A pound of mutton can be produced at less cost than any other kind of meat.

Reliable statistics show that sheep are relatively free from diseases dangerous to man.

Of 14,208,724 sheep inspected for food purposes in 1912, only 15,402 were condemned, about one-tenth of one per cent.

One-tenth of these condemnations were due to caseous lymph-adenitis, a germ disease causing an inflammation of the lymph-glands.

Reasons for Rotations

At the basis of all genuine rotations lies the fact that plants differ from one another; they differ from one another in their demands upon the soil, both chemical and physical; they differ with regard to their root system, depth of feeling, their moisture requirements, their time of feeding, their dates in reaching maturity etc.

Many plants impoverish the soil; a few enrich it; some spoil its physical condition, while others improve it in that regard. Many crops favor the growth of weeds, while others either are able to hold the weeds in check or require such cultivation and treatment as will prevent their growth.

All these differences fit plants for different places in rotation, and a well-arranged rotation is one in which the strong points of one crop follow so as to fit into the weak points of another, or vice versa, and in this way reduce deficiencies to a minimum. A crop that requires a large amount of one element should be followed by one that requires less of that element and probably more of another. A shallow-rooted crop should be followed by one that is deeper rooted, so that plant food which may have escaped the shallower roots may be caught by the deeper feeder, and that the nutriment in the soil may be used to a greater depth. Crops that are exhaustive to the soil should be followed by a so-called soil restorer. And crops that are conducive to the growth of weeds should be followed by a weed-destroying crop.

Correction

Mr. John McMillan, Georges River Station, won the following prizes on his Southdowns at the recent Cape Breton Island exhibition held at Sydney: 1st ram lamb; 1st ewe, 2 years old and over; 1st and 2nd ewe lamb and 1st pen. He also won Kirk & Tory's special prize for the best two year or over ewe, any breed.

In our published list of prize winners the above prizes were inadvertedly credited to another breeder and we are taking this opportunity to make the correction public and give credit where credit is due.

To Prevent Chapped Skin

—use warm water and Baby's Own Soap.

The warm water opens the pores of the skin and the minute particles of pure refined vegetable oils which form the creamy, fragrant lather of Baby's Own Soap are absorbed into the skin, keeping it soft, healthy, and preventing cracks and chaps.

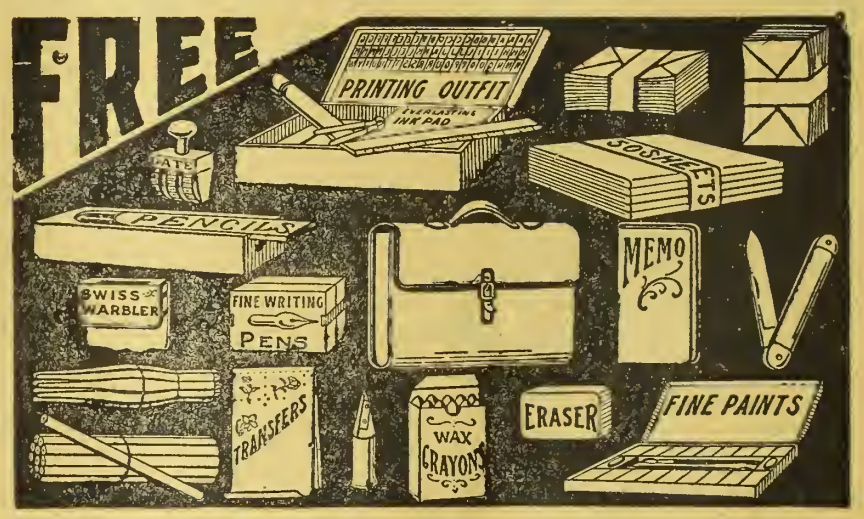
A perfect rinsing, then smart rubbing when drying guarantees a fine smooth skin in any weather.

BABY'S OWN SOAP

Best for Baby Best for You

Canada's Standard toilet and nursery soap for over 30 years.

ALBERT SOAPS, LIMITED, - MONTREAL.



FREE This 150 PIECE Complete Scholar's Outfit FREE

BOYS AND GIRLS, NEVER BEFORE IN CANADA HAS SUCH A GRAND PREMIUM BEEN OFFERED AND SO EASY TO GET.

READ WHAT THIS GRAND SCHOLAR'S OUTFIT CONTAINS.

1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water color paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 complete dater good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it, this scholar's complete outfit is **FREE.** We are determined to sell a million bottles of Rose Perfume this year, and are sparing no expense to reach this mark.

Rose Perfume is a great improvement on the old style of perfume and goes twice as far. Everybody buys it because it is so good, and a present is given away with every bottle.

We give you one of these grand scholar's outfits **IF YOU WILL AGREE TO SELL ONLY 30 BOTTLES OF ROSE PERFUME AT ONLY 10c PER BOTTLE.** Any boy or girl can sell 30 bottles easy. No trouble at all.

We send you the Rose Perfume free and trust you until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits.

Try. If you can't sell the Rose Perfume send it back to us.

Address to-day **THE ROSE PERFUME CO., Dept. S., 50** Toronto, Ont.

WOMEN CURED AT HOME

Women's disorders always yield from the very beginning of the treatment to the mild, but effective, action of Orange Lily. Within two or three days after commencing its use the improvement becomes noticeable, and this improvement continues until the patient is completely cured. Orange Lily is an applied or local treatment, and acts directly on the womanly organs, removing the congestion, toning and strengthening the nerves, and restoring perfect circulation in the diseased parts. In order to convince all suffering women of the value of this remedy, I will send a 35-cent box, enough for ten days' treatment, absolutely FREE to each lady sending me her address. MRS. FRANCES E. CURRAH, Windsor, Ont. 6

For Sale By Leading Druggists Everywhere

The Art of Dying.

Now is the time that the cleverness of the housewife, or rather the mother, is made apparent by the gathering of articles of dress or wearing apparel and saving them from the housecleaning rubbish box.

In this house-cleaning time one will go through old trunks and boxes, discarding garments right and left, and with a last sigh for a frock that has done good service, throw them away with the other things that have accumulated during the year.

The wise woman will not do this. She will look these clothes over carefully and if the material seems good, she'll lay them aside for future use. Just because the dress has become faded, or lost its freshness, or the shade is out of fashion, is no sign that it has outlived its usefulness.

Many a woman can easily dress in the new shades and styles, without buying a single new thing. There may be changes in style since the old dress was worn, but these changes in style have no terrors for the thrifty woman who knows the possibilities of dyes. If the materials in last years clothes are seemingly good, but a little faded or soiled, she'll convert the color into one of the new, fashionable shades. And with a few up-to-date patterns she'll have new dresses, correct in style and color.

Remnants, that are real bargains, are on sale quite often in the different stores, the only reason for the low price being that the shade is out of fashion. Quite a saving in a new suit can be made by buying up such pieces and dyeing them to meet the dictates of fashion. If the material is wool or silk, a dye that is especially adapted to these materials should be used. If it is linen, cotton or mixed goods, a dye made for cotton will give the best results. It is as easy as washing a handkerchief to get handsome new shades by using dye suitable for the material to be dyed, and any woman with a little time and care can thus effect and immense saving in her dress bills.

The use of dyes for coloring trimmings to harmonize with a dress or suit is endless. With a little perseverence, the careful dyer can obtain any color or shade to match or blend with her gown, while faded hosiery, veils and feathers can be made to give longer service by using dye to brighten or change the color. Portieres, couch covers, table covers, and shadow curtains can also be given new life and added beauty and will fill the house-wife's heart with joy at the marvelous color schemes that can be carried out in her home with little expense.

There are a few precautions, however, that should be used before and during the dying process, but if the directions that are given with the dyes are closely followed, no one need have other than the best results.

The first thing to be done is to have all the garments or wearing apparel free from grease. Grease spots can be taken out with benzine and afterwards washed with warm soapsuds.

Now, remember that all dyeing should be done at a gentle boil, and use a vessel large enough for the proper manipulation of the goods. Be sure, though, that the dye is completely dissolved before putting it into the dye vessel.

Keep stirring the goods. Use a smooth round stick, such as a broom handle. Do not use anything sharp or pointed as it might tear the material. Turn the goods gently, completely and with absolute regularity. Many of the uneven results obtained occur through poor manipulation.

Under no circumstances rush the dyeing because the shade looks beautiful or deep enough, for all colors appear much darker when wet. Full shades usually require about an hour's boiling.

Remember, also, that all articles must be well washed in many changes of water after the dye, or until free from color. Otherwise the color may crock. Never dye a light color in a vessel which has had a dark color in it without first cleaning the vessel thoroughly.

Now a word about the colors. If the original color is white, any color can be dyed on it. If it is cream, it can be dyed any darker shade of simliar character.

Red can be dyed a darker red, crimson, wine, navy blue, brown or black.

Orange a darker orange, olive red, brown or balck.

Yellow a darker yellow, olive greens, orange, red or black.

Green a darker green, olive, brown, or black.

Blue a darker blue, navy, plum, dark brown, dark green or black.

Violet a darker violet, plum, olive green or black.

Brown a darker brown, wine color or black.

Grays can be dyed a darker shade, wine, maroon, navy blue, dark blue, green brown or black. Or if very light, lavender, pink, rose or baby blue.

Good judgment should be used in combining shades, for you cannot dye a light shade over a darker one without first stripping. Nor a light shade over a dull one. The number of shades which may be produced by mixing two or more colors is limitless. Many textile mills produce their whole range of shades from about eight or nine standard colors by mixing them in different proportions.

Home dyeing is quite a simple operation, and if the home dyer will only use good judgment and observe the precautions given above, failures will rarely occur.

The Art of Mending.

Mending is just as much of an art as making, and often the thrift of a family and the steady rise in the world is due to skill with which the mother makes and mends the garments for them all. A careless, unsightly patch ruins the best garment while a neat, almost invisible darn or new piece set in will add to its usefulness weeks and weeks. And it isn't such a difficult thing to mend well, if one is only determined to succeed. It takes patience and time and skill, to be sure, but once learned it becomes as fascinating as fancy work to the thrifty woman.

Darning stockings is almost a weekly occupation, yet many women never learn to do it well. If the hole is very large a new piece neatly whipped in, by using a stocking darner or door knob, is the best and quickest way of closing the gap, and it lasts longer than darning. Cut your patch exactly the right size and proceed to whip it in with small, firm stitches after it is sezurely blasted. When the rent is small long, even darning with single thread cotton such as is used for that purpose only will make the place very firm and durable.

For uneven rents in braod new garments a little piece of mending cloth, such as tailors use is the best thing Any tailor will sell you a fair sized piece for ten cents, and show you how to apply it. This is especially good for men's garments. For children an extra piece of thin goods applied underneath may be needed to stregthen the weak parts, and if the hole is very large the entire piece should be replaced by a new one. This sounds formidable, but really it is easier to make a new sleeve and put it in, than to try to darn a zig-zag rent made by a nail or oyther projettion.

In every day garments the extreme care need not be used as no one objects to a patch on a working apron or petticoat. These may first be basted in place and then rapidly sewed on the machine, leaving the leisure time for better clothes. Of course school -clothes and afternoon garments will require skill and matching make them look right, but for everyday undergarments and working clothes the sewing machine is a great help in patching. In factory underwear no attempt should ever be made to patch with muslin, for when it is washed it is dreadful. Use pieces of old knit garments and carefully cut the patch to conform with the worn place. By so doing you will insure a neat fit, and the garment will last twice as long as if thrown together. The stitching, after it is carefully fitted, may be done on the machine, but only after it is fitted.

Such small items as buttons in place, button holes kept from getting too large and a stitch or two missing here and there are best done after the weekly ironing. To pin bands together is to wear them out rapidly, while to have every button and hook and eye in place adds to the neat appearance of the garment, and also prolongs its life. Early in her housekeeping career every woman should resolve to know how to mend in as nearly perfect a manner as possible, for in so doing, she will save many dollars, as well, as make her home more enjoyable.

Good Music for Home.

I will not attempt to say whether it should be piano or organ, or something much less pretentious, or whether singing alone may best provide the musical turns for the family, but music has its place and should be so recognized in every household. There is something about vocal music that goes much deeper than the words or sentiments of the songs. Family singing, according to one musical composer, is going out of fashion, and this he deplores greatly.

Because it carries four parts the piano or the organ is a little ahead of the smaller stringed or wind instruments, although in good hands the guitar, mandolin or or the violin can send out strains that tell their stories not less powerfully than the larger instruments. Having only one part, some of these are easier to play, a quality which will doubtless appeal to many.

The music need not be elaborate; it need not even be classical. There is plenty of material, not too difficult, yet full of character and sweetness, that is easily mastered and does well for the part music fills in the home life. We play mostly for our friends, many of whom are not "musical," and none will be over critical. And in the home we are not playing to big audiences or to weighed up by the gossips or the newspapers. Simple compositions, even of the easiest grade, if played in correct time and with delicate feeling, are more pleasing than 'studies'' which are plainly beyond our scope, or which are half-way done. Then, again, some of the most beautiful of the musical classics are not at all difficult.

Songs will naturally enter largely into the home repertoire, and just as naturally the ones best liked will be the ones having the most real musiccal merit, for really good music is sure to find its place. It is not necessary to go backward for what is good, but it is true that many of the old time songs are better than some which have come and gone since then. It would be hard to specify what to avoid in music, but what is pleasing to hear, and at the same time of a nature that will wear well, may be classed as good music.

The quality of music, as some people appear not to know, does not at all depend upon the words it accompanies. Yet we so much associate words with music that we often admire the tunes for the words. It is the occasional piece that, unaccompanied by words, stirs emotions, and in this the real force of music shows itself. Much, one might almost say all, depend on the skillful player and the literal accuracy of time. It is this that sways big audiences, or carries the soldier eagerly to battle.

PILES CURED at HOME by New Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp;

BURNS 70 HOURS ON 1 GALLON OIL

Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

$1000.00 Reward

will be given to the person who shows us an oil lamp equal to this **Aladdin** in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the **Aladdin?** We want **one person in each locality** to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get **ONE FREE.**

AGENTS WANTED

to demonstrate in territory where oil lamps are in use. Experience unnecessary. Many agents average five sales a day and make $300.00 per month. One farmer cleared over $300.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and sample.

MANTLE LAMP CO. 282 Aladdin Bldg., **Montreal & Winnepeg**

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They 51

Keep the Children Well

The Bathroom.

Much of the mustiness of a bathroom arises from the stale bath water that has trickled down the inner sides of the wooden casing, which, with gathered dust, has dried there. These casings are best if constructed in adjustable parts that can be easily removed for regular cleaning, and refixed afterwards. They are generally only painted or stained and varnished on the outside, which soon perishes and gives the bathroom an uninviting appearance, which should, however, always be bright and clean. There is no good reason why both sides of the woodwork should not be enamelled, as that not only makes it impervious to water, but easily kept in a clean, sweet and bright condition. Even if the top be of mahogany the under side is all the better it enamelled, keeping the upper French polished, as the bare wood in patches is most unsightly. But the most cleanly way with a bath is to remove all the wood casing, giving the outside of the bath a coat or two of paint, and then one of enamel of cherry colour. Even the top can often with advantage be dispensed with. This plan transforms the bath like to the newer kinds now being fitted, enamelled inside and outside, fixed to stand alone without wood of any kind, not a very expensive business if taken in hand and done properly.

Brass Bedsteads.

These may be cleaned by rubbing them with a cloth slightly moistened with sweet oil, and then polishing them with a soft, dry duster, and lastly with a chamois leather. This will, if done occasionally, keep them in good condition for years. Wooden bedsteads should be wiped over every three months with a cloth moistened with turpentine to keep them clean.

To remove tar marks, rub a little butter on the spot and allow it to stand until the tar is softened, when it will wash out with warm water and soap. To clean a dark costume, sponge with cold tea to which a small lump of ammonia has been added. This also answers admirably for men's and boy's suits. To remove egg-stains easily from table linen, soak in cold water before placing in hot soda and soap.

Toe-Capped Boots.

It is astonishing how much discomfort and even torture some people will endure from ill-fitting footwear for the sake of "being in the fashion." Very few people can with any comfort wear capped boots or shoes, and for most they are the forerunners of many feet troubles. Hard corns and in-growing toenails more often arise from wearing toe-capped boots than from other causes. If one's toes are boxed in a double thickness of leather, and lining stiffened by a stitched seam, it stands to reason that free- and easy movement is impossible, consequently painful corns and ugly feet distortions must result. Besides, the compression pinches the "ball" of the foot, causing a painful hard corn to come, which the sufferer gets acquainted with when stepping on some sharp substance. And it is not easily eradicated. Capless foorwear, anyway, is best for plump feet, and children's should always be so with plenty of breadth to allow of expansion and freedom when walking, and for proper natural growth, should be worn so that the ankles get plenty of fresh air, and in the case of hot, humid feet, to allow of proper ventilation and evaporation of moisture.

TO FUR SHIPPERS FREE

The most accurate, reliable and only Market Report and Price List of its kind published

"The Shubert Shipper"

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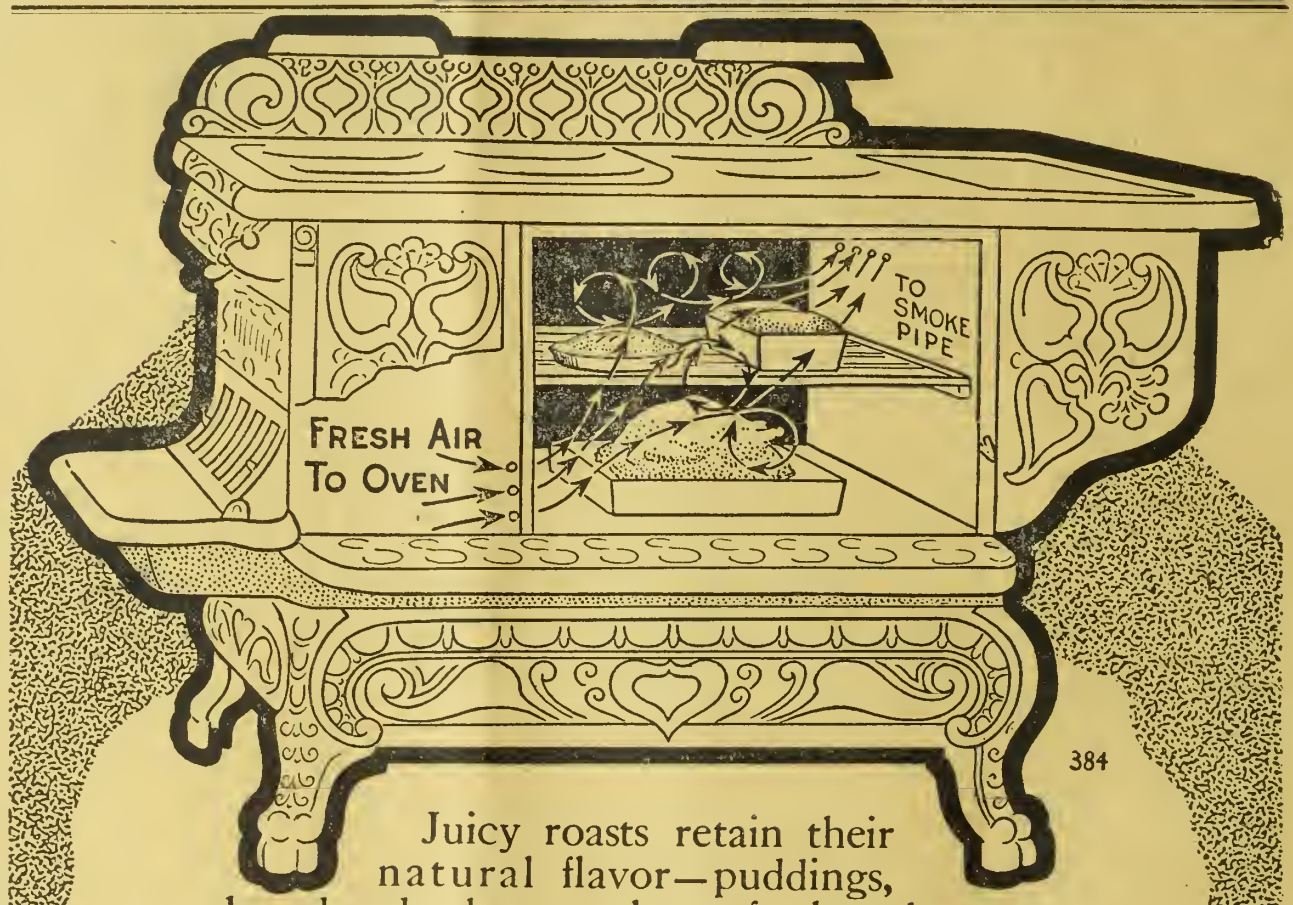
You want this valuable publication—it is worth hundreds of dollars to you, issued at every change of the Fur Market, giving you an accurate and reliable report of what is doing in all the Markets of the World in American Raw Furs.

Write for it—now—it's free

A. B. SHUBERT, Inc., 25-27 WEST AUSTIN AVENUE DEPT. 644 CHICAGO, U. S. A.



Juicy roasts retain their natural flavor—puddings, bread and cakes are always fresh and sweet, when cooked or baked in the Pandora—the reason is that a scientific system of oven ventilation has been perfected.

You should know all about this and numerous other exclusive features before selecting your range.

McClary's Pandora Range

LONDON
TORONTO
MONTREAL
WINNIPEG
VANCOUVER
ST. JOHN
HAMILTON
CALGARY
SASKATOON
EDMONTON

Pandora Ranges are sold everywhere by good dealers who back up our guarantee on this splendid range—
McClary's

Her HEART and NERVES

Were So Bad She Could Not Sleep.

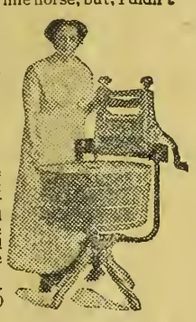
To those who sleep in a kind of a way, but whose rest is broken into by fearful dreams, nightmares, sinking and smothering sensations, who wake in the morning as tired as when they went to bed, we can recommend Milburn's Heart and Nerve Pills. By taking them you can have your old, peaceful, undisturbed, refreshing sleep back again.

Mrs. Chas. Teel, Horncastle, Ont., writes:—"Just a few lines to let you know what Milburn's Heart and Nerve Pills did for me. My heart and nerves were so bad I could not sleep, and the least noise or excitement would make me feel so that I used to think I was going to die, and I would tremble until I could hardly stand. I took doctor's medicine, but it did not do me much good. At last I tried Milburn's Heart and Nerve Pills, and I can certainly say they did me a great amount of good. I can recommend them to anyone who is suffering as I was."

Milburn's Heart and Nerve Pills are 50c. per box, 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.



So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address Me Personally

G. G. Morris, Mgr. 1900 Washer Co.

57 Yonge Street, Toronto.

Boots, if tightly laced or buttoned, prevent this, which is unhealthy, making the feet tender, besides lessening the life of the boots.

The Bashful Child.

Too many mothers scold and feel aggrieved when their children are shy and awkward in the presence of friends or strangers instead of recognizing bashfulness as a disease and trying to cure it. If you have never been timid yourself, you cannot understand the agony that your poor child suffers. No matter if you have drilled and lectured and threatened about good behaviour countless times, the bashful boy does not know his right hand from his left, and his tongue refuses to act when you want him to apper easy and polite. Scolding only makes matters worse, and punishing is a crime.

First of all never allow timid children to be teased about their infirmities. If Willie shakes hands with the wrong hand or Mary makes a blundering speech when you admonish her to "be sociable" in the presence of company, let both pass unnoticed. If a guest should do something awkward you would use every bit of tact you possessed to make him forget it, so why retail the blunders of the timid children to the rest of the family, or permit other children to taunt them. Suppose you upset a vase or ruined the table cloth accidentally, would you want to hear about it and be laughed at even by your best friends? Use common politeness in the home life as well as in dealing with strangers.

Clothes play an important part in making children free and easy at home and abroad. Put a shabby, ill-fitting dress on the nicest little girl in the world and she will immediately become awkward and shy. Bashful boys and girls should always be dressed in neat, inconspicious clothes, and should be entirely unconscious of what they wear. It is just as easy to make clothes to fit as to spoil them in these days of cheap and accurate patterns, but some mothers do not seem to think so. It is bad enough for the tom boy of the family, who cares nothing for clothes, to be sent to school or church in a clumsy, unbecoming frock, but the bashful girl suffers tortures when compelled to wear garments that attract attention.

One mother transformed her bashful little ones into polite, but not forward, boys and girls by playing "come to see" with them day after day. She never hinted why she was playing the game, but patiently took turns with the children in being hostess and serving refreshments and being polite to callers until gradually she knew the agony was over for her little folks when friends or strangers called. Even the smallest could open the door, shake hanhs, draw up a chair for the guest and modestly carry on a conversation. Don't you think that mother felt repaid for the time she spent playing with her children? And don't you think she is much happier and better satisfied than her neighbor who pronounced that plan "all nonsense" and punished her timid children for their blunders? If you could see both families you would see a difference at a glance.

Never forget to praise the boys and girls for every correct expression and deed. It is safe to be looking at the wall or out of doors when some little break occurs, but never miss the things that are done and said at the right time. A word of praise lingers a long time and the mother who is alert in seeing the things she ought to see can do what she will with her boys and girls. A little girl who was scolded and laughed at at home for years because she was timid and awkward suddenly had a new world unfolded before her astonished eyes when a tactful aunt with whom she spent a year showed her the beauty of good manners. She had received the impression at home that being polite was a hard task, but her aunt taught her, not by word but by example, that happiness depends upon kindness to others and that good are nothing more than the outward da Richmond.

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FLORICULTURE.

H. A. H., Amherst, Writes;—How late can I wait before planting bulbs?

The planting can be done any time before the ground freezes up. But better results wil be obtained by having all bulbs planted by the last of October. The longer the bulbs are exposed to the air the lower becomes their vitality. Such hardy bulbs as Crocus, Scillias and Narcissus in varieties should also be planted among shrubbery, along fences and in corners of your garden to be come naturalized and form permanent clumps, in a few years that will give you every spring an abundance of fragrant blooms for a long period before any other class of plants have hardly commenced growth. Another way of ultilizing these two dwarf species of hardy bulbs, Crocus and Scillias, is to plant them on the lawn. They may be planted in lines, geometrical designs, names, etc., and all sure to come up in early spring showing perfectly the lines desired and increasing every year, in number and beauty and lasting a long time in bloom.

As many men readers of the Floral Notes have enquired about the proper method of planting care etc., etc., of hardy bulbs I will repeat instructions for their benefit. All soil should be well drained, that is, no water should stand on or around the bulbs. If the natural position will not afford good drainage it must be provided as bulbs will not stand stagnant water. Never spade in green manure or any fermenting substance for a fertilizer in the soil—use only old, well rotted fertilizer. If you do not have that plant the bulbs in the clear soil and use for a covering in winter a coarse strong manure to a depth of six inches or more not placed on the beds until the soil has been frozen two or three inches. The backing of this covering will give all the fertilizer needed. I use this method to fertilize my beds. In planting dig up and fertilize the soil. Plant the tulips five inches a part and five inches deep, Narcissus the same, Crocus and Scilias three inches a part and two inches deep. Press the soil firmly over the bulb in planting, when planted in light soil. In heavy soil press lightly. When planting bulbs in heavy soil (clay) a handful of sand under each bulb will assist it in rooting and often the same attention in planting on badly drained soil will give good results. As before stated do not cover your bulb beds until late in autumn after the soil commences to freeze; when they will repay the trouble of a good mulch not to be taken off—again—until the frost commences to leave the soil in spring, after which it must be at once removed.

St. John, N. B., writes;—Can you explain why a large plant of Begonia sheds its leaves without anv apparent cause? I have had it about six years and every now and again it sheds all its leaves. There is no regularity about it. I take the best of care of it and it never gets dried out.

If correspondent would send Begonia leaf and size of pot, nature of past treatment as regards watering, light, etc., I will be very glad to answer question to the best of my knowledge.

Caladenius bulbs should be thoroughly dried off now for the season also Tuberous Rooted Begonias. Keep them thoroughly dry. They are easily kept in clean dry sand.

If you intend to force some pots of Spire for Easter it would be well to have the roots dug up in the fall before the ground freezes and stored in an out building where they can remain frozen until time for potting, which is well to the last of December this year, and should be forced as fast as possible after the little green leaves begin to show. Easter comes earlier next year. They are one of the strong plants for Easter so green and such white spikes of flowers that last so long.

If you have stored some soil for potting during the winter keep it in a moist place and do not let it dry up for in that condition it loses a much larger percentage of its ammonia than it would if moist.

Hampton sends asparagus leaf.

The frond of aspargus received does not show any disease. Turn the ball of soil out of the pot, if roots are crowded repot it. See that the drainage is perfect and keep moist. Cut out all dead wood. No insect appears to have troubled it. Spray foliage often. Do not use soot on pot plants but save it for the garden and use manure water instead. The trouble with the orange tree referred to is that it is probably so crowded with roots that water fails to penetrate to the lower roots. Repot it at once and if the ball is dry give a good soaking up. Cut out all dead wood. Give good drainage and if the roots, crown and stem are healthly it will soon make new branches. Soft wood ashes have some value as a fertilizer but owing to the small amount of potash and phosphoric acid they contain compared with hard wood ashes the difference in value is in favor of hard wood ashes. Both are valuable fertilizers especially on light soils that are usually deficient in potash. Charcoal itself is not a fertilizer but owing to its absorbent properties in useful in taking up readily free plant food in the soil and yielding it readily again to roots of plants. Its value is wholly mechanical. A large percentage of charcoal being carbon many think it useful as plant food but all the carbon used by plants is taken from the atmosphere through the foleage.

Amateur, Hampton, writes;—Regarding the plot of ground for lawn mentioned in my last communication it is quite sunny and the soil is quite dry and also very good soil. Would it not be better to have it dug over this fall and have all weeds removed? Please name grass seed and quantity required for plot forty by sixty feet.

By all means dig up lawn this fall and if you can remove weeds do so. Weeds are usually easier removed in spring after the water has rotted the sod. You will require six pounds of grass seed mixed in the following proportions:— 1lb.—Rhode Island bent grass seed, 1 lb. fancy red top grass seed, 1 lb. white Rutch clover—mix thoroughly before sowing and roll well after sowing.

Chatham, Writes:—If not to late please tell me how to plant shrubs and vines? I have an old lawn on which I am desirous of planting shrubs and also to cover an old shed with five fingered Ivy.

To plant shrubs on lawn you should make beds first, as you would flower beds, large enough to take the desired quantity of shrubs. It is a good time to plant them in the fall, any time before the ground freezes, so the soil will get nicely settled before the ground freezes. The making of beds for shrubs and vines is universal plow where good work is done. Shrubs cannot be successfully grown in sod.

Yes, your Freesias, Paper White Narcissus and Roman Hyacinths should be planted early so by the middle of November they can be taken up to the sunshine. If they are well rooted give them plenty of water and a cool situation.

Early Azalias should be fed from now on until flowering. Use Smaller doses of fertilizer than for Geraniums or other quick growing plants. Frequentspraying is also essential to the wellfare of these plants.

Watch the insects on your plants. Washing and spraying once a week with castile soap and water is a prevention of insect trouble and keeps the plants clean.

Don't forget to separate all hardy plants this month whose roots are crowding each other. Paeonies do well when transplanted in the fall as soon as the leaves begin to fall and the stalks dry up.

Anxious Writer, says:—I have a large Honey suckle by my house. I want to remove it but cannot without cutting the roots badly. Should the stalks be pruned to that extent? By all means prune the top of the vines severely if the roots have been partly destroyed.

The Iris.

Hampton, N. B. writes:—Tell me about the Iris. Are they hardy or good for early flowering? I want something that does not need much care.

The Iris are among the most beautiful of our hardy plants for early summer flowering and are destined to become as popular as the hardy Phlox and Paeonies. They are valuable not only as decorative flowering subjects for garden but are also very useful as cut flowers.

While generally a deep wet position is recommended for them, we have had far more satisfactory results where we have grown them in deeply cultivated, well drained ground, which has been well enriched with animal manure and where an abundance of water has been applied during their growing season and particularly during their flowering period. The choice standard varieties are Cherion Lilac, Mauve; Edith, Light Plumbago Blue; Honorabills Golden

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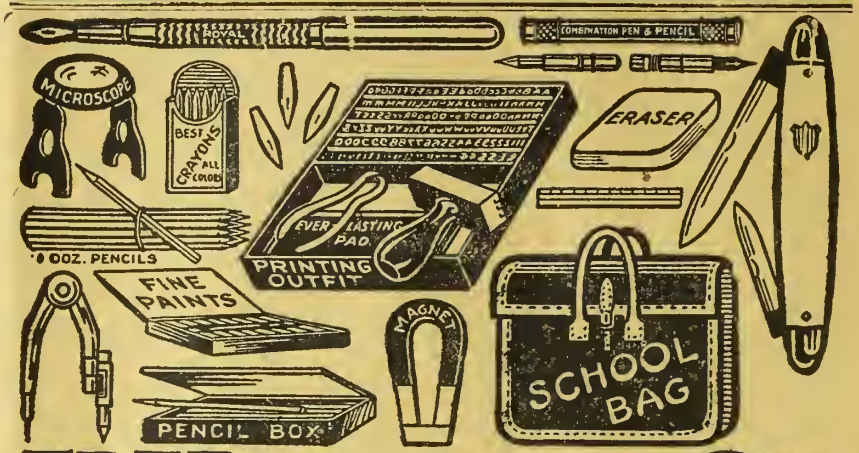

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Yellow, changes to rich mahogany brown; Lord Salisbury Standard, amber; White Falls dark violet or purple. They can be planted early in spring or late in the fall before the ground closes.

PERENNIAL PHLOX.

The hardy Phlox comes next in value. They are of the most gorgeous of flowering summer plants in the world having the collections while not extensive embraces all the distinct newer varieties as well as the standard sorts. Many varieties which heretofore have been scarce and high priced are now available in large quantities and at regular prices. They require little or no care after once getting them into the ground and they increase very rapidly from year to year. Among the new varieties of Hardy Phlox is the Asia, tall, a shade of mauve with crimson eye Barga, dwarf, mauve rose with white eys; Europa, tall, white variety with very decided crimson carmine eye. There are eight varieties all running in this line, very beautiful and lasting a long time while in bloom. Brush and old strawey manure are some of the best of coverings from the middle of December after the ground freezes to hold them from the winds.

Oats as a Concentrated Feed.

Chemical analysis of the varieties of oats during the past three years reveals many interesting facts relative to the variability in per cent of protein, carbohydrates and fat in this plant.

Among the varieties of oats tested in 1910 there are marked differences in the composition of the grain. The percentage of protein varies from 13 to 18 p.c., and the calculated yield of protein ranges from 248 to 426 pounds per acre. The percentage of carbohydrates ranged from 57 to 60 p.c., and the yield of carbohydrates carried from 908 pounds to 1400 pounds per acre. The percentage of ether extract, which comprises the fats, varies from 3.9 to 6.75 p.c., giving a yield of 67 to 143 pounds per acre. These 16 varieties of oats yielded from 46 to 73 bushels per acre.

Among 14 varieties of oats tested in 1911, of which 13 varieties were in the tests of 1910, similiar variations in composition exist. The yield of these 14 varieties grown in 1911 ranged from 37 bushels to 62 bushels per acre, the average being 48 bushels, as compared with 64 bushels produced in 1910. This marked decrease in the average yield of varieties in 1911 was undoubtedly due to the conditions of that season which were less favorable than the season of 1910 to the growth of oats.

The variety of oats which contained the highest percentage of protein, namely 18 p.c., in 1910 was the Early Champion. This oats contained 19 p. c. protein in the 1911 crop. The Early Champion contained 59 p.c. of carbohydrates in 1910; 57 p.c. in 1911.

It is clear that oats may be a high producer measured in bushels of grain per acre and yet not contain a high percentage of protein. However, some of the varieties in the tests made at Highmoor during the past three years are high producers of grain and also give a comparatively high yield of protein per acre. For example, the variety which yielded the most grain per acre (73 bushels) in 1910 gave the largest amount of protein, namely 426 pounds. This variety of oats, according to analysis, contained 18 p.c. protein.

From the above figures we must realize the variability in composition that exists between varieties of oats. This is of considerable value to the farmer. It suggests the advisability of procuring varieties of oats which have the highest protein content as well as the capacity for high yields of grain. An oats containing a high percentage of protein and also a fair content of carbohydrates and fats is obviously a valuable feed.

On good soil carefully plowed and prepared it is comparatively easy to obtain an average yield of 50 bushels of oats per acre. By using good varieties of seed it is possible to grow 60 to 65 bushels per acre under ordinarily good farming conditions. A ton of grain per acre containing relatively high percentages of protein and other food compounds makes a cheaply produced and fairly concentrated feeding stuff for farm stock.

The Care of Harness.

It is worthy of note, apart from a matter of comfort, how much more work can be done by a horse with properly fitting harness that is kept in good condition, than with any clumsy collar that seems to have just been thrown on and fits where it touches. Just imagine the discomfort to a small man having to wear a large man's clothes and work in them all day, or a large man working in small man's clothes. It makes a great difference whether harness is kept soft and pliable, hard or rough, whether it fits snugly or not. There are more horses permanently injured by badly fitting harness than most people are aware of. Harness should be kept in a dry place when it is finished with. Generally in the spring, when all the work seems to come on at once and all the horses available are required, some collars, etc., are brought out that were put away perhaps the previous autumn; if these were well cleaned and oiled before being put away they will be found to be soft and pliable, but if not, and they are hard, rough and probably damp, it is nothing short of cruelty to put such like on any horse, let alone on a young one that is about to be hitched for the first time perhaps. The oily surface of the leather and the sweat from the animals causes the dust to adhere to it, and thus make it dry and uncomfortable. First wash all this off and then before really dry apply the oil and work it into the leather as much as possible. Neats-foot oil answers this purpose well, but there are several excellent harness oils advertised that are worth using, after which place the harness out of doors, and then when dry rub clean. When harness has been unavoidably made wet it should be partly dried and rubbed over, then oiled before it has the chance to get hard; by doing this it will be found to last much longer.—Harness and Saddlery.

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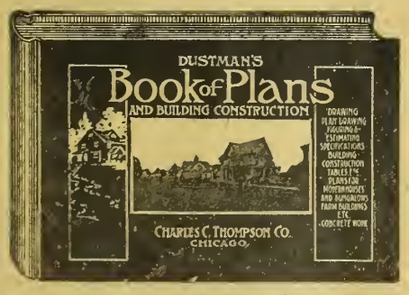
Storing Late Cabbage.

Place the cabbages close together in a single layer, head down, on the ground in a well-drained location and cover the cornstalks, setting the stalks on end and inclining them so as to cover the cabbages. Make the pile narrow enough so that the tops of the cornstalks will overlap from either side and put the stalks on good and thick to keep the temperature even, then shovel some soil up around the base of the pile and lay a few boards on top to hold the stalks in place.

It is not necessary to keep out the frost, but the cabbages should not freeze solid and constant freezing and thawing may cause them to rot. A temperature as near the freezing point as possible all the time is what is desired. Storing the cabbages on the north side of the building will help to keep the temperature constant, but they should be out of the way of water from the eaves.

Where it is not possible to get cornstalks, straw might be used for covering the cabbages, though it is not so good as the stalks. A thin layer of straw on the ground under the cabbages will help to keep them clean.



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THE MARITIME FARMER, SUSSEX, N. B.

Udder Troubles Among Ewes.

In some seasons more than others the shepherd has trouble in the shape of bad udders among his lambing ewes. There is recognized on the continent an infectious mammitis of ewes, a septic disorder, a form of which is greatly on the increase in this country among dairy cows, but does not, so far as we are aware, affect sheep, and it may generally be taken that when several cases of bad udders occur in a flock they are not due to infection or contagion, but to the exposure of the whole of the animals to similar unfavorable conditions.

THE CAUSES OF UDDER TROUBLES.

The causes are somewhat numerous; some cannot be guarded against, others are due to sheer carelessness or neglect. They include the effects of cold and wet consequent on exposure, especially when night frosts prevail; the dirt and moisture of badly-bedded folds and yards, bruising of the distended udder on hard ground, or from the head of the lamb when sucking, and inflammation consequent on retention of milk—perhaps the most fertile of all the causes of mammitis in ewes. Udders sometimes become what the shepherd calls "caked," and the lamb cannot get the milk away. It is, of course, always desirable that the cause in operation should, if possible, be elucidated, because on its avoidance depends prevention in other cases, and on its removal the success or otherwise of treatment.

TREATMENT OF UDDER TROUBLES.

It is desirable that this should be suitable and prompt, because it has a most important bearing on the terminations and complications, and the earlier and more assiduous the treatment the better the chance of the only favourable termination, which is known technically as resolution—that is, complete recovery or restoration of function. Unfortunately this termination is the most rare, mammitis in the ewe often resulting in gangrene or mortification, and sometimes in the death of the ewe, as well as the death of the part. The frequency of this termination, as compared with induration or atrophy, which are the most common termination in cows, is said to be because the absence of close supervision, which milking twice a day provides for in the cow, results in the disease getting a long start. The first step is to get the affected animal under cover on a dry, clean bed, and where it can receive frequent attention without chasing it all over the place. The gland should be fomented freely and frequently with hot water, or, in the alternative, poulticed. Poulticing is very useful if the animal has frequent attention and the heat and moisture, which is the essence of poulticing, is properly applied.

Lambs able to suck should be kept at the teats if possible, as the drainage of the gland in the unaffected portion is a matter of some consequence affecting a cure; otherwise everything possible should be got from the teats by hand milking.

Camphor is the best deobstruent we have, and in the form of camphor liniment—popularly, camphorated oil—should be used freely to rub or massage the gland after fomentation. A full dose of Epsom salts is generally useful; it helps to keep down the temperature as well as opens the bowels. While the strength of the ewe should be maintained, milk-producing foods should be avoided, and the lamb otherwise provided for. This treatment should be persevered in until it is seen to be of no avail, and that one of the unfavorable sequence—induration, atrophy, suppuration, or mortification—must result, when it must be charged to suit the circumstances of the partirular case, for it is rare that any two cases of ovine mammitis run exactly the same course.—Pately Bridge.

Hog Notes.

The more pigs a sow has, the more feed she needs.

The older pigs grow, the more food it will take to make a pound of gain.

Young sows that do well with their first litters may be considered good breeding sows.

The health, thrift and growth of swine are best and most economically secured in a clover field.

With pigs as with all other young stock, sweet food is preferable to that which is fermented or soured.

Hogs may be fed out in winter to a good advantage if there is warm and dry shelter kept perfectly clean.

Usually pigs from large litters are more thrifty than those from small litters and are better feeders.

A good thing about the hog is that he may be able to utilize much of the wastes of the farm and orchard.

The easier feed is digested the greater the gain made from it. The more hogs can be made to eat in a certain time the more profit.

The hog is raised only for its meat and this being the case, the object is best subserved by turning into meat as soon as possible.

A short snout and a long back make a good hog combination. Then feed for growth and not for fat until it is time to fatten.

It is less expensive and more satisfactory in every way to keep the boar in a good thrifty condition rather than stuff him to get him fat.

If a sow is known not to be a good milker, she should be fed a laxative ration some time before farrowing, and on through until she weans her pigs.

The fattening hogs should have warm shelter and protection from storms, as it will require more grain to finish them off. Besides, they will not grow so rapidly.

When pigs are weaned early they should be taught to eat as soon as possible, otherwise they are apt to suffer from the change in diet and lose in weight, which means a checking in growth.

There is one particular virtue about pigs which makes them emphatically the stock for the poor man to grow, and that is the very quick returns which they afford by the rapidity with which they increase and come to maturity.

The hogs should have all of the grain that they will eat up clean now but no more should be given at any time that will be eaten up clean and quickly.

Topdressing Old Mowings.

Editor The Maritime Farmer.

In topdressing old mowings, what percentage of the fertilizer do we loose by bleaching, etc.?

G. Frank Cann,
Yarmouth Co., N. S.

The percentage of loss in top dressing such land as you speak of is practically nil.

Bleaching does not affect the fertilizer quality in the least. Bleaching affects it very little if the top dressing is given early enough after the frost has begun to go in the spring, or even if top dressed in winter provided the land is fairly flat.

We will make you a suit for $12.50 in London, Eng., That would cost you $25.00 in Canada

You've heard that clothes are cheap in England. You know, too, that English woolens are the best in the world.
But do you know that many thousand Canadians buy their clothes every year direct from us in London—and save about one-half of what they would have to pay if they bought them locally ?
The reason for it is this :—Being the largest firm of Mail Order Tailors in London, we are able to take the whole output of many big mills. By doing this, we save all middlemen's profits, and so are able to sell you a suit and pay all duty and carriage charges upon it for a price about one-half what you would have to pay in Canada.
To prove to you that this is so, we will, upon receipt of the coupon filled in by you, send—**Absolutely Free of Charge**—our latest Style Book, 72 pattern pieces of fine English suitings, a letter explaining our system of doing business, and a self-measurement chart so simple that you can't go wrong in using it.
Now isn't that a proposition worth while looking into ?
It doesn't cost you anything, and it may save you a whole lot of money.
Sit down right now—fill out the coupon, mail it, get the samples, and be convinced.
If you don't want to cut this paper, we will send you the samples anyway, provided you write and mention this paper, but to get them you **must mention Sussex Maritime Farmer.**

CATESBY'S LIMITED,

(Of Tottenham Court Road, London, England.)

119 West Wellington Street, Toronto.

The **"Burlington."**—This shows the most popular style of suit worn by well-dressed men in Canada. The materials used are specially selected for this shape of suit.

$12.50

Duty Free and Carriage Paid.

Mail this coupon now—

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MESSRS- CATESBYS LIMITED (of London),
Dept. "H." 119 West Wellington St., Toronto, Ont.:
Please send me your new season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit—overcoat. ×

Full Name.....

Full Address.....

× If you only want overcoat patterns, cross out the word "suit." If you only want suitings, cross out "overcoat."

Maritime Farmer. Coupon No. 2.

A Trouble of Male Sheep.

Diseases of any portions of the urinary organs cannot be said to be common in sheep. It is seldom that any proceed from intrinsic causes, and this is doubtless owing to both the peculiarly sedentary life the animal leads and to its being kept more under natural circumstances than any of the domesticated classes. Of such instances as do come under notice the origin can, either directly or indirectly be traced to small calculi, or accumulations of fine gravelly deposits in some parts of the urinal passages, and with the continued presence of which dangerous symptoms are apt to be associated. It is a fact that until improved methods of feeding sheep became so fashionable, together with forcing for early sales and shows during the summer, affections of this character were, to a great extent, unknown, and at the present time it may be said that in some localities, and with particular flocks, scarcely ever a season passes without deaths, inconvenience, and loss resulting from this cause. Cotswolds, as a breed, appear more predisposed to suffer than others. It has to be remarked that sheep kept wholly and solely on grass are scarcely ever affected.

CAUSES AND MODE OF FORMATION.

Fattening sheep and lambs suffer from the presence of deposit from the urine, but it is much more frequently in the ram that the most acute cases are seen. It originates in the animal being kept on a large quantity of dry food of a highly stimulating character, or a diet which contains an abundance of starchy material, convertible in the system into saccharine matter, such as some of the cakes, barley, wheat condiments, mangel wurzel, and sometimes even turnips. These, together with very limited or no exercise, and scarcely any supply of water, constitute the chief causes. As a result of this system of management the urine of the sheep becomes highly acid, and contains in great excesses those salts which exist in the food it is kept upon. This, conjoined with the sedentary habit of body, and the imperfect performance of natural functions always associated with high breeding, produces a strong tendency to the disposition of sedimentary matter from the urine in some portion of the passages through which it passes. In the ewe, owing to the shortness of the urethra (which leads to the bladder of the external orifice), its largeness of calibre and comparatively freer outlet, the accumulation does not take place, as any calculous material which may exist in the urine is carried off each time the animal stales. In the ram, however, the urethra is much longer, its passage smaller, and at the immediate termination is a fine structure called the vermiform appendage, in which the canal becomes so diminished that even the very least amount of solid particles with difficulty gets through. It is at this point that the accumulation takes place, and continuing, forms a disposition of calculus, which, obstructing both the passing of the urine and exciting inflammation of the membranne of the urethral canal, leads to the most untoward results. Should it remain and increase, the bladder, if not also the kidneys, must as a consequence become likewise inflamed, and owing to this circumstance many shepherds and sheep-breeders, on losing their fattening sheep, rams, or lambs, lay the cause to individual structures, instead of ascertaining its true seat. Chemically, the deposits consist of a small portion of carbonate of lime and magnesia, with a large amount of ammonia-phosphate of magnesia in combination with a little mucus and organic matter. The calculi never, owing to the smallness of the urethral canal, attain any great size, but may gradually form from the vermiform appendage nearly up to the bladder in such numbers as to choke the passage up and constitute a perfect impediment to the passage of the urine.

SYMPTOMS.

The attention of the shepherd is attracted by the sheep exhibiting great difficulty in staling, stretching himself, and straining, yet only a few drops are got rid of, and these with much apparent pain. He is dull, off his feed, and is generally found lying down quite away from his companions. The breathing is quickened, the pulse increased, and he will never get up unless made to or shifted. On being cast on his rump and examined, the part immediately next to the vermiform appendage will be found more or less choked up, the impediment being very easily felt. Often this is only an accumulation of sediment resembling fine sand, the removal of which can be easily affected, and with a little subsequent proper treatment subsidence of the symptoms will result. If the obstruction is not got rid of, the symptoms tend to increase in severity, straining is considerable, and staling becomes next to impossible. There is much constitutional disturbance, the bladder gets enormously distended, and inflammation of its membranne sets in; the kidneys very soon participate; the skin and all excretory organs of the body have a strong smell of urine, owing to its not being got rid of, and the blood becomes highly charged with poisoned material. The head finally is affected, and the animal dies amid much suffering. Owing to such over-distention, rupture of the bladder has also been known to take place.

TREATMENT.

In simple cases, as seen in lambs and wethers that have been fattening but a little while, and the calculous deposits exists merely as accumulations of a fine sand-like character in the tesminal portion of the urethra, throwing the animal on his rump, fomenting with warm water to soothe local inflammation, a little pressure with the finger and thumb, and careful manipulation of the part is sufficient to remove the obstruction. In some instances, with a change of management, the animal has got rid of the matter itself, even after exhibiting severe symptoms. The application of plain sweet oil, glycerine, or vaseline to the parts is beneficial. Saline aperients are best avoided, but a good dose of castor oil, according to the age and size of the patient, can well be employed; a drachm of spirits of nitre is also not a bad adjunct. Following this, from half to a drachm of bicarbonate of potash should be given twice or three times a day dissolved in plenty of water. When much constitutional disturbance exists, spirits of nitre is unadmissible, but extract of belladonna (15 to 20 grains) will exercise soothing effects. The diet should be changed and varied as much as possible, above all; let the flock have free access to water, with plenty of exercise. Branches cut from fir trees are frequently put by shepherds in the way of sheep when cases of this kind occur, and occasionally with a good effect. This it may be presumed, is due to the resinous material contained in the fir

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Bread Flour
And A
Pastry Flour

"A woman always wants a reason, but never gives one".

So we are going to tell you just why **"Beaver" Flour** is a bread flour and a pastry flour —as good for one as for the other—*and best for both.*

Ontario Fall Wheat is the most nutritious wheat in the world — rich in flesh and strength building qualities and with a full rich flavor and splendid pastry making qualities.

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increasing the staling, which washes away the sedimentary deposit, but its action would only tell in the more simple instances. In older animals and rams, when the calculi have attained the size of small seeds, it is impossible to get rid of them through the external opening. In wethers it is usual to draw the parts, cut off the vermiform appendage entirely, and then squeeze the deposit through the opening. With rams—particularly valuable ones—an operation is necessary, and an incision underneath the parts, just sufficient to force the obstruction through, must be had recourse to. This should be done with a sharp knife, and the wound so inflicted, if kept clean, will readily heal up. In these two latter instances, after-treatment of the character alluded to must also be adopted. When acute inflammation of the bladder and kidneys exists as a consequence of urinary deposits, there is not a deal of hope for the patient, and the best thing to do is to call in professional aid, or kill the animal outright to spare its sufferings.

PREVENTIVE TREATMENT.

It must be remembered that a certain peculiarity of system is conducive to the formation of urinary deposits, which accounts for such taking place frequently in certain flocks. Hence, though recoveries have taken place, strong preventive measures must be brought into play, there being every probability of their recurrence. Mangel wurzel is not a good article of food for sheep, especially if taken with highly stimulating dry food, and, if used when turnips are finished, they should be exposed to the sun for a day or so before being given. If rich feeding is employed, a corresponding amount of exercise is essential, as is also free access to water. Barley, wheat, and other foods containing a large quantity of starch should be employed as little as possible. When it is noticed among any of the flock that the removal of the deposit only partially alleviates, it may be taken for granted that other obstructions are also present, either at the neck of or in the interior of the bladder, or in the tubes leading from the kidneys to that organ. The sheep may not yet go amiss for a time, but there is only one course admissible the sooner it is fit for the butcher the better.

Roosting on the Nests.

To prevent hens roosting on the edge of the nests and soiling the nesting material, I took gunny sacks, fastened an old slat to one side and hung them on nails driven in the wall above the nests. I let the slat fall 4 or 5 inches below the edge of the box. The slat weighted the bag sufficiently to keep it in place, and hold it straight. I've never found anything so simple and so good for the purpose. The hens just love to go behind these curtains, as they do not make the nests too dark. In cleaning, I hook the curtains off the nails and carry them out, then move the boxes from the wall and sweep behind them.—Maria Johnson, Penn.

The Effects of Crying.

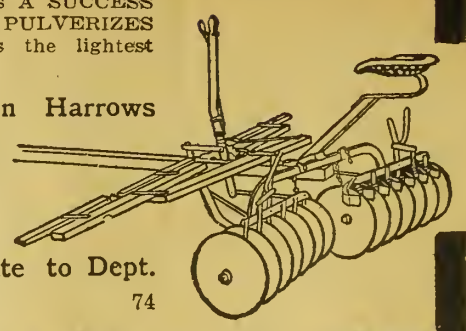
It has long been maintained by eminent authorities that a certain amount of crying is beneficial to a baby; in other words, that is a whole some form of exercise. It is not, of course, suggested that the baby should be tortured into crying in order to give it proper exercise, but the mother should not be disturbed because the infant cries now and then without disturbances of pins or any other discoverable cause. The baby often cries in order to exercise his lungs, and is benefited by so doing.

Prove the "BISSELL" by Its Work

Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you will HAVE PROOF that it is A SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.



Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept. "M" for free Catalogue. 74

T. E. Bissell Company, Limited, Elora, Ont.

This label, on every bag, identifies Canada Portland Cement.

MAKE certain of complete success in your concrete work by always using

CANADA Portland CEMENT

We are supplying Canadian farmers with the highest quality of Portland Cement it is possible for human skill to make.

We have reduced the price of Canada Portland Cement until it is within your reach for practically every purpose. It is the only building material that is not increasing in cost.

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If you have not received a free copy of "What the farmer can do with Concrete," write our Information Department and get one. It's a complete practical concrete encyclopedia.

Victory Co., N. B., Field Crop Competition.

The Victoria County Field Crops competitor's was held under the management of the Vic. Co. Seed Growers' Association. The judging was done the last week in August by Wm. H. Moore, Scotch Lake, York County. Following is a complete list of entries with the score made by each.

Wheat—1, Donald Innes, 95; 2,C. E. Pickett, 93⅔; 3, Warren Jamer, 93½; 4, Benj. Bull, 92½; 5, Christian Adams, 91; 6, David Currie, 90¼; 7, Archie Smith, 86½; 8, J. W. Stevenson, 86; Jas. Lamereaux, 85½; Frank Baird, 84; John A. Graham, 83½; Samuel Wark, 82.

Oats—1, Percy Payne, 94⅔; 2, Frank Baird, 92; 3, Warren Jamer, 91⅔; 4, Thomas Wark, 91½; 5, John S. Baird, 91¼; 6, Lee Bedell, 91; 7, Jas. Lamereaux, 90⅔; 8, Allen Wallace, 90½; Donald Innes, 89; Elijah Sisson, 89; B. Ervin, 88½; Harold Sarensen, 88; Benj. Bull,87; Hans Carlsen, 87; Wm. Porter, 85; Charles Wallace, 84; J. W. Corey, 84; Jerry Hafford, 83½; Anders Jensen, 79.

Potatoes.—1, J. F. Johnson, 95; 2, Herbert Manzer, 94½; 3, Lee Bedell, 94; 4, E. Warrington, 93¾; 5, Frank Baird, 93½; 6, Archie Smith, 93; 7, W. A. Baird, 92; 8, Henry Brinkman, 91½ :F. E. Henderson, 91; W. S. Phillip, 91; Hans Larson, 91; Hans Carlsen, 91; C. E. Pickett, 90½; John A. Graham, 90; Jas. Lamereaux, 90; Elijah Sisson, 90; Hugh Ervin, 89¼, J. S. Baird, 89; Jerry Hafford, 88½; Harold Sarensen, 88½; Thos. Wark, 88; Bruce Ervin, 87; Charles Wallace, 87; Allen Wallace, 87; Rudolf Hansen, 87; J. W. Corey, 86½; Oskar Peterson, 84½; Wm. J. Miller, 83; Donald Innes, 83½; Fred O. Everett, 79; F. E. Henderson, Sec.

Ventilating Arrangements.

A very simple arrangement by which the air of an apartment can be kept pure, without danger of drafts, is to have fitted into two windows, on opposite sides of the room, a piece of wood two inches thick and the exact width of the window. Raise the window and let it rest on the strip. A current of air will then continually pass in between the sashes.

Another way is to cover a screen of desired size with cheesecloth and insert in windows, the same as mosquito or fly screens. By this method rooms can be ventilated without creating drafts and allowing snow to blow in. This is especially good for bedrooms. Keep them in all winter. In fact, never close all the windows tight, if you value the health of your family.

Use and Care of Files.

The choice of a file for any particular piece of work will be determined by the form of surface to be worked the amount of material to be removed, the nature of the material and the finish to be left on the surface.

From the twenty different standard forms and cross sections in which files are manufactured the user must choose the proper form of file to best fit the work in hand. Next the amount of material to be removed will determine the size and coarseness of the file, the size being the length in inches of the file body without the tang, and the coarseness depending upon the six grades of cuts—rough, coarse, bastard, second-cut, smooth and dead-smooth. The bastard, and second-cut are the grades most used for general work, and the smooth or dead smooth for smooth finish work. All of these forms may be had as either single or double cut, in any grade of cut, excepting that the rough cut is usually single and the dead-smooth double cut. The double-cut file will bite more freely and leave a more broken surface than a single-cut file of the same size.

The nature of the material worked determines in a large measure the "life" of the file. A new file should never be used on very hard material, such as scale of castings and forgings, or on hardened steel; nor should it be used on soft, tough metals, or on thin edges, where it bites to freely. Files should not be thrown into drawers together with other tools. They should be kept clean by brushing, and should never be placed where they will rust, as that will ruin any file.—A. Cammack.

Feeding For Market

TO put flesh on poultry quickly, feed them on the famous Harab Beef Meal. By using 10 to 15 pounds of this concentrated meal with every 100 pounds of your fattening meals or mashes you will increase the food value of your rations from 40 to 50 per cent. You will finish your birds off in quicker time at less expense, and at same time produce stock that will command the highest prices.

Harab Beef Meal is ALL food and absolutely pure. It is one of the famous

Harab Poultry Foods

which are made in Canada, with a big Canadian corporation standing behind them. Hundreds of leading poultrymen now using them. If your dealer will not supply Harab Poultry Foods, write us direct.

The Harris Abattoir Co., Limited

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Maple Grove Stock Farm Registered Ayrshires

As I am selling my Farm I will offer for sale at Public Auction my entire herd of pure bred Ayrshires on

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At 1 o'clock, p. m.

Herd consists of 14 males and 22 females all of choice breeding. Every animal will positively be sold.

Buyers from a distance will be met at train if desired.

For descriptive Catalogue apply to the undersigned.

M. H. PARLEE,

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Clean, Simple, No Chance of Mistakes. TRY IT! Send for Free Color Card and Booklet.
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Rubbers and Over-Stockings All in One.

Easy to put on and take off. Fit well—Look well—Wear well. All sizes for women and children.

Buy them and protect yourself and family from winter ills.

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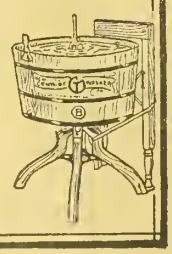
All Dealers

The "New Century" SMILE

Is worn by every housewife who uses one of these washers. The reason is quickly found for the New Century makes washing easy. It removes the hard rubbing and does the work more thoroughly than any other way.

The New Century Hand Washer works quickly and easily. It gushes the water through the fabric, leaving it sweet and clean in a few minutes. It cannot injure the finest garment you possess.

The product of twenty-five years experience in making washers, the New Century is without an equal. Patented features make it the leading hand washer.



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Don't waste your money buying strengthening plasters. Chamberlain's liniment is cheaper and better. Dampen a piece of flannel with it and bind it over the affected parts and it will relieve the pain and soreness. For sale by all dealers.

Honoured by the King.

Mr. George Hughes, the well-known inventor of Molascuit, was specially favored by his Majesty at Bristol. On visiting the Molascuit stand the King asked to have the process explained to him, which Mr. Hughes was able to do in his usual lucid manner. The process is one of using the interior of the crushed sugar cane as the absorbent of the molasses, and is very interesting. The invention is, of course, not only of much importance to English stock fatteners, but has done much for the West Indies, ingeniously uniting two products and preventing one of them from remaining more or less waste. His majesty was most interested throughout the explanation, and as he shook hands with Mr. Hughes at the end of it, as he had done on the inventor being presented, we think it may fairly be premised that he was pleased as well. Those of us who have heard Mr. Hughes on agricultural occasions know what an excellent, clear, and decisive speaker he is, and can imagine how well he would define a process or explain a method of practical science.—London Elementary Standard.

At the Pictou Exhibition

John McDonald, & Son, New Glasgow, and Harold Falconer, Alma, divided the honors for the Ayrshire cattle; John J. McCabe, Alma, and Dan McC. Fraser, Sylvester, in the Holsteins. The Jerseys were variously owned—a nice lot. In Guernseys the chief competitors were D. G. McKay & Son, and Geo. W. McKenzie, Roger Hill. McKay had twelve head and won 7 firsts and 4 seconds, and the herd prizes. Among the lot were a young bull, rising two years, which the Messrs. McKay imported as a calf direct from the Island of Guernsey. See their add in this issue.

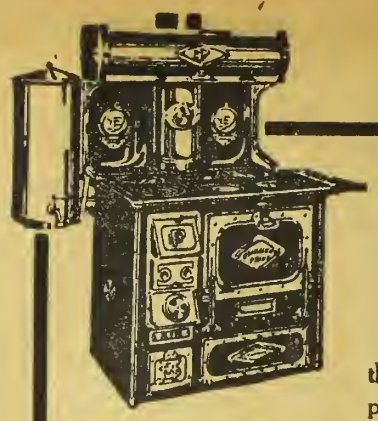
The Food Safe.

The little outside food safe so often used in cottage homes should not be painted but enamelled, which is more weather proof and much more easily kept clean. A cover of sheet-iron is the best, but it must be raised a few inches above the safe top at sufficient angle, allowing enough to overlap at the sides and front to throw off the water and protect the sides of the safe.

The House Fly Cause of Worms in Horses

Dr. B. H. Ransom, in the service of the U. S. Government, has just discovered that the domestic fly transmits not only microbes and germ life on the ends of its feet, in its mouth, and by means of its salivary glands and digestive canal, but spreads certain parasitic worms which infest horses. Dr. Ransom caught at random 137 ordinary house flies, of which a careful record was kept. Thirty-nine were infested with the worm. Even when the flies were killed these parasitic horse larvae remained alive two and more days afterwards. The eggs of this parasite are picked up from manure, dirt, dust, and the flies that touch those things with their salivary fluids pick them up. Then they develop in the insect. The flies hover about the heads of horses and the latter snap them up. Then the larval form—called Habrema musra—which is growing in the fly, begins to enter on its new stage of development in the digestive tube of the horse, where it assumes another form with the new name—Spiroptera microstoma—under which it has been known for fifty odd years as a parasite of the horse. Dr. Ransom is the first to discover that this bane of herdsmen and horse breedess requires the common and unpopular house fly for its birthplace.

WE PAY THE FREIGHT.



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Buying at the factorywill land this range at your station freight prepaid for $20.00 less than the next best stove on the market. You pocket the dealer's profit—about 30 per cent.—get a beautiful steel and malleable iron range built to last a lifetime. And what's more you save money every month on your fuel bill.

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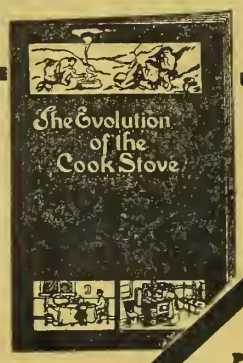
It's as good as seeing the range to read the complete and clear description in our book. The book also contains a history of cooking worth reading. Let us send you a copy.



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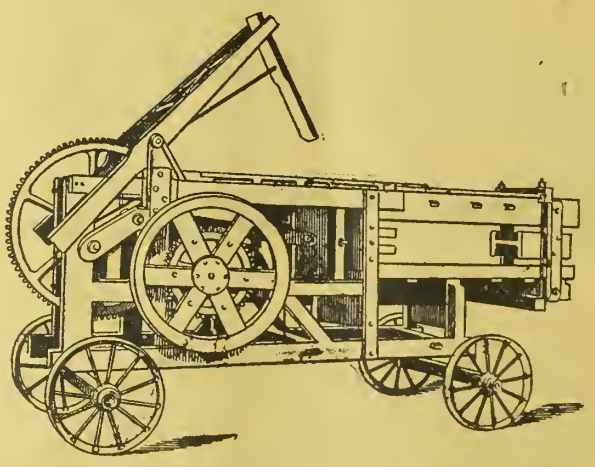
Our Hay Press is operated by either Steam, Gasoline Engine or Tread Power. The whole machine is so powerfully constructed that no jar is felt in any part when in operation. The Bale Box is steel lined. The Side Springs, which are thoroughlv tested, are made of the best quality of Spring Steel, The Folder is located to do perfect work, and requires but a slight spring pressure to operate.



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All our machines are guaranteed for a year against any defects in workmanship and material.

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The Sussex Manufacturing Co., Ltd.

Sussex, N. B.

David Copperfield.

(Continued from page 93)

needn't wince!" said my aunt. "I know it's true without that."

He had stood by the door, all this while, observant of her, with a smile upon his face, although his black brows were heavily contracted. I remarked now, that, though the smile was on his face still, his colour had gone in a moment, and he seemed to breathe as if he had been running.

"Good day, sir," said my aunt, "and good bye! Good day to you, too, ma'am," said my aunt, turning suddenly upon his sister. "Let me see you ride a donkey over my green again, and as sure as you have a head upon your shoulders, I'll knock your bonnet off, and tread upon it!"

It would require a painter, and no common painter too, to depict my aunt's face as she delivered herself of this very unexpected sentiment, and Miss Murdstone's face as she heard it. But the manner of the speech, no less than the matter, was so fiery, that Miss Murdstone, without a word in answer, directly put her arm through her brother's, and walked hautily out of the cottage; my aunt remaining in the window looking after them; prepared, I have no doubt, in case of the donkey's reappearance, to carry her threat into instant execution.

No attempt at defiance being made, however, her face gradually relaxed, and became so pleasant, that I was emboldened to kiss and thank her; which I did with great heartiness, and with both my arms clasped round her neck. I then shook hands with Mr. Dick, who shook hands with me a great many times, and hailed this happy close of the proceedings with repeated bursts of laughter.

"You'll consider yourself guardian, jointly with me, of this child, Mr. Dick," said my aunt.

"I shall be delighted," said Mr. Dick, "to be the guardian of David's son."

"Very good," returned my aunt, "that's settled. I have been thinking, do you know, Mr. Dick, that I might call him Trotwood.

"Certainly, certainly. Call him Trotwood, certainly," said Mr. Dick, a little abashed.

My aunt took so kindly to the notion, that some ready-made clothes, which were purchased for me that afternoon, were marked "Trotwood Copperfield," in her own handwriting, and an indelible marking ink before I put them on; and it was settled that all the other clothes which were ordered to be made for me (a complete outfit was bespoke that afternoon) should be marked in the same way.

Ths I began a new life, in a new name, and with everything new about me. Now that the state of doubt was over, I felt, for many days, like one in a dream. I never thought that I had a curious couple of guardians, my aunt and Mr. Dick. I never thought of anything about myself, distinctly. The two things clearest in my mind were, that a remoteness had come upon the old Blunderstone life—which seemed to lie in the haze of an immeasurable distance—and that a curtain had forever fallen on my life at Murdstone and Grinby's. No one has ever raised that curtain since. I have lifted it for a moment, even in this narrative, with a reluctant hand, and dropped it gladly. The remembrance of that life is fraught with so much pain to me, with so much mental suffering and want of hope, that I have never had the courage even to examine how long I was doomed to lead it. Whether it lasted for a year, or more, or less, I do not know. I only know that it was, and ceased to be; and that I have written, and there I leave it.

(Continued in next issue)

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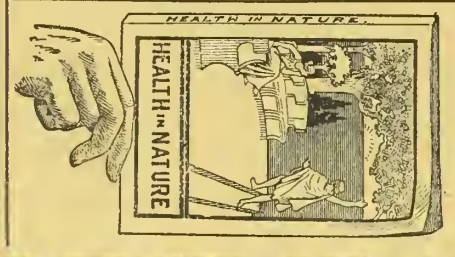

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Volume 19. SUSSEX, NEW BRUNSWICK, NOVEMBER 25, 1913. Number 4.

Hereditary Traits in Milch Stock as Revealed by Danish Control Unions

IN THE work of selecting the best possible milch stock, the Danes have for a number of years given particular attention to heredity. They made it a special study from the start to produce a pure breed of first grade milkers. At that time they had no herd books to help them, they had only their own judgment to rely upon. The racial characteristics and good qualities of the animals were the chief points which helped them to estimate whether or not the breed was free from foreign blood. Little by little the herd book grew in size and they got to know a little about the sire and dam and as time went on grandsires and grandams, etc. In this way a more accurate account was kept of the breeders than by merely estimating them from the known qualities of the existing animal. According as the herd book grew, it became more and more helpful with regard to the selection of sires or dams as it was easy to see if they belonged to a prize strain, etc.

But the herd book only gave information about the build of the stock and the purity of the strain and stopped there. The most desirable information was lacking, i. e., the amount of milk yielded and the percentage of fat it contained. The breed and build of the stock were good in their way, but the end immediately in view was to increase the percentage of fat in the milk and the herd book contained no information on this point. Many hard-headed farmers could not understand how the herd book helped them towards this goal. In bargaining about a bull they said: "It is very good to bear so much as to the animal's pedigre), but if you can tell us something about the milk of the sire's dam and grandam and the dam's dam and grandam, why that's just what we want to know about. May we expect that the bull in question will raise the fat percentage in the milk of our stock?" At that time there was no reliable information on these points and the buyer was obliged to take his chances.

In 1893-95 the control unions came into existence and gave state controlled information regarding the quantity of milk, the percentage of fat and the number of pounds of butter made from it yearly. The material placed in the hands of the Danish dairyman in the course of some years enabled him to select the best animals for breeding purposes with considerable accuracy. There is no surer road to the improvement of the quality and quanity of the milk than by availing yourself of the state controlled individual record of each animal.

Before the advent of the control unions many strains had won excellent reputations and farmers bought freely of such strains. In some cases their stock was much improved, in others slightly improved, and in others there was no visible improvement. Some farmers, who attached too much importance to breed, build and pedigree and too little importance to the quality and fat percentage of milk, felt disappointed in the results of their labors for the improvement of their milch stock. The less fortunate results might in many cases be attributed to the fact that good and bad animals exist in every prize strain and the buyer is just as likely to get a bad bargain as a good one. The control unions hindered the sale of bad bargains to a great extent as they furnished reliable records concerning the merits of the individual milkers. For this reason the farmer is not quite so likely nowadays as in the past to pay out a large amount of cash for an indifferent animal with a pedigree.

It may be of some interest to show how cattle selected with ordinary care may fail from one cause or another to improve the milch stock, but it is much more interesting to demonstrate the importance of a selection made in conformity with state controlled information, that is to say, information which sets clearly forth how far the offspring inherits the good or bad qualities of the sire and dam As it requires a great many years to estimate the effect of heredity, the amount of information available so far is meager enough.

The figures quoted regarding the quantity of milk must be taken with considerable reserve as they vary in a great measure according to the feeding and care of the animals. The quantity of fodder and care of the animals on a farm where a bull is bought may be very different to that of the farm where his offspring is foundso that a direct comparasion of the sire and offspring is unjustifiable.

All comparisons quoted in this article will be between the yield of the dams and their offspring. If the offspring yield more than the dams there is good reason for assuming that the increase is caused by the bull and if they yield less than the dams it may also be attributed to the same cause.

The percentage of fat in the milk is of first importance in deciding the question of milk yield as, unlike the quantity of milk it is not influenced by the quantity and quality of the fodder. The fat percentage must therefore decide the matter. The report of an inquiry concerning the productivity of the offspring of two prize bulls, Brondstrup I and Brondstrup III throws some light on the question of heredity and the fat percentage.

It was ascertained that these bulls, which in their way were considered to belong to the best strain of Red Danish milch cattle on the Island of Fumen, begot offspring whose milk was neither rich nor plentiful. The average amount of milk produced annually by 18 controlled cows (offspring of the bulls referred to) was for each, 6,636.5 pounds of milk containing 3.19 per cent. fat.

Although there was ground for assuming that the low fat percentage was due to the influence of the bulls, this cannot be quite certain as the dams of the milkers were not controlled. Another bull in Copenhagen county "Ole Romer," a son of Brondstrup I and a cow, which was a half-sister to Brondstrup I, have produceda number of offspring of which six head were controlled. Their average yearly production was 8.518 pounds of milk containing 3.07 per cent. fat.

Another bull bred from the same cow and sired by Brondstrup III has in like manner given much milk with a low percentage of fat; a third bull, which was bred from a whole sister to Bronstrup III begot a number of offspring of which five head were controlled and their milk contained 3.07 per cent. fat, while that of their dams which were also controlled averaged 3.49. This goes to show that the bulls of that strain begot offspring whose milk contained a low percentage of fat.

These figures are not encouraging, but they give a broad hint that there is good reasons to guard against poor milk and that the offspring always inherits more or less determined proportions the good qualities of the defects of the sire and dam.

It is more interesting to see how far the percentage of fat can be raised by systematical choice. In the bull union of one county where systematical choice had been the rule for many years, the members succeeded in improving their milch stock through the use of good bulls. In the year 1900, the aim of the union was to raise the percentage of fat in the milk and the members agreed to select and buy a bull for this purpose. They bought a bull whose sire had begotten offspring with rich milk and whose dam and grandam had given milk containing 3.90 per cent. fat. This bull, Max Dysted I, was kept by the union for a number of years and begot many offspring, the majority of which were controlled and almost all gave rich milk. In this case the cows, from which the offspring were bred, were controlled; so they can be compared with the offspring. In order to make the comparison as fair as possible only the offspring, which were controlled after calving for the third time are included.

The records of the dams also apply to the period after their third calf. The average annual production for each of nine dams was: 9043 lbs. of milk containing 3.09 per cent. fat and yielding 508 lbs. butter. The average annual production for each of nine offspring was: 8,087 lbs. of milk containing 3.77 per cent. fat and yielding 339 lbs. of butter. The increase in the percentage of fat and in the amount of butter is rather remarkable. It may be pointed out as a drawback, that the quantity of milk is about 960 lbs. less for the offspring han for the dams at the same age. This was an heredity trait, as the richness of the milk and its diminished quantity were characteristics of the dam and grandam of the bull. At that time it was difficult to find bulls with satisfactory records as to breed, build, fat percentage, etc.

The bull union wanted rich milk and were obliged to renounce the quantity for the sake of the quality and the result answered their purpose.

In the financial years, 1911-12, each of 23 heifers sired by Max Dysted I gave on the average: 7,634 lbs. of milk containing 3.92 per cent. fat and yielding 333 lbs. butter. The experiences of a private dairyman in Copenhagen county yields further information of an interesting character. This man had a stock of good, well-built milkers in 1897-99 of the red Danish breed whose milk was rather poor in fat. The average annual yield of each of sixty cows was: 8,818 lbs. of milk containing from 3.25 to 3.40 per cent. fat.

In 1900 the owner resolved to raise the fat percentage of his milch stock by securing a suitable bull. With this object in view he bought the bull Dan. There was not a great deal of information to be had about Dan. His dam was controlled and the average fat percentage of her milk was 4.16 per cent. fat; its quantity variedgreatly as she suffered for several years from udder disease, became three-teated and finally two-teated. Besides this, it was ascertained that the offspring of Dan's sire, Taurus II, gave rich milk. At present, there is an account of sixty heifers sired by Dan, each of which has a higher percentage of fat in its milk than its

dam. In the following table all the offspring (heifers) are included for which there were corresponding control records of the dams at the same age.

	Number of Cows	Financial year	Milk lbs.	Fat %	Butter lbs.
Offspring	33	2nd	9,666	3 99	371
	20	3rd	8,735	3.84	417
	14	4th	10,034	3.86	433
Dams	33	2nd	8,5468	3.38	320
	20	3rd	9,510	83.4	352
	14	4th	9,03	3.48	341

As a supplementary to the foregoing it may be stated that the average yield of 33 offspring for the financial year 1911-12 was for each 10,744 lbs. of milk containing 3.97 qer cent. fat and yielding 472 lbs. butter.

This information it rather interesting as the controlled account of dams and offspring comes from the same source, affects the same stock at the same age and subject to the same care and attention so that the remarkable increase in the fat percentage may be correctly ascribed to the influence of the bull. The increase in the percentage of fat is more than one-half pet cent. and in the amount of butter about 63.13 lbs. per cow annually. The amount of butter for the 33 offspring mentioned last would be 406.74 lbs., if the fat percentage were 3.40 per cent., whereas the actual yield is 772.88 lbs. of butter and amounts to 66.13 lbs. of butter more for each cow or for the 33 cows, 2,182 the fat percentage 3.97 per cent. This is a goal worthy a long, tenacious struggle on the part of any cow keeper.

The next step taken by the same dairyman was to endeavor to attain an average of fat percentage of 4 per cent. for his entire stock. He made an energetic search through control books, etc., and at length found the bull Hermod, whose dam was recorded as giving a yearly average for two years of 7,966 pounds of milk containing 4.82 per cent. fat. This fat percentage was almost unheard of It was so high that most hard-headed dairymen shook their heads and were skeptical about the figures. Hermod was used for some years and as soon as there was an account of the offspring most dairymen were anxious to know the result. The first record was that of the first financial year of control and the following figures indicate the return of five offspring together with that of the dams all controlled at the same age. Average of each of five offspring: 6,942 pounds of milk containing 4.41 per cent fat and yielding 344 pounds butter. Average of each of five dams controlled at the same age: 8,326 pounds of milk containing 4.14 per cent. fat and yielding 391 pounds butter.

The great augmentation in the fat percentage of Hermod's offspring is sufficient to prove the influence of the bull. The milk yield of the offspring, which is considerably less than that of the dams, seems to counterbalance the increase of the fat percentage. This is not the case, neither is the decline in the milk so great as it appears. The circumstance is due to the calving time. The average calving time for the offspring was April and that of the dams November. It is a well known fact that the average milk yield of cows which calve in spring is considerable lower than that of cows which calve in autumn. The figures which indicate the quantity of milk cannot be compared in this case.

In the financial year 1911-12 the average return for each of 15 offspring sired by Hermod was: 9,100 lbs. of milk containing 4.25 per cent. fat and yielding 463 pounds butter. In spite of the fact that this is a particularly good yield and an over-realization of the fat increase aimed at in making the selection, it must still be admitted, that the quantity of milk does not compare favorable with that of the offspring sired by the bull Dan. Hermod seems to have inherited in more or less determined proportion the shortcoming of his dam who did not give a large quantity of milk.

The figures in the foregoing article prove what may be attained through purposeful, systematic choice in the matter of stock breeding. If it is possible in this way to raise the fat percentage in the milk, there isn't the slightest doubt but that the build of the stock may be improved along the same lines.

But it will never be brought about by folding one's arms and leaving everything to chance. In trusting to choice, the animals are only apt to be good. It lies in the hands of the breeder to develop this aptitude to the fullest extent and afterwards in the hands of the dairyman to thoroughly develop and observe the latent facilities of the animals by careful feeding and control.—J. J. Dunne, Denmark, in Hoard's Dairyman.

A School Teacher's Enterprise.

One of the most interesting letters recently received by the Dairy Commissioner, Ottawa, is from a school teacher in Alberta who asks for milk record forms and literature on the subject of cow testing, because—now listen: Some of the boys in the school ars starting a contest in recording the production of individual cows to last one year.

This opens up a most promising field for every school teacher and for thousands of boys in our country schools. In this we would be following somewhat slowly in the wake of many schools in the United States and New Zealand where the use of the Babcock milk tester has been taught for some time. In a dairy country like this, we should be out blazing trails for other teachers and boys to follow.

No better work could be taken up by such lads for any record work of that kind must infallibly lead to better, vastly better, conditions on dairy farms. Probably these Alberta lads will soon be excellent dairymen obtaining seventy-five or one hundred dollars per cow.

Needless to say the Dairy Division will be only too ready to supply blank forms and instructions in all such cases.—C. F. W.

Bran, Shorts and Chop Feed.

In the months of September and October, 1912 the Inland Revenue Department purchased throughout Canada 396 samples of feeds sold as bran, shorts or middlings and chops. The samples may be taken fairly to represent the character of cattle feed offered under the above names. Such feeds are required to possess the following values:—

	Proteids.	Fat	Fibre
	Min.	Min.	Max.
Bran	14	3	10
Shorts & middlings	15	4	8
Chop	10	2	10

Although feeds of these classes are not required to be registered before being offered for sale, it is not forbidden that any manufacturer who believes his product to be notably better than the minimum legal requirements should register this and sell with a guarantee of quality. In such case the manufacturer must give some distinguishing name to the article, and not sell it simply as "Bran." He may name it "Smith's Bran," or "Jones' Bran," or he may devise a specific name for it. For purposes of the Act, the Article then becomes "Stock Feed" as defined by Sect. 2 (b) of the Act; and is amendable to the conditions of Sect. 2 (e) and Sect. 15. Thirty-eight samples of bran, shorts and chops among the 396 now reported are sold with a guarantee of value. It is, of course, proper that the manufacturer should be required to live up to any guaranteed value which he claims; and it may thus happen that a bran (for example) which would have passed as legal bran, if sold without any special claim of quality may be found deficient and technically adulterated because it fails to show the content of proteid matter or fat which the manufacturer claimed, and upon which, rather upon legal requirements for bran, it is judged.

The following table gives a concise statement of the results of analysis of bran, shorts and chop feeds.

	Sold with a guarantee		Sold without a guarantee		Total		
	Meets guarantee	Below guarantee	Genuine	Below requirement	Genuine	Adult	Sum.
Bran	8	4	121	2	129	6	135
Shorts or middlings	1	3	127	8	128	11	139
Chop	16	6	91	9	107	15	122
Total	25	13	339	19	364	32	396

In some cases the deficiency is very small and may be regarded as accidental. Sometimes the deficiency is one component is fully compensated by overplus in another, so that the purchaser of the feed is not defrauded except technically. As a rule the deficiency is most notable in cases where a guarantee of value is given, the manufacturer evidently basing his guarantee upon a higher analytical result than he has found it practicable to live up to. It is to be noted that standards, as interpreted by section 15 of the Feeding Stuffs Act, 1909, provide for deficiency of one per cent in proteids or fat or for an excess of two per cent fibre, if the total value of the feed is not impaired thereby.

So far as nutriment value is concerned, it therefore appears that only 23 sample out of 396, or less than six per cent of the collection, can be regarded as adulterated under the Act. Of this number, one sample is doubtfully amenable to the charge of adulteration; and seven others, while failing to meet the manufacturer's claims are found to meet the legal minimum values for the class of feed to which they belong. This leaves only fifteen (15) samples in whose regard no extenuating circumstances can be pleaded.

Even among these it will be found that the deficiencies are for the most part slight, and the report shows that bran, shorts and chop feeds are so far as their feeding value goes generally of good quality. Modern milling processes are so complex, and the natural desire of the manufacturer to work economically and to secure a maximum value from his grain is so great that with the fullest intention to bring his low priced products up to the legally required minima, it is inevitable that he should at times utter a sample below standard, unless he takes the precaution of checking his output by analysis.

In Bulletin No. 231 The Department calls attention to a variety of feeding stuff sold as shorts or middlings, but having characters which would seem to indicate that it is rather low-grade flour than shorts or middlings, as these are generally known. The following quotation from Bulletin No. 231 explains this matter:—

"A considerable of samples, which appear to answer a description of low grade flour, were found in the above collection; but these were supplied indiscriminently as shorts or middlings, as indicated by the maxima for fibre and for fat, though most of them were sold as middlings.

"In order to discover whether the present collection indicates any accepted distinction between the terms, I have collated the results for 72 out of 37 samples sold as shorts, and for 54 out of 68 samples sold as middlings, being in each case the number of samples respectively, which meet the requirements of legal definition.

Seventy-two (72) samples of shorts give results as follows:—

SHORTS.

	Fat.	Proteids.	Fibre.
Means	4.65	16.20	6.3
Maxima	6.48	18.46	8.0
Minima	3.44	14.00	3.9

"Fifty-four (54) samples of middlings give the following results —

	Fat.	Proteids.	Fibre.
Means	4.47	15.59	5.2
Maxima	6.26	18.02	8.1
Minima	3.02	14.13	1.4

"The results appear to justify the conclusion that the article sold as shorts is not substantially different from the article sold as middlings; and this conclusion is corborated by the expressed opinion of many millers, in answer to questions by our inspectors. At the same time it is to be noted that samples characterized by very low fibre, low fat and high starch content (indicating flour), are usually sold as middlings, rather than shorts.

"Feeds of this kind should be sold as feed-flour; or by some name which distinguished them from legal shorts or middlings. While they possess considerable value for feeding purposes, they must be regarded as adulterated under the Act when offered as shorts or middlings. Their low fibre content is an advantage from the point of view of nutritive value, since this is replaced by starch in amount equipalent to the difference between the legal maxima the legal maximum for fibre (8 per cent) and the actual fibre present."

The Department is convinced that in none of the above listed samples is there any evidence of intended fraud. The irregulgrity is apparently due to ignorance of legal requirements for shorts (middlings), and a mistaken idea that a low grade flour is even better value, than middlings as usually understood. The Department feels justified in recommending that for this first inspection under the Feeding Stuffs Act leniency be exercise towards the vendors, and their attention called, to the requirements of the Act."

It is a matter for consideration whether the Act should not be amended by addition of this description of feed under the name "FEED FLOUR" in such case it would be necessary to amend the Act in Section 2 (b), by exclusion of the term "FEED FLOUR" as a commercial feeding stuff requiring registration.

The standard for bran, shorts and chop feeds, as defined in the old Act, were amended on June 7, 1911, by the following clause: 'And must be free

from vital seeds of any of the noxious Weeds defined by the Governor in Council under the Seed Control Act.'

Examination of all the samples herein reported as to their content in vital weed seeds has been made by the courtesy of the Department of Agriculture, through the office of the Serd Commissioner, Geo. H. Clarke, who reported as follows:

We have not made germination test of any of the weed seeds enumerated to determine whether they are vital. We have, however, enumerated only those weed seeds which were found to be fully matured and in perfect condition; these we have assumed to be vital.

Nature has provided most kinds of noxious seeds with a hard or mucilagenous seed coat by which the germ may be protected, even though the seed may be exposed to the best possible conditions for germination; such weed seeds do not lend themselves readily to artificial methods for determining their percentage vitality.

From research work that has been done in our seed laboratory and elsewhere, however, we have good reason to believe that there are exceedingly few fully matured and uninjured seeds of plants that can properly be characterized as noxious weeds that are not capable of germinating. The fact that they cannot be forced to germinate until nature has prepared them for such is the principal factor that brings them within the category of noxious weeds and makes them so troublesome to farmers.

The result of this examination is presented in the following summary:—

	Samples.
Containing more than 400 vital weed seeds per lb.	6
Containing more than 300 vital weed seeds per lb.	3
Containing more than 200 vital weed seeds per lb.	4
Containing more than 100 vital weed seeds per lb.	11
Containing more than 50 vital weed seeds per lb.	14
Containing more than 25 vital weed seeds per lb.	27
Containing less than 25 vital weed seeds per lb.	71
Free from vital weed seeds.	260
Total	396

The Seed Control Act (1-2 George 5, Chap. 23) of 1911, as interpreted under Order in Council under section 2, is as follows:—

The maximum proportion of noxious weeds that may be tolerated in any other seeds without affecting their character as being free from the seeds of the said weeds within the meaning of section 6 of this Act, shall be as follows:—

(a) For seed of oats, barley, wheat or other seeds similiar in size, one weed seed in one pound avoirdupois.

(b) For seed of flax, millet or other seeds similiar in size, one weed seed in one ounce avoirdupois.

(c) For seed of white clover grasses, five weed seeds in one ounce avoirdupois.

It is to be kept in mind that these regulations apply to seeds intended to be applied directly to the land. In the case of cattle feeds, the vital weed seeds are presumably applied to the soil only after they have passed through the alimentary tract of the animals to which they are fed, and it is reasonable to suppose that their vitality will be greatly affected in the processes of digestion.

The only experimental data available directed to the determination of the vitality of seeds which have been fed to animals is contained in a report published as Bulletin No. 128 of the Maryland Agricultural Experiment Station, College Park, Md., in June, 1908.

This valuable study of the question is briefly presented in the following summary:—

SUMMARY.

The above results were obtained through experiments concerning the vitality of weed seeds under the influence of their distribution by manure along two different lines; namely, the effect of fermenting manure on the vitality of weed seeds (seeds introduced through bedding) and the effect upon the vitality of weed seeds after passing through the digestive channel of domestic animals (seeds fed to animals).

The first part of the experiment was accomplished so as to cover the condition where manure remains for six months in a barnyard, pound or pile. The second covered conditions where the manure remained on piles for a short while, as when shipped by carload lots from cities.

From the above results the following conclusions seem to be justified:—

1st. When manure is allowed to ferment in piles for six months no danger of distributing weed seeds is incurred.

2nd. When manure is allowed to remain in piles and undergoing partial fermentation, little danger of distribution is incurred.

The second part of the experiment which dealt with the effect upon the vitality of weed seeds after passing through the digestive channels of domestic animals was accomplished so as to bring about three existing conditions.

1st. Manure hauled direct from the stable to the field as a top dressing and left there exposed to the washing of the rains.

2nd. Where the manure is hauled directly from the stable to the field where it is immediately ploughed under.

3rd. Where the domestic animals are allowed to run in pasture and the droppings are allowed to remain wherever they chance to fall.

From the above tables in the latter part, the following results were obtained:—

1st. Where the manure was hauled directly from the stable as a top dressing an average of only 12.8 per cent of the feds fed to animals germinated.

2nd. Where the manure was hauled directly from the stable upon the land and ploughed under, 2.3 per cent of the seeds fed to animals came up.

3rd. Where the droppings remained on the pasture fields unadultered as they fell, an average of only 3.1 per cent of the seeds fed to animals germinated.

Geo. H. Clarke, Seed Commissioner expresses the following opinion:—

"There has been quite a large number of samples of mill feeds analysed in our seed laboratory covering the period of six years, and from the results of this work we have formed the opinion that the proportion of whole weed seeds contained in the feeding stuff depends largely on the care or lack of care on the part of the manufacturer.

Weed seeds in seed grain are probably five times more dangerous to agriculture than are weed seeds in mill feeds, for the reason that only a small per cent of the weed seeds fed to stock ultimately are put on the land in viable condition.

"For the present, I think I cannot do more than to express the opinion that if you were to tolerate five noxious weed seeds per pound of bran, shorts or chop feed before you consider their character affected as being free from the seeds of the said weeds within the meaning of your regulations, then field agriculture would be as well safeguarded as it now is under the regulations that are applied for a similiar purpose under the Seed Control Act."

This last suggestion would place the limit at five vital seeds of noxious weeds per pound; and it is proper, in its regard, to further analyse the case of 71 samples of this collection which contained less than 25 weed seeds per pound:—

	Samples
20 or more weed seeds per lb.	8
15 or more weed seeds per lb.	11
10 or more weed seeds per lb.	14
5 or more weed seeds per lb	18
Less than 5 weed seeds per lb.	20
Total	71

It may be found necessary to place the limit for vital weed seeds in bran, shorts and chop feeds as low as suggested by the Seed Commissioner. There can be no doubt, however, that when the number exceeds 25 seeds per pound, a reasonable limit is passed, and such samples must be regarded as adulterated, on this ground and altogether apart from considerations of nutritive value.

Many of these contain notable amounts of protein and fat, and if properly ground so as to destroy their vitality they might not be objectionable in a feed except in such species as contain acrid or poisonous principals.

Complaints have frequently reached this office to the effect that animals refused to eat certain feeds, or that ill effects have been noted after feeding.

A perusal of the tables submitted by the department reveals the fact that 62, perhaps 63, out of the 65 samples recorded as containing more than 25 vital weed seeds per pound are of satisfactory value as regards the nutritive values of the feeds. This does not prevent them from being judged as adulterated, provided that the limit number of 25 vital weed seeds per pound be held adjustiable, which limit is quite liberal.

Thirty-seven samples are sold as chop, 18 samples as bran and 10 samples as shorts or middlings. It is to be expected that if unground 'weed seeds are to be found in cattle feeds they should appear in chop or in bran. They should not apparently be found in shorts or middlings because this product is supposed to represent only the result of such fine grinding as should ensure the destruction of the seeds by comminution. It would seem that whole weed seeds could only appear in shorts or middlings by purposeful addition of waste 'screenings.'

It is evident from this study that purchasers of stock feeds have little ground for complaint as regards the feeding value of these goods.

On the other hand, they contain very notable amounts of vital weed seeds, and, in the light of present knowledge are adulterated when such contamination exceeds 25 seeds per pound.

The practice of adding 'screenings' or 'offal' to bran, shorts and chop is very objectionable, and unless the 'screenings' have been ground so fine as to destroy the vitality of the weed seeds contained must be held to be a violation not only of the Adulteration Act, but, in spirit at least, a violation of the Seed Control Act.

Financial Report of the Halifax Exhibition.

This year as in years past, various Nova Scotia newspapers are out with the headlines "Deficit on this year's Exposition was over $10,000," while papers in the other provinces report their fairs as either "breaking even" or coming out with a "surplus." The headline "Deficit" as applied to the Nova Scotia Provincial Exhibition is hardly justifiable. Fairs in the other provinces receive an annual grant and as above stated either "break even" or leave a "small surplus" while the Halifax Exhibition does not receive a grant, the Province of Nova Scotia and city of Halifax meeting the apparent deficit share and share alike. Supposing that the Halifax exhibition had been granted a round sum of $10,000, which amount would be the very lowest that any government would offer for an exhibition of the magnitude of the Halifax fair it too could be reported as "breaking even" or coming out with a "small surplus."

When contrasting the following report with that of the other provincial fairs we trust our readers will look on it in the right light and will not be carried away with any wrong conceptions of the success of the fair.

Following is the financial statement of the fair:—

The Provincial Exhibition Commission met on the 18 inst. and fixed Sept. 9th to 17th as the dates for next year's fair. The deficit on this year's show is $10,139.26, which is the lowest for years. In 1910 the deficit was $14,000, and last year it was over $800 more than the present year.

A change is contemplated at the grounds, especially affecting a rearrangement to the live stock buildings.

On application of the Trades and Labor Council the grounds will be put to their use on Labor Day and the firemen will be gipen the use of them on a day in August during the tournament.

The report presented by Manager Hall was as follows:

I beg to submit my report of the Seventeenth Annual Exhibition held September 3rd to the 11th, and as the Superintendents will report for their various department I shall confine my report to the Exhibition as a whole.

Notwithstanding various letters that have appeared in the press, some of them going so far as to say the Exhibition of 1913 was the "worst ever," I feel that this statement will stand investigation.

Beginning with the live stock class, our exhibit in the horses class was the best since 1906, there being 20 per cent. more exhibits than last year.

The Beef Classes were larger, the Dairy not quite so large. The falling off being in the Aryshire and Holsteins, while a perceptible gain was made in the Grade Dairy.

In both the Sheep and Swine classes exhibits were the largest and best we have had for some years.

In the Live Stock Classes it is gratifying to note that the twenty-three exhibitors appeared for the first time.

The Poultry exhibit was not so large as last year, due entirely to the early dates at which it is impossible to get a large exhibit.

It is not to be expected that a good showing of fruit can be made in the early part of September, particularly when the season is a backward one as was very plainly evidenced by our show in this class this year.

The suggestions made by a Fruit Growers' Association, that a Fruit Show be held in this City during the month of November, combining our Fruit Department with the Valley Fruit Show, is one that should be considered and steps taken to carry same out.

Although a late season the exhibit in the Root and Vegetable Department was an exceedingly good one, and as stated by the Judge the best we have had here in years.

The Domestic Department, while not containing as many exhibits as last year, was, I think, one of the most attractive tney have ever had, while the Arts, as usual, though confined very largely to local exhibitors, was well worth the price of the gate admission.

The Mines Building received much

(Concluded on page 130.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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NOVEMBER 25, 1913.

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January 13-27

FARMERS SHOULD MAKE PRICES.

We have suggested that if an increase of the food supply is ever needed, it will be up to the rest of society to make the financial returns to the farmer sufficiently attractive to cause an increase in the number of farmers and an increase in the product. It is probable, however, that the farmers will have to force the issue and compel the rest of society to pay to them a sufficient price so that the returns to the farmers for the things they produce upon the farms will be adequate in comparison with the terms that come to others for the handling of those supplies and for other kinds of labor of hands or minds, not one of which is so essential or fundamental as the labor of the farm. It is hardly to be expected that the rest of society will pay the farmers more for their produce unless they demand more and can show reasons for the demand in a statement of the cost. It is right here that a revolution in business is needed. In his relation to the food supply, the farmer is a manufacturer as much as any other business man. He is more than that, he is the original producer. But in his business relations he is a manufacturer. As a manufacturer, however, he is an anomoly, for he is the only manufacturer who allows some other business interest to set the selling price upon his goods. The manufacturers who change the form of the products of the farm not only set the price of their own manufacturers, and set it high enough to make large profits, but they make the price to be paid to the farmer for his original product. This is a practice and custom of modern business which is radically wrong in theory and principle. The farmers ought to set the prices on their products, and they must do so before the business of farming is put upon the right basis.

We can imagine the assurance and compliance with which many of the commercial interests would receive this suggestion, and the tolerant patience and magnanimity with which it would be explained to one who had little understanding or conception of the principles or exigencies of business, that the general principle that the farmers, being the producers, should set the prices on their products, but that in actual practice it would be impossible and impracticable on account of the diverse interests and the peculiar conditions under which farm products are sold and distributed.

It probably would be impracticable from the point of view of those diverse interests and undoubtedly it would be impossible for the farmer to set the prices while he lacks knowledge regarding the cost of farm products.

It is inconceivable, however, that it should not be possible and practitable for the farmer, the man who produces the food supply of the world, and the original producer of all the other necessities of life, to determine and know what it costs him to produce those things, and then set the prices which he should receive for them.

The first great essential, therefore, in bringing about the proper condition is that the farmer should learn the cost of his products. It is not to be expected that every farmer would be able to reckon his costs at the same figure, any more than that every manufacturer would be able to agree upon the exact cost of any particular kind of product. But a fairly general knowledge of what the cost of products of the soil really are on the average would go a long way toward the establishment of fairly profitable selling prices.

It is by no means too much of an Utopian dream to believe that the time will come when the farmers will get together and think together enough to determine whether the cost of a bushel of potatoes is 20 cents or 50 cents, and when that time comes they will insist upon a price no less than the average cost with a fair profit added. It is an accepted principle of the manufacturing trade that the price to the consumer, the retail price, shall be fixed by the manufacturer, as well as the wholesale price, thus fixing the percentage of the middleman or middlemen.

When the proper time comes, the farmers will have the power in their hands to do likewise, for they can sell to the consumer direct, even as they are doing in a small way at the present time.

OPEN MARKETS CHEAPER GOODS.

F. C. Nunnic in Conservation says:

"A burning topic of today, is the high cost of living." While many reasons are cited for the existing high prices of food stuffs, there are many ways in which the dwellers in towns and cities may economize in purchasing supplies for the table, The majority of city dwellers today draw upon the whole world for their food supply and buy from the retail dealer. The telephone and delivery wagon entrench him in his position. Hence comes the difficulty often encountered in maintaining a public market in many of our town and cities.

A study of the whole subject of the public market leads to the conclusion that it is much more advantageous to the city consumer than to the progressive farmer, though there are certain advantages for the latter, such as the building up of a reputation for certain specialities, the placing of a premium on excellence, and receiving better prices than could be obtained from local retailers. The city consumer gets the products fresh from the farm; and at much more reasonable prices than might be charged by the retailer if there were no local market. Various investigations have shown that in some of our cities, certain staples cost two or three times as much as the farmers received for these products. A recent investigation in a Canadian city of upwards of 100,000 population showed that in no case was the scale of prices of the retailer for farm products as low as that on the public market, and, in some commodities, the price was about double. While there are many city residents who cannote get to the public market to buy, there are many who can, but who are not patronizing it. The difference in cost would pay handsomely. The custom of going to market is as old as city life itself, and as honourable as it is old.

"Where a public market has been opened in a town in which it had not hitherto existed, prices to the consumer have been lowered. In towns where they have been allowed to go out of existence, prices have gone up. Markets should be wholly for the use of the farmer and not dominated by hucksters."

FARMERS' MEETINGS.

The season of the fall meetings of the various associations of farmers, orchardists and stock beeeders is here, and we do not think we can offer any better advice to our readers, most of whom are practical farmers, than to take a day or two or three off and attend one or more of them.

We can imagine some who read this saying that they do not teach them anything new; that they do not hear anything at those places which they have not heard many times before, and which they do not already know. This may all be true to a certain extent, but yet we do not think that is a fair case against the principle of holding such gatherings.

It is a fact to be noticed that the farmers who attend those gatherings are among the best farmers in the various communities from which they come. We believe it is also a further fact that the men who are poor farmers do not attend such meetings. There are probably exceptions to both these rules, but on the whole we believe thay hold fairly true. Whether a man is a good farmer because he attends farmers' institutes and meetings of farmers' associations, or whether he attends these gatherings because he is a good farmer, does not matter. The idea is that the two go together to a very geeat extent. The best farmers as a general thing believe in such gatherings and try to make the most of them.

It is impoossible for a man to go to any of these meetings with the intention of participating in them, learning all that he can from the addresses, demonstrations and discussions, without learning something that will help him in his business, that will make him a better farmer.

There is another and a very good reason for attending these meetings and participating in the discussions. If a man is a good farmer and knows how to do any particular thing particularly well, he can help his fellow farmers by giving them the benefit of his experience and knowledge.

There is something in the very fact of getting together and talking things over, learning the other man's point of view, his method of doing things and his reasons why, that helps a man to do better.

A man has a strange disposition indeed if he is satisfied to go right along doing things in the same way with the same indifferent results every year after learning what other men are doing under different methods, and especially after talking it over with them and learning why they have done thus and so.

Attend as many farmers' institutes and meetions of farmers' associations as you are able, even with a little sacrifice. Other men think that they have found that it pays. Go looking for something and you will be likely to find it.

SEX CHARACTER.

A male animal, if said to have masculine character, must be of a positive masculine type, with a strong masculine head and horn. Weak heads and countenances, as usually possessed by steers, should be studiously avoided in a sire, A steery or negative kind of head and countenance is not indicative of prepotency, and an animal of this type will certainly never be an impressive sire. He may be just useful for begetting steers for commercial purposes, but never for begetting breeders' stock. Masculine style also includes a strong, thick neck, wide and well-developed shoulders, broad, "chine," wide and well-fleshy back and loin, good, deep and well-sprung ribs, thickness through the heart, and well-developed thighs. These are a few of the chief points which are included in the term "masculine character." Then again, the word character is applied in the same way with regard to femininity, and a cow should be as distinctly feminine in her chief points as a bull is strong in his.

A cow, like a bull, should never have a "steery" countenance, but should look "breedy" and refined about the head. She should be wide between the eyes and have a wide muzlle, but in all points where the male is strong and muscular the female should be refined. There should be a look of sweetness and general refinement all over a breedy-looking cow which is worthy to be described as of true feminine character. The word character, as applied to a breeding animal, includes much that is difficult to explain in writing, but at the same time it behoves all breeders of pedigree stock to see that the animals they breed possess it, and they will always find when it comes to a sale that very great value attaches to it. Likewise, in the showyard, an animal with strong character will always beat an equally good animal without that quality, and in the science of breeding every breeder of experience knows the value of it.

Alfalfa is Not a Plant.

An alfalfa field, sown with enthusiasm and some knowledge by a farmer, succeeded and became a beautiful thing, says the Breeders' Gazette. The farmer cut from it some fine crops of hay and was an alfalfa convert. Then he found it convenient to pasture the field. The horses and cows and pigs did well indeed in the alfalfa. More than ever he was a convert—but, alas, he left them in the fall. They nipped the tender shoots to the quick, they tramped the land into hard mud. The next year much of the alfalfa had perished and again the field was pastured much. Weeds and foxtail grass began to spring up, the alfalfa's doom was sealed. Finally, the man plowed the field in disgust. "I was deceived in alfalfa," he declared, "it is not adapted to our conditions."

Alfalfa is hardly a fit plant for being pastured hy grazing animals. They nip off the terminal buds, then the alfalfa can not make growth. They eat it to early in its growing period and neglect it after it has become nature and really needs cutting. Alfalfa pastures are fine for the animals, hut they had best be so wide that they are really alfalfa meadows. Then the mower should be taken in and hay made as though no stock was there. Thus treated and by taking off the stock early enough in the fall, the alfalfa pasture is a success and a great money-maker anywhere. The farmer's action was like killing the goose that lays the golden egg and then reviling her because she was not immortal.

The Management of Hired Help on the Farm.

There is a vast difference in farm methods so far as the management of the work of the place is concerned. In visiting several different farms in a day, one may notice the contrast to a marked degree, and draw his conclusion therefrom with a good degree of accuracy.

At one farm we could find fences down, weatherboards off the buildings, shingles loose, crops weedy, and a careful inspection will reveal many other odd jobs which ought to be done while the hired help may be found going slowly to their work, arguing over details and methods of working with the farmer himself, or else collected in groups telling jokes and stories. It is true that they will do some work during the day, but not enough to make it profitable for the farmer, when everything is taken into consideration at the end of any one month or year.

Another farm will show us a "cleaned up" appearance, with most of the "odd jobs" done. It will show the different men employed on the farm, busily engaged with some definite task which has been planned for them hy a "real farmer" and the directions he received from that farmer were short, simple and easy to understand. There was no chance for argument or debate, for the "help" realized that the farmer knew and understood his business.

The succes of this second farm must of course be greater than the first, because there is no waste of either work or energy.

A successful farmer recently remarked: "Show me the farmer who is unable to keep his men busy and I will guarantee him to be a failure in less than three years—and perhaps in six months."

And there is a large amount of truth as well as wise suggestion in what he said.

The plan book will help you to have things mapped out abead so that it will not be at all difficult for you to keep a force of men at work, or even a vest pocket notebook will help you greatly in this matter. But most of all, you must look ahead and learn to be a keen observer. It is a wise plan never to go to hed at night without knowing exactly what you should do the next day. Of course, circumstances will occasionally arise which will prevent you from doing just as you intended, hut you still have other days coming when this unfinished may he done.

Perhaps we ought to have a practical reason for this method of handling help, and it is hest illustrated hy supposing that the average cost of farm help is $10 a week. During a year, we will suppose that three men employed on your farm spend only 15 minutes each morning and afternoon in arguing and debating various questions, either with you or with the other help. This is a waste of a half hour of 312 working days, which is equal to more than 15 workdays, or more than two weeks for each man, making a total loss to you of $20 for each man, or $60 for all.

Now I do not mean by this that there never should he 15 minutes spent in talking or discussing methods, for it is a wise thing sometimes to do so, hut I am speaking of useless discussion and loafing. Nor is it wise to work without pause or rest at any hard labor, but even in this work some definite program could be arranged; that is, it may be understood pauses may be for rest only and not to fool away time. Such things may easily be brought ahout without seeming to be harsh or unjust in any way.

If you allow your men to waste this two weeks or more of time each year, it would he far better for you to keep them husily employed and give them a week's vacation on full pay. They would enjoy it better and you would receive much greater credit for it.

Again, many farmers prefer to pay their help low wages and "throw in" all vegetahles, etc., used by the "help," as well as firewood and house rent in many cases. This is all very good and proper if you make the person realize what he is receiving. Thus, if you pay him $1 a day cash and give him various things, figure it up in this way:

Wages for the vear .....$365.
House rent ....$50.

Thus you can make it clear to him that he is receiving really $40 a month, almost, instead of $30.

It is hest always to have a complete understanding with men before they are employed, and if you draw up an agreement in which your obligations and his are clearly set forth, it will he found profitahle. This is a simple matter and will prevent all sorts of trouhle and misunderstandings.

Help must he kept husy, hut it does not follow that they should be treated unfairly in any way. Give them a square deal and show your appreciation to the man who works to your interest hy advancing him to a better position; that is, if your work is divided so that this is possible.

Large farms should have the work arranged so that certain men may look after certain kinds of work, and in fact, all chores should be assigned to each man, so he will know exactly what is expected of him.

Make Tile Drains More Efficient.

It has been my experience that tiles as usually laid are to close together. Tile just from the kiln will absorb moisture, and in absorhing moisture they expand, and, when closely laid in the first place, they become so extremely tight that water cannot get through and consequently the drain is defective. Unless soil is very sandy, or is muck soil that easily granulates and washes into the tile, small crevices should be allowed occasionally, especially if the tile are such that fit evenly and closely.

Wherever it is possible so as not to hinder tillage we have "drops" that will let the water down into the tile more quickly. We chip off the end of two tiles so as to imake a small cavity at a place where we intend the drop to be and uprightly set a tile (or two, one on top of the other if the drain is deep) over this, firmly tramping the ground around it so that it cannot move from its position. Drainage must have quick service if it is to be effectual. Water remaining several days on crops, especially in hot weather, will ruin them, and often the main trouhle is where water remains unusually long that it is prevented from getting down into the tile hy the soil heing too stiff or the tile heing to tightly connected. An occasional drop will entirely eliminate the trouble.

Where there is a heavy fall or land is unusually sloping often much trouhle is experienced with the outlet of tile drain; the tile at the outlet, forced by the heavy pressure of water, wash away from their position. A huttment of stone and cement should he built around the last tile to hold it in position and prevent the ground from washing away from the tile. The outlet should also be screened to prevent the ingress of any wild animal that may be inclined to build a nest inside the drain. A small floodgate that swings out with the rush of water and falls back against the tile again when the water subsides can easily be erected and should be at the end of all tile drains that run into the open ditches.

WHEN ROOTS CAUSE TROUBLE.

If running tile drains under trees whose nature are to send their roots into tile to seek water you often meet with a proposition which is rather troublesome. You do not like to give up a certain tree as it furnishes shade for your stock and is the only tree in the field, and yet if you let it stand it is likely to give you trouble as we have known such trees to do, unless you know another way out. Here is a substantial way out of the difficulty. As far as tree roots are in danger of penetrating tile enclose tile completely with cement and all danger of trouhle is eluded for all time.

Let me mention here that it is not only trees that are troublesome near tile drains hut also perennial shrubs and hushes. Those are often far more liable to fill up tile with root growth than trees. The common elder is known to be one of the most troublesome. The roots of this hush force their way between the joints of the tile and soon form such a mesh and network of roots inside as to fill up tile completely and stop the flow of water. The quickest and least expensive way out of this difficulty is to clear the farm of all such rubbish, especially in the near vicinity of tile drains.—J. A. Raiser, in O. N. J.

Concerning Potato Troubles.

Editor's Note.—The following article has heen written by a resident of one of the rich agricultural districts of England. At our request he has written this article on potato spraying. He has had experience in that intensive farming district. It will he found of much henefit to the grower of potatoes in Canada.

Under the auspices of the Gloucester Education Committee, an experiment in the spraying of potatoes was conducted at Gloucester, England, during the year 1912 for the purpose of testing this means of preventing the Potato Disease (Phytophthora infestans) upon a crop of Duchess or Cornwalll potatoes.

The soil, which was of a rather gravelly nature, was given a light dressing of farmyard manure, supplemented hy an application of 3½ cwts. superphosphate, 1 cwt. sulphate of ammonia, and 1½ cwts. sulphate of potash per acre.

The seed was obtained from Scotland and planted on April 11th on land previously cropped with wheat, the rows heing 27 inches apart.

The objects of the experiment were to ascertain: (1) The effect of spraying in reducing the proportion of diseased potatoes and increasing the quantity of saleahle tubers. (2) The hest time to spray. (3) The advantages of spraying twice at intervals.

For the purpose of the experiment four equal plots were selected, each ¼ acre in extent and containing six rows of potatoes running the entire length of the field. As the plots were not measured off until the plants were in full growth, the cultural operations, i. e. manuring, planting, hoeing, etc., in each case were precisely the same. The plots were then treated as follows: Plot 1, unsprayed; plot 2, sprayed once, July 19th; plot 3, sprayed twice, July 19th and August 16th; plot 4, sprayed once, August 16th.

THE BURGUNDY MIXTURE.

The spray fluid used was the one known as the Burgundy Mixture, which differs lrom the well-known Bordeaux Mixture as the lime in the latter is replaced by common washing soda. The advantages of the Burgundy Mixture are: (1) it is considered more effective in comhating the disease; (2) it contains no gritty substances, which tend to choke the fine nozzles, and (3) it adheres hetter to the foliage. The mixture was made up as follows: sulphate of copper (hluestone), 20 lhs.; washing soda, 25 lbs.; water, 100 gallons. The quantities are sufficient to spray one acre of potatoes, with the average amount of well-grown tops. The cost, including material and lahor, works out at ahout 10s.—($2.43) per acre for one spraying.

CLIMATIC CONDITIONS.

The season of 1912 being one of the wettest on record, favored the development and rapid spread of the disease, and in many cases where spraying was not carried out, the crops were almost an entire failure. Rain fell on 42 of the 56 days from July 20th to September 14th, and the total rainfall in Gloucester for that period was 11.57 inches.

August 16th.—The effect of the first spraying (July 19th) on this date was very striking, the plants on the spray-

(Continued on page 135)

	Unsprayed 1		Sprayed July 19 2		Sprayed July 19 and August 16th 3		Sprayed August 16th. 4	
	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
Ware	5	14½	9	2	10	3	8	0
Chats	0	7½	0	12¾	0	12¾	0	18½
Diseased	2	1½	1	6	0	0¾	0	12
Total crop	8	3½	11	0¼	10	16½	9	10½
Percentage of total crop diseased	25.4		11.8		0.3		6.3	
Total weight of sound potatoes	6	2	9	14¼	10	15¾	8	18½

HORTICULTURE.

A Modern Apple Problem.

Of all the fruits grown in North America the apple easily leads in amount and instrinsic value. Apple planting has gone on with amazing strides within the last decade or two, and some orchardists, transportation companies and dealers have become nervous about the outcome.

Eighty years ago my grandfather planted apple orchards that were then called big, and mainly of seedlings, to make into brandy and for other and milder uses to some extent. My father made apple butter and boiled cider which were taken on flat boats down the Ohio river to be sold to southern sugar and cotton planters. Fresh apples were almost a burden and the old records show that picked winter apples sold for "$2 per two-horse wagon load," and "cider and apple butter apples (windfall), $1 per wagon load."

During later days we had quantities of apples which I helped gather from these same trees, and those later, that often sold at from 10 to 50 cents per bushel, according to quality and season. Commercial apple growing and marketing was even then in its infancy, which was in the '50's. and '60's. The price of apples of all grades was really advanced until now the very choicest apples bring from $2 to $5 and more per bushel box. Who says there are enough good apples, or apples of any kind, for the American people to eat at living prices, to say nothing of the foreign consumers? Certainly the consumers are not well satisfied with the situation as yet. They want more apples and cheaper ones.

The apple shippers are thoroughly organized, and I have been told that they parcel out the apple producing territories in ways that suit them. However this may be, the apple growers need to work more harmoniously and intelligentiy, and for their own good as a whole.

They need more organizations founded on the principles on which the various successful rural unions are based. And they need far more storage houses of their own on the farms and at the small trade centers. They should be able to command some sort of fair price for what they have to sell and not be compelled to sacrifice their crops at gathering time to whoever may come along, or send them to the overcrowded city markets.

All these things are parcticable and are done by some growers, but by far too few. It would help to steady the markets, and that is what is needed—steady markets—and not floods of apples at ruinous prices to the producers, and their apparent scarcity and prices that are unreasonably high to the consumers.

PROGRESS IN GRADING AND PACKING.

When we see rows and stacks of uniform, neatly, and above all, honestly packed boxes of apples, we mgy look back to the time of entire absence of anything of the kind in our apple markets. Barrels, hampers and even bags of apples sometimes were all that could be seen. There was no such thing as an apple box or strictly honestly graded and packed barrel to be found. All of them were faced with a better grade in size, color and conditions than that which lay under cover.

The first really honest apple package came from the Pacific coast. They had to put it up that way or not do business with profit at such long range. The western growers did their work so thoroughly that they sold a single bushel for as much as their eastern competitors got for a barrel, and the eastern consumers sometimes paid the freight. They are doing it yet.

It was said that the color did it. Some said it was the soil that made the color—that the east lacked volcanic ashes in the earth. Others say the sun shines brighter beyond the Rockies.

There may be something in all of this, but the greater lies in the conscience and care within the box. Apples that can be and are sold at fixed and fancy prices must have something about them even better than rich flavor in the minds of the buyers. A reputation for fair dealing goes a long way in a bargain. It is the exception rather than the rule to find a falsely graded or packed box of western apples, and barrels they never use.

Those who are really in earnest in getting down to business in the modern grading and packing of appfes have usually hired western teachers of experience, and are following their instructions. Let me cite a case that came directly under my observation last year. A young business man bought for $10,000 a farm of 35 acres mostly set to apples, in one of the good apple sections of Virginia. He had me look it over and advise him, and I urged the boxing of the better grades of fruit. The varieties are Winesap, Arkansas, York Imperial and Ben Davis. I told him to barrel most of the York Imperial and all the Ben Davis.

He looked up a market in a large manufacturing city, and having arranged to sell all the crop that was fit to grade to the standard in size, color and freedom from blemishes, he made the buyer take the Ben Davis in the trade at an even price. He got $2 per box by the carload for the entire crop of over 4,000 bushels, except the culls, which he put in barrels and sold at a fair price.

And another case I know about and saw in part was in the mountain section of southern Virginia. A young orchard last year had about a 1000 barrels of extra large and extra brilliant Winesap apples. The dominating directors of the orchard company

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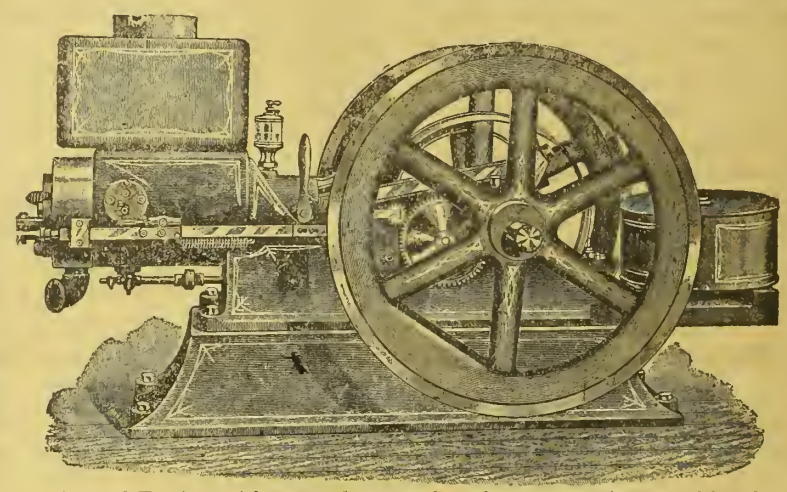

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got scared about the apple market early in the season, and being helped in this belief by a firm of speculators sold the lot at $1.50 per barrel, picked and hauled to the railroad, but not including the barrels and packing. In the bargain 30 barrels were retained by the company, and out of these 50 bushel boxes were selected and packed according to western rules. These were exhibited at a fair for a week and then sold for $3 per box. Who believes that eastern apples will not sell in boxes at fancy prices?

The eastern apples have the flavor, although their color is not always up to the western standard in this respect. The western apple is the aristocrat in outward appearance at least, but its eastern mate is a full match, all things considered, when properly grown, graded and packed. The wax on the skin is not quite so thick, because of the moister air, and will, therefore, not take quite so high a polish, but the quality is there.

One of the most skilful of the Hood River packing teachers told me last yaer that he had never packed better or handsomer apples at home than those he worked with in an orchard in Massachusetts. At the land show in New York city I judged some exhibits from Connecticut, New Jersey and Virg nia that were fully up to the standard in all respects except in brilliancy of color. At the second Indianna apple show there were many exhibits of this same character.

THE IMPORTANT QUESTION TO CONSIDER.

The vital question now is, will the eastern apple growers really mend their ways and grade and pack their fruit honestly and carefully? Will their barrels and boxes contain apples that will be alike from top to bottom.

There was a time when apples were simply apples. One variety was about as another to the average consumer. Now they are becoming discriminating and intelligently so. The Baldwin or Ben Davis will rarely satisfy the really sensible buyer who is getting apples for his personal or family use.

The sprightly flavors of Yellow Bellflower, Norther Spy and Esopus Spitzenburg are not forgotten. The tender, juicy Jonathan is called for, and rich, delicious Grimes is becoming well known and sought by lovers of good eating apples, and nothing of inferior quality will satisfy them. It is an encouraging sign to see intelligent and critical displays of fruit for sale. It shows that the public is being educated pomologically, and that the fruit vendors are keeping pace with the public demand for something really good.

Never so far as good apples go, will they ever be too plentiful, and they will rarely be to cheap for living profit to the grower. There will be unusual crops and the markets may be full to overflowing almost, but these occasions will tend to stimulate the general consumption or increase the "apple habit," as some call it.

The public ought to have apples and all fruits at moderate prices. But never fear of really choice apples carefully graded and packed, being very cheap. They will always find sale at top prices just as does the best beef, eggs and other articles of trade on which people live.—H. E. Van Deman, in Farm and Home.

Thinning the Fruit.

After the proper planting of the tree there is no other one factor as important in the production of high quality fruit as the proper thinning of the young fruit, which concentrates the entire forces of the tree in maturing large and perfect specimens rather than a host of imperfect "starved" fruit, says a writer in the Garden Magazine.

A tree that has had its set of fruit properly thinned each year, especially in its early stages, will bear annually and will not go on an annual expedition of restoration which usually occurs in apple trees from carrying to much fruit.

The proper time to thin fruit is directly after the "stoning" period. If you are a close observer you will have noticed that there is always a stage in the apparent development of the frvit, when it shows no growth and a certain number turn sickly yellow and fall off. That is the "stoning" period. In apples it occurs when the fruits are about the size of marbles. If you thin before this time you are very apt to have an unbalanced tree because some of the set will fall during the period; but directly after this stage has been passed is the time to thin. The tree is using what energy it has in forcing the growth of the fruit and the real object of thinning is to save undue effort by lessening the load. Very little energv is expended by the tree in r.pening the fruit.

The next problem: How many apples must be removed; how many left? It all depends on the tree. It is hard to decide intelligently without first seeing the tree, as no two trees are alike. Two trees of the same size might be totally different in their capabilities of bearing. We take as a basis a good healthly tree. Trees that are not in robust health will be the better for a severe thinning and younger trees just starting into bearing should be thinned more than older ones.

Remove any fruit showing signs of disease. This is important, as it will act as a sort of check upon any disease in your orchard. Be certain, too, that, in removing the fruit, you don't in any way injure the stems of the fruit you intend to leave on the trees, as they will fall off later if the stems are started from the spur by rough handling.

A good vigorous health tree just coming into bearing should have about two-thirds of its crop removed for the first season or two. This will give you one apple for about every cubic foot of space the foliage occupies. Always remove the fruit at regular intervals and rather toward the inside of the tree than the tips of the branches.

Where the fruit will get plenty of air and light for several succeeding years, an average of about one-half of the fruit that sets should be removed. By removing one-third of the crop from an old, well established tree, we get a harvest of fine big apples, the tree suffers no strain, and we are preserving for future use an orchard which might be rendered useless by a few seasons of overbearing.

Pears require thinning in much the same manner as apples, although they start bearing much earlier than apples and require earlier attention. Varieties differ in the amount of thinning requisite; I would not thin a Seckle pear as harshly as I would a Barlett, because we cannot expect to increase the size of a Seckle to equal a Barlett.

Peaches should be vigorously thinned. They are very free bearers and if left unmolested will carry tremendous crops of medium quality fruit. When properly thinned, however, the fruit attains a size and quality quite astonishing. Plums should not be thinned so vigorously as is recommended for the larger fruits. But thinning should be done, however, especially when the trees are just coming into bearing.

Grapes respond kindly to thinning and the vines will give large bunches of big, lucious berries instead of a large number of bunches with only small berries. Thin out the berries of each bunch, besides reducing the number of bunches, which should be cut off immediately after the berries are set, removing the smallest ones, Cut out altogether about one-half of the bunches; when the berries on the remaining bunches are about the size of small peas, they also can be thinned, reducing the number about one third. Use a pair of small scissors and a small crotched stick to support the bunches during the operation. The special thinning scissors are a most useful tool and indeed are essential to good work. Be careful at all times not to injure, in any way, the fruits that are left—a mere scratch now will become an ugly scar later.

Raspberries and blackberries are rarely thinned as it is too tedious an operation but currants and gooseberries that are to be used for table or exhibition purposes can be improved, both in size and quality. Cut off about half the number of bunches of currants; there is no need to thin the berries as with grapes. With gooseberries, just pick off the less promising fruits.—Farmers' Magazine.

Dates to Remember.

St. John Exhibition, September 5th to 12th, 1914.

P. E. I. Fruit Growers' Show and Annual Meeting, Charlattetown, P. E. I., December 3rd and 4th, 1913.

Nova Scotia Provincial Exhibition Halifax, N. S., Sept. 9th to 17th, 1914.

P. E. I. Poultry Show, Charlottetown, December 16th to 19th, 1913.

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DAIRYING.

Demonstration Cows.

Are your dairy cows making good profits? It is neceseary to find out, for at the famous National Dairy Show held in Chicago the last week in October, the authorities had gathered nine demonstration cows to prove for one thing how easy it is to lose good money feeding poor cows. All feed was weighed, all the milk was weighed and tested, the results of each day were placarded in bold figures above each cow. These two furnish the extremes for one day. A 7-year-old grade Jersey consuming 21 cents worth of feed produced only 13 cents worth of fat. This means that she incurred a loss of 8 cents for that day, that the feed cost of one pound of fat was 52 cents, that the feed cost of 100 pounds of milk was $2.53, and that for every dollar's worth of feed given to her she yielded only 62 cents worth of product.

Close to her was a 7-year-old grade Guernsey that on the same day consumed only 26 cents worth of feed; but notice what she did with it. She produced two and a quarter pounds of fat worth 79 cents showing there. fore a profit of 53 cents. Her pound of fat cost under 11 cents to produse, while every dollar's worth of feed gave three dollars' worth of product.

It has been demonstrated to Canadian farmers over and over again that similar conditions exist in each province. Just as soon as the keeping of dairy records becomes general, the profit from feeding cows may be expected to increase rapidly. The Dairy Division, Ottawa, gladly supplies feed record forms and a herd record book; apply for them today, and make sure, by systematic records, that each cow in your herd makes a good profit on her year's work.—C. F. W.

The Weighing of Butter and Cheese.

For a considerable time persistent complaints were made to officers of the Department of Agriculture at Ottawa by producers and vendors of dairy produce in Eastern Ontario and Quebec regarding the unsatisfactory methods by which butter and cheese were weighed in Montreal. So numerous were the charges and so serious the allegations that it was considered necessary by the Government to have the matter properly investigated. Consequently in the summer of 1912 a Royal Commission was appointed. The investigation by this Commission covered several months and involved the taking of evidence at many points and from many people who were considered likely to be able to shed light on the subject.

The Commission consisting of R. A. Pringle, Chairman, A. J. Hodgson, and J. S. Macdonell, completed their work some time ago and presented their report to the Honourable the Minister of Agriculture. In this, the advisibility of amending the Act respecting the weighing, measuring and gauging of certain articles of general consumption is recommended, as well as the appointment, under the control and direction of the Dairy and Cold Storage Commissioner, of a competent official, with headquarters at Montreal, who shall be charged with the duty of investigating the weights of cheese when shortages arise.

The Report of the Commission, consisting of a pamphlet of 17 pages, is ready to be sent to those who apply for it to the Publications Branch of the Department of Agriculture, at Ottawa.

A Necessary Food Supply.

Some comparisons of records indicate what infinitely better returns some dairymen obtain from their cows than do other owners of herds. One lot of milk testing 3.4, delivered at a factory last month was 21,580 pounds, the yield of 20 cows in two herds. Two other herds also totalling 20 cows and producing 3.4 milk gave only 12,380 pounds during the same month. These are not extreme comparisons because in many known cases the test was lower and the total pounds of fat delivered would be consquently far lower. Apart, however, from the weight of fat and the monetary value of the milk, think of one group of 20 cows giving in one month four and a half tons of milk more than the other group.

It needs no stretch of imagination to picture the consternation there would be if Canadian cows in general were as poor as these twenty Ontario cows: people need milk, plenty of it, as a good, nutritious and cheap food in these days of high prices. But if poor cows with only low yields are kept, where would be this necessary and universally appreciated food supply?

Fortunately, through systematic cow testing, these comparisons are possible, so that an incentive is furnished to every owner of a poor herd to keep cows more worthy the name of 'dairy' cows. Simple records, easily kept, give definite information acting as guide posts to herds bred and fed for large yields.—C. F. W.

The Milker.

In a recent bulletin issued by the Storrs Agricultural Experiment Station of Connecticut, the authors discuss the milker as a source of bacteria in milk and base their discussion on practical observation and experiments conducted at the station.

The kinds of bacteria, they say, that the milker is likely to introduce into the milk include nearly the whole list of those found in milk. It seldom occurs to the average milker that it is as necessary to wash the hands before milking as before eating a meal of vituals. The number that come from soiled clothes and dirty hands which get into the milk are large. The hands of a milker working around the farm during the afternoon were tested, just before milking time, for the number of bacteria that could be washed off in a quart of sterile water. The number was found to be 45,000,000. This washing did not remove all those that would have dropped off during the milking. Another experiment was tried to determine how many bacteria were left on the hands after thorough washing with soap and warm water. The number that could be washed off them in sterile water was found to be 900,000. These two experiments show that 98 per cent. can be washed from the hands.

The clothes of the ordinary dairyman carry immense numbers of organisms with dust from all sorts of contamination. The milker, has a much wider range for the collection of a larger number and greater variety of organisms than the cow. The only proper attire for a milker is a white suit and cap to be worn only at milking time. A white suit shows dirt very readily, and when made of white will last a long time and can be sterilized almost indefinitely.

The milker may not only be the source of a very large number of harmless bacteria, but the largest source of disease germs that get into milk. The milker may be the immediate source of disease germs or may transmit them to another person. The disease germs that get into milk

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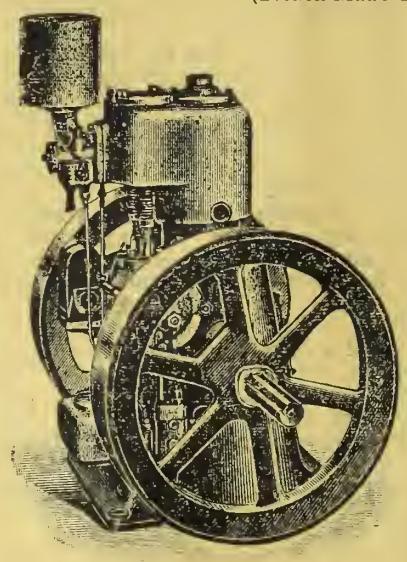

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Fitted with phosphor-bronze bearings throughout, the best money can buy.

No babbit metal to wear and run out.

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We have sold over 50,000 Melotte Cream Separators in Canada during 15 years. Ask any Canadian user how he likes the Melotte.

Well—**we guarantee** the Lister as good an engine as the Melotte is a cream separator. We can't say more.

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THE UNIVERSAL CAR

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Six hundred dollars is the new price of the Ford runabout; the touring car is six fifty; the town car nine hundred—all f. o. b. Ford, Ontario, (formerly Walkerville Post Office) complete with equpment. Get catalog and particulars from the Ford Motor Company of Canada, Limited, Ford, Ont.

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Windsor Dairy Salt dissolves evenly and gives a delicious flavor to the butter.

DAIRY

Practically every big prize at the big fairs was won by Butter made with Windsor Table Salt. 119

SALT

RAW FURS

Our specialty is CANADIAN RAW FURS. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

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N. Hallmen, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

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New classes will be formed in October and November.

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PRINCIPAL
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Is your husband cross? An irritable fault finding disposition is often due to a disordered stomach. A man with good digestion is nearly always good natured. A great many have been permanently cured of stomach trouble by taking Chamberlain's Tablets. For sale by all dealers.

are largely from human origin, infectious diseases that pass from individual to individual. A grave mistake has been made in the past by allowing persons ill with contagious diseases to enter a cow stable or dairy where milk is handled. Many an epidemic of diptheria, scralet fever and typhoid has been traced to a case of illness on a dairy farm, which was not propetly quarantined and cared for. One high grade milk handling concern requires that if a case of contagious disease arises in the dairy of one of its patrons, that the milk supply be withheld till the patient has passed the danger limit of conveying the disease germs. The milk produced, however, is paid for during the quarantine. It is very difficult to make the average individual understand or even believe that our worst diseases are caused by special kinds of bacteria, and that these bacteria can be transmitted to a healthy individual, who is likely to contract the same disease.

Discarding Cows in City Dairies.

In city dairies cows are frequently discarded because they are no longer giving milk in paying quantities. The owner sells them and puts another fresh cow in their place. That would not be a sufficient reason for discarding a cow in a farm dairy if a good producer. In the latter good cows should not be discarded as long as they are able to produce well. The following reasons, however, would justify the farmer dairyman in getting rid of them: If they failed to reach a good standard in production if they were usually restless and irritable, if they were hard milkers, and if they failed to breed regularly.

The standard of production each dairyman must set for himself. In no case should it be less than 6000 pounds of milk a year. In many cases it may be more than that. To know what the cows are doing, of course records must be kept. The very fact of keeping such records will have a salutary influence on the dairyman. It will cause him to reach out for higher attainment.

When cows are irritable and restless and give trouble more or less because of such peculiarities, these may furnish justification for discarding them. Of course, it may be wise to retain such cows for a time in the absence of others not much more satisfactory, but as soon as circumstances will justify it they should be dispensed with.

Difficult milking may be caused by small teats, or by some peculiarity in the milk ducts and glands, which make it not easy to get milk from them. The small teats are, to some extent. peculiarities of breeds, and, therefore, are the outcome of inheritance. They make milking more tedious than it would otherwise be, since it makes stripping necessary. When the structure of the udder and teats is such that considerable strength is called for to get the milk the work of milking becomes much more laborious, and calls for a much longer time to do the work. It is a matter, therefore, of much practical moment that cows shall milk easily.

It is also a matter of prime importance in the farm dairy that cows shall breed regularly. In this way only can the maximum of milk flow be maintained. Of course, the great object in having dairy cows to produce young is to freshen them. If this does not take place at regularly recurring periods, as say once a year. the milk flow will not be sustained as it ought to be. When such cows fail to breed properly this in itself will furnish one important reason why they should be discarded.—Prof. Thomas Shaw.

Hard to get Good Cows.

The reason why more farmers are not finding dairying as profitable as it can easily be made is because they do not pay close enough attention to the business end of it. They are not building up good herds. They are making too much use of beef bulls rather than of dairy bred sires. It is practically impossible for the average farmer to buy high producing cows to start with. The only way he can get a profitable herd is to raise one from the cows on hand, or from a few good ones that he may be able to buy. In doing this he should pay special attention to the bull end of his herd. A poor bull is expensive to the dairyman at any price. The old saying that the bull is half the herd is quite true; in fact, it rather understates than over states actual conditions. This statement, however, should not be construed to mean that the sire has greater influence upon the offspring than the dam, as such is not the case, except where the dam is of mixed or uncertain breeding and the sire has been bred in one line for many generations, so that his characteristics have become fixed and he has become what is termed very prepotent. The statement is true only in-so-far as the sire has greater opportunity to reproduce himself than any individual cow in the herd.

SHARPLES MILKER

The most important factor in dairying today.

The Sharples Milker means cleaner milk—a problem of serious import to the modern dairyman. It means a large saving in milk production. And it eliminates the most disagreeable part of dairying — the drudgery of hand milking.

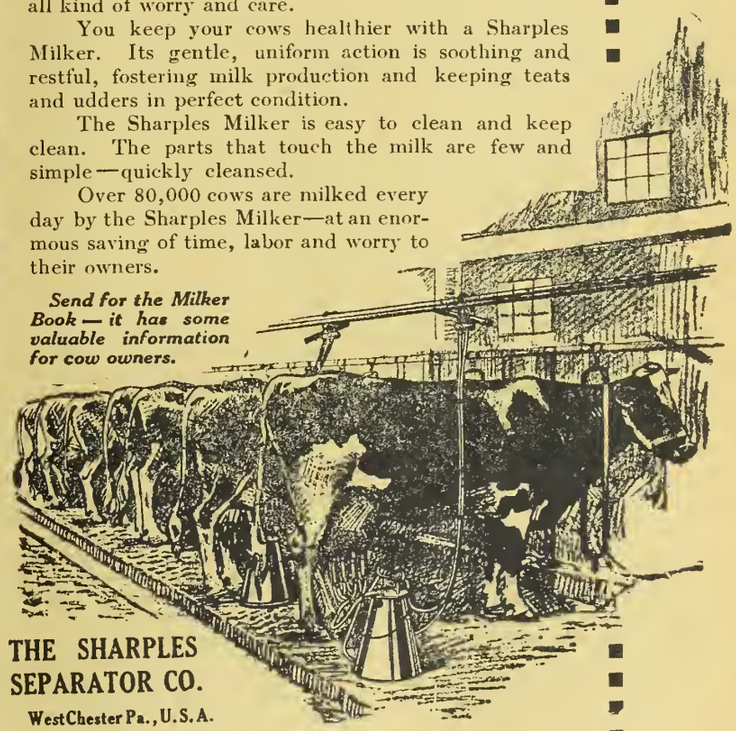
Think what it would mean to you as a dairyman to be able to save more than a third of your present payroll. Remember, too, that the Sharples Milker is on the job every day, year in and year out, saving you all kind of worry and care.

You keep your cows healthier with a Sharples Milker. Its gentle, uniform action is soothing and restful, fostering milk production and keeping teats and udders in perfect condition.

The Sharples Milker is easy to clean and keep clean. The parts that touch the milk are few and simple—quickly cleansed.

Over 80,000 cows are milked every day by the Sharples Milker—at an enormous saving of time, labor and worry to their owners.

Send for the Milker Book — it has some valuable information for cow owners.



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Agencies Everywhere.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and sena them in

Feeding the Ewes.

Let us suppose that lambing has commenced, and that there is a good crop of swedes awaiting. As each ewe brings forth her single or twins she is penned and fed on hay and a few pulped mangels—by this time a highly nourishing food—with some crushed oats, than which nothing is better. Measured, they may be given at the rate of a pint daily with a small addition of cake. Oats weighing 40 lb. the bushel before crushing would weigh slightly more than a half a pound by the pint, so that alone a pint of crushed oats is insufficient. As a milk-producing food they are excellent. Later on, when the flock is on the swedes, it may be well to add to them some crushed beans, or to mix cotton cake with the linseed cake. Ewes with twins need good feeding, and the remark applies equally to those which are suckling ram lambs intended for stock. This fare will last until they are turned into the fold, when the mangel feeding will cease. On some farms it is as convenient as it is economical to turn them on pasture land during the day, returning at night to the fold, and so to continue until the grass is insufficient for their requirements. Great care is needed to ensure sufficient food until the spring crops are ready for folding. There we have a great variety, including rye, winter oate, trifolium incarnatum, vetches, and sainfoin. On some farms rye grass will be available in addition. Winter oats should not be fed so late that the corn crop will be damaged, while vetches may be sown in successions, so that the flock will be carried right through the spring. For this reason an early action, is necessary. It is not advisable, however, to keep sheep on vetches too long a time, and the seed mixed with oats will produce a more useful food than vetches alone, while the plant will be kept on its legs instead of falling and wasting as it is liable to do upon land in high condition. Although sheep often go into a vetch crop which is as high as the hips, ther are some feeders who cut them, put them into covered racks, or hang them on the hurdles for the use of the lambs. So much depends upon the shepherd and his experience. A careful observer of the habits and preferences of sheep can take many liberties—if such they are—which others dare not attempt; but it is never well to risk the possibility of scour, which keeps the lambing back. It will be noticed that when sheep are folded on roots and forage crops they are not provided with water, but when confined to a minimum quantity of roots, with hay and corn, water is necessary, and it should be essentially clean.

The Lambs.

Unless lambs are required for very early markets, it is doubtful policy to force them. If it is intended to fatten them for sale when they have attained greater size, or to keep them for stock purposes, forcing is a mistaken policy. A flock master who is a good judge of sheep stands in a better position that his neighbours. There are few men who can select the most perfect lambs in their flock at an age when feeding commences, and yet this part of the business. One man is an excellent judge of a foal, and without seeing its sire or dam is able to place a value upon it; another will predict the future of a calf with nothing else to guide him. A good calf is more easily selected from a number, but even so it is not so easy to value it and to give it a place in a herd; but with the flock one lamb can be compared with twenty, or perhaps with a hundred, others, and still it may be difficult indeed to value it as a future stock sheep. It is this fact which places so many at a disadvantage, for the reason that with good ewes tupped by good rams good lambs are produced. But owing to the difficulty of recognizing them they go the same way as the rest, instead of being kept for sale for breeding. When lambs begin to breed well and are weaned the sooner they are fat and sold the better, if they are adapted to the early market.—James Long, in English Exchange.

Diseases of the Liver in Cattle.

It is not surprising that ruminants should be more subject to liver diseases than the horse, when we consider that the liver is the largest gland in the body, and remember the varied diet, the complex digestive system, coupled with the restrictive movements which domestication enforces upon animals of this description. The liver is situated in the abdominal cavity rather to the right of the diaphragm, i. e., the muscle separating the chest from the abdomen, and is distinguished by its bluish-brown or violet color. It is somewhat friable, and it is not notched at its outside in lobes like the liver of the horse, which has three well defined lobes. It is suspended by blood vessels, and is kept in position by three or four strong ligaments attached to the diaphragm. It is surrounded by a strong fibrous capsule or wrapping which penetrates even to the substance of the liver.

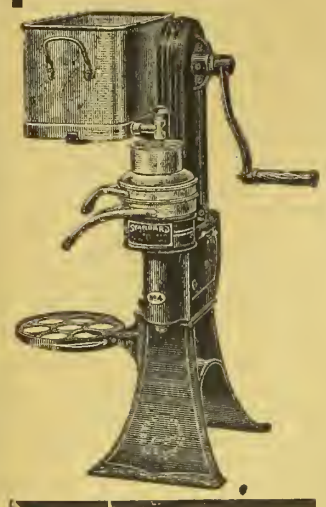
THE ANATOMY OR STRUCTURE OF THE LIVER.

The liver cell is an individual unit, like the citizen of a country. It has its birth, reproduction, and death, and during its life it is busily at work producing, principally, bile and animal starch (glycogen, and also, probably, other substances of value to the body. Millions of these cells combined and working for one common weal we speak of collectively as the liver. If we know the working only of one cell we have gained a very intelligent comprehension of what the functions of the liver are generally. The liver cell is a microscopic, being about one-thousandth of an inch in diameter, and has several sides. The divisions we perceive on the face of the liver with the unaided eye are lobules, or a community of cells. It is pierced by numerous minute passages, some for the entrance of crude material—viz., the blood from the digestive system—others for giving entrance to its own special food supply. Some cells of the liver have trouble thrust upon them in the form of cystic parasites—cancer cells, tubercle bacilli. Sometimes they suffer from a plethora of material to deal with—e. g., too much blood (from cold) or a too great richness in sugar or fat. Being unable to deal with this plethora of material, this we call congestion, occasionally they go out on strike, and no bile is secreted, or only in small quantities. Occasionally the main road is blocked up with gall stobes to the gall duct or from gall bladder, in both of which cases we speak of the condition as jaundice.

BILE; ITS COMPOSITION AND FUNCTIONS.

This yellowish green fluid is probably produced in the liver cell from albuminous compounds; it contains from 15 per cent. of solid matter, the principal part of which consists of two acids, glyco-cholic and tamocholic (sweet bile, and literally bull or ox bile), the latter containing all the sulphur of the bile, to which the bitter taste is due; in combination

Where Do We Hide Its Brains?



Said a dairyman: "Where do you hide the brains of that machine?" "Why! what do you mean?" asked our surprised agent. "Well," said the dairyman, "that Standard Cream Separator of yours is such a really wonderful machine, it seems to know just what to do and how best to do it' and it does some things so nuch better than any other separator I ever saw; that it really seems as if it must have brains of its own."

When you come to think of it, it does seem as that dairyman said, that the

Standard

cream separator must have brains of its own. For instance, think how intelligently it looks after the oiling. You never have to think about seeing if there is enough oil in the neck bearing or any other part. The Standard attends to the oiling of every gear and bearing itself. It also keeps the discs clean by automatically deposting the foreign matter from the milk in the space between the bowl and the disc edges. And it also automatically brings all the gears to a stop the moment you let go of rhe handle. But the way it gets the cream from the milk, only allowing one tenth of a pound of butter fat to escape in every 1,000 pounds of milk skimmed, would do credit to the best money-making brains in the land. See this "brainy" money-making machine at our agents, or write direct for catalogue and easy payment offer.

The Renfrew Machinery Co., Ltd.

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Agencies Almost Everywhere in Canada.

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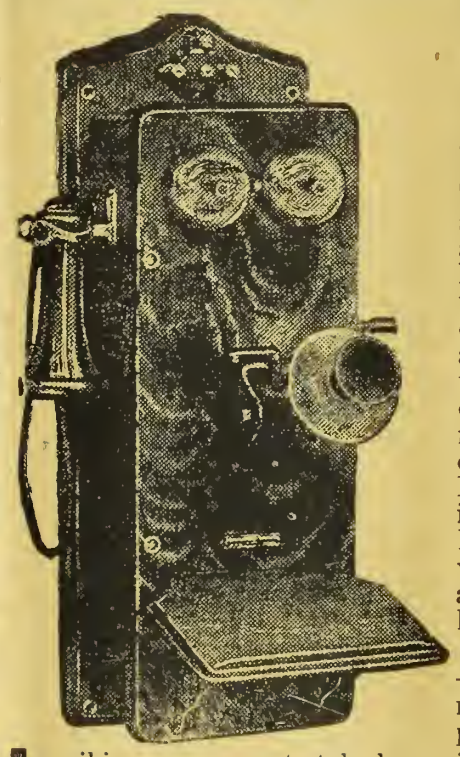

They are the clearest-talking and loudest ringing bridging telephones on the market. They are guaranteed to be superior in design, material and workmanship. They have several exclusive features that add to their efficiency. Made in wall phones as illustrated, and desk or table styles. If you are operating a telephone line and not using our telephones and equipment, write for our Free Trial Offer. If there is no telephone line in your locality, write us and we will tell you how to organize an independent municipal or local company.

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family, the engines that give the right speed for every job and deliver 100 per cent service. A Gilson "Goes like sixty" for every purpose up to 40 H.P. Write for particulars.

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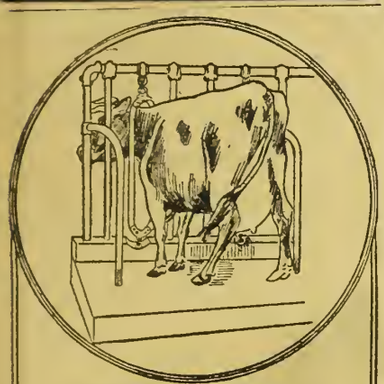

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is
A Profitable Cow

ARE your cows contented? Are they profitable? If not, make them so by doing away with your old-time wooden stalls. They gather dirt, harbour disease germs, and prevent the free circulation of life-giving air and sunlight.

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Tubular Steel Stable Equipment is easily and quickly installed, and insures cleanliness and ventilation. Its use means comfort for your cows and profits for you.

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RAW FURS

We have the MARKET for them and the MONEY to buy them.

Why not exchange YOUR FURS for OUR MONEY. It means MORE MONEY for you. A trial shipment will prove it. Think it over.

A postcard from you will bring you our latest price list and shipping tags. References furnished. Goods held separate on repuest.

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with soda, are the main constituents. Another constant consrituent is cholestrine (chole bile, stereas solid), a substance which when in excess forms biliary calculi (it also occurs in yolk of egg, beans, peas, wheat, and other plants). Bile first neutralises the acid contents of the stomach; secondly it promotes the peristaltic or circular contraction of the bowls; it assists in the decomposition of fats by partial saponification; it acts as an antiseptic in checking fermentation, and also in keeping down, or limiting, the bacterial flora. The greater part of it is absorbed, like saliva, in a more or less modified form. Another function of the liver cell is to reduce thrown-out tissue of nerve, muscle, and proteid matter in urea or uric acid, which eventually is excreted by the urine. Some physiologists believe that a large portion of the starch and sugar taken in the food, and absorbed and altered by the intestine ferments, is converted into fat and passed on by the white corpuscles to be deposited in other parts of the body.

Another and very important function of the liver cell is the manufacture of glycogen, or animal starch; this is formed and stored up in the cell, converted into sugar, and given out in small quantities as required to the blood. This warehousing, or provision, is of the greatest importance. It is in the nature of banking account, which in times of stress, hunger, starvation, or fever, the tissues can draw upon for supplies of nourishment for the maintenance of life. In hibernating animals large quantities are stored up by the liver in the autumn for consumption by the fody during the winter period of repose.

The cell manufactures glycogen principally from carbohydrate (starch or sugar), and little or none from a pure proteid diet.—Southern Vet.

Halifax Market Report.

GRAIN.—Oats, 49c. to 57c. bus., bagged; Peas, $3.00 to $3.25, bag, 98 lbs.

FEEDSTUFFS.—Bran, $24.00 to $25.00 ton; Shorts, $25.00 to $26.00 ton; Middlings, $26.00 to $27.00 ton. Linseed Meal, $36.00 to $38.00 ton; Cottonseed Meal, $36.00 to $38.00 ton; Gluten Meal, $29.00 to $30.00 ton; Corn Meal, $1.75 to $1.80 98 lb. bag.

LIVE STOCK.—Milch Cows, $40.00 to $60.00; Sheep, 8c. to 10c. lb.; Lambs, 12c. to 15c.; Hogs, 10c. to 13c. lb.

DRESSED MEATS.—Beef (Carcass) 10c. to 15c. lb; Beef (Retail), 15c. to 25c. lb.

HORSES.—Drafters, $250.00 to $300.00; Roadsters, $200.00 to $250.00 Carriage, $200.00 to $250.00.

DAIRY PRODUCTS.—Creamery Butter, 30c. to 32c. lb.; Dairy Butter, 28c. to 30c. lb.; Cheese, 15c. to 16c. lb.

POULTRY AND POULTRY PROOUCTS.—Eggs, 33c. to 35c. doz.; Fowl, 15c. to 17c. lb.; Chickens, 16c. to 20c. lb.; Ducks, 16c. to 19c. lb.; Geese, 20c. to 22c. lb.; Turkeys, 20c. to 2$c. lb.

FRUIT.—Apples, $2.50 to $4.00 bbl.

MISCELLANEOUS.—Hay, $13.50 to $15.00 ton; Straw, $9.00 to $9.50 ton.

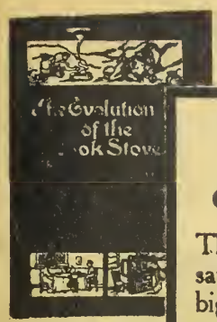
VEGETABLES.—Carrots, $1.70 to $1.89 bbl.; Potatoes, 50c. to 60c. bus.; Turnips, 90c. to $1.00 bbl.; Beets, $1.50 to $1.75 bbl.; Parsnips, $1.50 to $1.75 bbl.; Cabbage, 60c. to 75c. doz.

To Clean White Feathers.

Make a strong suds of luke-warm water and ivory or wool soap. Put the feather into the suds and wash thoroughly, being careful not to break the shaft. Rinse well in luke-warm water and draw between the fingers to remove as much water as possible. Spread on a sheet of clean wrapping paper one-fourth to one-half cup of corn starch until it is dry and fluffy.

One is apt to become discouraged during the process and think the feather is tuined, but if directions are carefully followed she will feel more than repaid by the final results. The corn starch keeps the barbules from sticking together and makes the feather appear light and fluffy.

If the feather is to be curled, cover with tissue paper. Pull out from under the paper three or four barbs of the feather and draw over the edge of a very dull knife. Repeat until all the barbs have been curled.—Charlotte E. Carpenter, Colorado Agricultural College.



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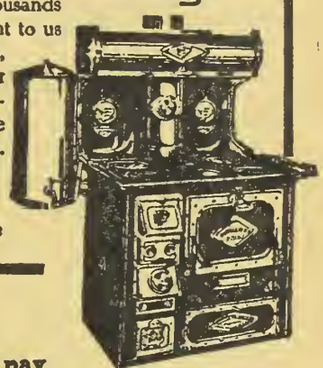
That's about $20.00 isn't it? And you can save it by ordering direct from the factory (the biggest malleable range plant in Canada.)

Dominion Pride Range is the range you would choose at any price—a beautiful steel range with unbreakable doors, castings and lids of malleable iron—a range that saves coal—a range so solidly built that with care it will last a lifetime.

And you can secure a Dominion Pride Range by making a small payment with your order—the balance on terms to suit your convenience.

Dominion Pride Range

Thousands upon thousands of Canadians have sent to us direct for their ranges, and we have yet to hear a complaint. Our unconditional guarantee goes with every range.



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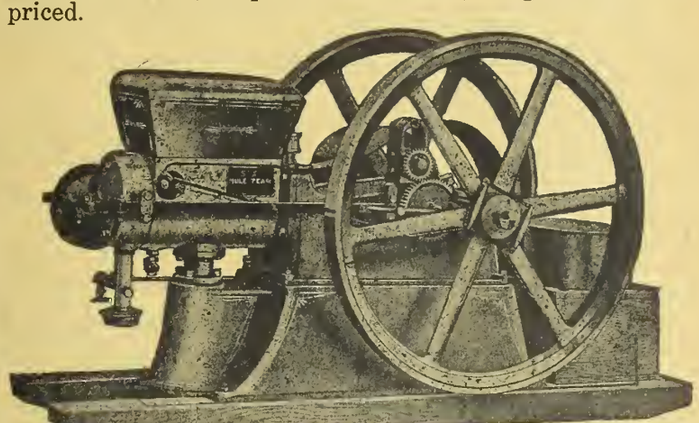
The man who buys an "Esco" buys an Engine which develops more power than any other make of equal rating.

It is smooth running; Reliable for continuous work; Economical on fuel; simple in construction; Long lived and low priced.



The "Esco" is built in the largest Gasoline Engine plant in the world, and every Engine is given a full Five Years Guarantee.

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BAILEY-UNDERWOOD CO., LTD.

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Irate doctor, seeing a bottle of quack medicine beside his patient: "Why didn't you tell me you were taking this wretched stuff?" Patient: "Well, it's my wife, sir. She says, 'I'll dose you with this and the doctor'll try his stuff, and we'll see which'll cure you first.'"

THE HORSE.

Conditioning Horses for Sale.

In order to sell horses to the best advantage, whether privately or otherwise, it is always desirable to condition them in a suitable manner, so that they may be presented to prospective buyers in the most favorable light. Such conditioning for sale is everywhere fully recognized as a perfectly legitimate practice, being in effect equivalent to the getting up of horses for the show ring, and it has nothing in common with tactics of second-rate horse dealers whose doping practices are so often designed to deceive the unwary, and, if possible, to mask some unsoundness, blemish or vice. A breeder or farmer is, indeed, culpably neglectful of his interests if he fails to bring a horse for ward in good condition, for the omission will in all probability entail a certain depreciation in its selling value. The intrinsic worth of horses and their good points are usually only fully brought home to buyers when looking well fed and sleek, with carefully groomed coat and trim main and tail. Even many experienced horsemen are notoriously bad judges of a horse in the rough, and quite unable properly to appreciate inherent good shape and looks when more or less obscured owing to the animal being in that unkempt state. Hence horses sold in the rough in most cases fail to make their full value.

FEEDING FOR CONDITION.

As regards the process of getting up a horse for sale, the leading principle is to feed it up well on corn, so as to bring it into a well-fleshed condition. It will be advisable, in fact, to have it a bit on the fat side, for this imparts nicely-rounded contours, which appeal so much to the eye of the average buyer. If the horse is poor, or in rough condition, and is to be prepared for sale quickly, there should be included in the diet, besides a generous supply of oats, some dry bran and a little barley meal, both of which will help it to put on flesh more rapidly, while the use of linseed cake or linseed meal is also to be recommended, these foods have a distinctly fattening effect, and they also improve the appearance of the coat, which is an important consideration, Locust beans comprise another food that specially promotes rapid improvement in the condition when the horse is poor.

Next to presenting it in a well-fed condition, the great secret of showing a horse in an advantageous manner, to an intending buyer consists in having the animal full of mettle, or "above itself," as it is commonly termed. Dealers always make a great point of this, well knowing how efficacious the plan is. To this end the horse should be kept rather short of work, though it must, of course, be given a modicum of exercise every day, if only to prevent it from becoming unmanageable and to keep its legs fine. This line of treatment in combination with liberal corn-feeding will engender the requisite freshness or high spirits, causing the animal to carry itself with a special air of spritliness, to arch its neck in taking fashion, and to step out with unusual freedom and vim. If a horse has been kept in hard work, it will certainly be desirable to discontinue this and work it very moderately during the last three or four weeks before it is put up for sale, otherwise it will not be possible to bring it into the required good bodily condition. If much pulled down in consequence of having been severely work

Horsemen Attention!

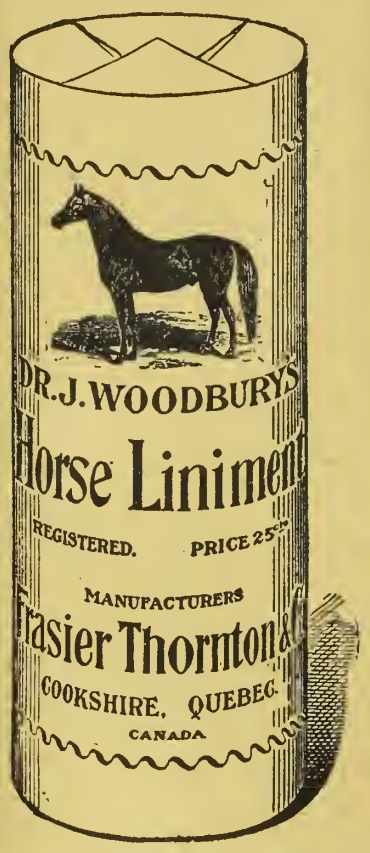
Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Thier use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

Demand

DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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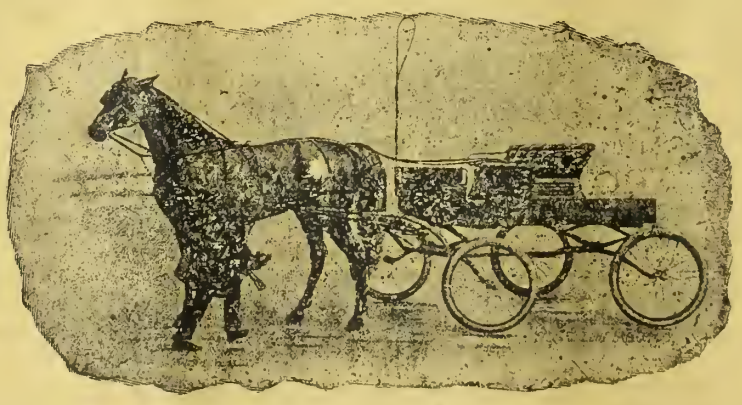

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SAFETY to the horse often means safety to the driver.

Where dangerous, slippery roads are to be encountered it is essential to have the horse sure-footed.

Red Tip Calks

are easily adjusted by anyone, without delay. They make the horse sure-footed and dispel the terrors of icy roads.

No more danger of injury to the horse or damage to wagon and harness. No more vexatious delays due to unsharpened horses. With

Red Tip Calks

your horse is always sharp shod and you can drive any road with

SAFETY, SPEED and COMFORT

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The Neverslip Mfg. Co.,

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THICK, SWOLLEN GLANDS that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with

ABSORBINE

also any Bunch or Swelling. **No blister, no hair gone,** and horse kept at work. Concentrated—only a few drops required at an application. $2 per bottle delivered. Book 3 K free.

ABSORBINE, JR., antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Knotted Varicose Veins, Ulcers. $1 and $2 a bottle at dealers or delivered. Book "Evidence" free.
W. F. YOUNG, P.D.F. 124 Lymans Bldg., Montreal, Can.

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

ed, the best plan undoubtedly will be to ease it up for a short while, merely giving a little slow exercise, in order to allow it to recover both its flesh and its freshness. Unless some easement is given as regards the work in these circumstances, the horse will respond but very little, if at all, to a special feeding-up regime within a reasonable limit of time.

GROOMING AND TRIMMING.

An important detail furthermore, is to get the coat into tip-top order, for which purpose plentiful and vigorous grooming is called for, while a good bloom on the coat will also be materially promated by keeping the animal rugged. The mane and tail should be carefully trimmed. A badlar, will detract considerably from ly-kept, disordered mane, in particu- the appearance of the horse, the unfavorable impression it is lible to create being out of all proportion to the actual significance of this in itself a quite immaterial point. It is surprising how much the appearance of horses in the rough can be improved and smartened up simply by thinning and straightening their unkempt mane and trimming the tail. To make the horse's mane look well, it needs to be freely thinned out at the roots, so that it may fall flat against the side of the neck and leaves the line of the crest entirely unobscured. It should then be shortened to the required extent and given a straight edge by carefully pulling it strand by strand. To make it lie well it may be brushed over with a damp water brush twice a day. In the case of a horse that has come up from grass in the rough the most effective way of training the mane to lie as it should do is to keep it plaited for a week or so. The tail is simply squared at the end and gently combed out to remove dead hairs. It often adds to the smart appearance of a norse if it is shown to the prospective buyer with the mane neatly plaited. Dealers frequently favor this plan, but it will only look well if properly done. There are several ways for plaiting the mane, and in the case of carthorses straw is very commonly used for that purpose. These also often have their tail done up with strands of straw when shown for sale.

SHOEING.

Another point to be attended to is the shoeing. It should preferably wear new shoes—that is, shoes that have not been on for more than, say, a week or so, and the feet should be nicely trimmed by the blacksmith and left as neat as may be. Feet that are newly shod will impress the average purchaser much more favorably and appear to him to look more shapely than when the shoes are old and more or less worn down. Supposing one is obliged to sell a horse in the rough, owing to its not being convenient to stable and condition it for a while, it will at any rate always pay to have the animal shod, besides trimming mane and tail, as noted. It is a mistake to show a horse unshod. The mere fact of unbroken young horses being shod will often make them sell for a considerable amount more than would have been offered had they been presented without shoes.—Argus.

"There could be no better medicine than Chamberlain's Cough Remedy. My children were all sick with whooping cough. One of them was in bed, had a high fever and was coughing up blood. Our doctor gave them Chamberlain's Cough Remedy and the first dose eased them, and three bottles cured them," says Mrs. R. A. Donaldson, of Lexington, Miss. For sale by all dealers.

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The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
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BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
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REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY

Always Reliable. Sure in Results.

None genuine without the signature of
The Lawrence-Williams Co.
Manufacturing & Proprietors for the U.S.A. CANADAS. } CLEVELAND O

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

anadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.

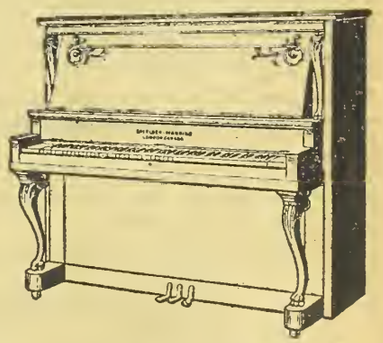
The Lawrence-Williams Co.

TORONTO, ONT. CLEVELAND, OHIO.

The Music Master Says:

"The really great pianos are identical—inside. There are only a few made. The Sherlock-Manning is one of them. For brilliancy of tone this instrument is unrivalled. Before buying a piano you should know all there is to know about the

Sherlock-Manning 20th Century Piano



Louis XV.—style 80

Study out the things that make a piano a splendid musical instrument. Find out the reasons why this piano is a permanent, joy-giving investment, Write to the Sherlock-Manning people and ask them to show you wherein their instrument is worthy of the title

"Canada's Biggest Piano Value"

Their reply will delight you, and—save you $100—if you want to buy a really great piano. Get the facts. That places you under no obligation.

SHERLOCK-MANNING PIANO CO.,

London (No Street address necessary) Canada

Handling Hen Manure.

One little product of great value which goes to waste on almost every farm is hen manure. Poultry manure is the most valuable fertilizer produced on the farm. It is so rich that ordinarily it cannot be safely applied in the state it is taken from the dropping boards but should be weakened by mixing with wood ashes and compost. Applied in this way, the fertilizing value of the manure dropped during the winter from 100 hens is close to $100. Those who have found out the real value of hen manure allow none of it to go to waste. It pays those owning more than 30 hens to have a shed near the poultry house into which to place the droppings during winter. Land plaster should be sprinkled over the droppings each time after placing them in the shed to prevent loss of fertilizing elements. The manure is best applied to the land with a fertilizer drill as we do commercial fertilizer. To do this we must first pulverize the dry drop pings. One winter's accumulation with ashes and compost added will cover several acres. The effect of the application is very noticeable as treated areas have a much ranker growth of vegetation than untreated portions. On most farms poultry manure is considered to small an item to bother with. Thus without knowing it, the farmer allows one of his most valuable by-products to go to waste. This fact is the more deplorable since poultry manure requires such little labor and expense to handle and results are so encouraging. Many farmers save their poultry manure but do not do it propecly. If piled in a heap outs de the manure loses over half its value through evaporation and decomposition. It is too valuable a product to be treated in this way but should be kept dry and some other substance mixed with it to lessen the loss of its value. Hen manure and ashes are very valuable in fertilizing orchards, also potato lands. The best piece of corn I ever saw was fertilized with hen manure. In the garden it is of especial value. A teaspoonful placed with the seed in hills of cucumbers, melons, etc., works wonders. I believe that considering the expense and labor of saving that hen manure properly handled is the most paying operation that can take place on any farm.—C. J. G.

A WOMAN'S MESSAGE TO WOMEN.

If you are troubled with weak, tired feelings, headache, backache, bearing down sensations, bladder weakness, constipation, catarrhal conditions, pain in the sides regularly or irregularly, bloating or unnatural enlargements, sense of falling or misplacement of internal organs, nervousness, desire to cry, palpitation, hot flashes, dark rings under the eyes, or a loss of interest in life, I invite you to write and ask for my simple method of home treatment, with ten days' trial entirely free and postpaid, also references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by this method. Write to-day. Address: Mrs. M. Summers, Box. 309 Windsor, Ont.

Using Perches With Bark On.

We have written many years against using perches with bark on, and yet we find how many people with old-fashioned notions still use them. We often ask them why they do this. Sometimes we are told it is because the birds can hold on better with their feet if the rough bark is on, while others say it is natural to leave the bark on the wood. They argue when fowls and pheasants sleep out in the woods they sit on the branches and the bark is there. There is absurdity in this argument.

When fowls sit upon trees' in ninety-nine cases out of a hundred the are growing and the bark is green, therefore the sap runs under the bark, and if the vermin were to get underneath the bark they could not live in it.

Then, again, the trees are outside in the open, and the branches are exposed to the frost and wet weather. The probabilities are, if the branches were alive which the fowls were sitting upon, there would be very few vermin corrode there on account of their being exposed to all weathers. It is different altogether in a poultry house where the bark is on the perches. Thousands of vermin corrode under the bark and irritate the fowls during the night, then in the daytime most of them get back to their hiding-place.

The perches should always be perfectly smooth and clear, so that there is no opportunity for the vermin to corrode there. These pests breed very fast in hot weather. To make sure of the perches it is well to give them a good soaking with paraffin oil all over; it will not hurt the fowls in the least.

Use your gentlest voice at home.

Respect your boy or girl. They may easily outshine you some day. At any rate, they will reach their best only with your encouragement.

A good many folks, and young folks at that, spoil their teeth by using them for nutcrackers. Too costly, friends. Take the hammer, or get a nut-cracker; it only costs a few cents. You can buy it a great deal easier than you can get a new tooth.

WOODEN pails and tubs are as much ou of date as the scythe and the sickle—and just as unpractical.

Eddy's Fibreware

gives superior results—for less money. Pails, tubs, dairy utensils, etc.. made of this material are light, tight and durable. They have no hoops to drop off—no seams to crack. And they outwear the wooden articles many times over.

Ask Your Dealer

"Just as Good as Eddy's Matches."

A Prize Food for Prize Stock

You can raise "fall" pigs and have them fine and fat for the May market. All you need is a little extra care and

"INTERNATIONAL STOCK FOOD."

Feed "INTERNATIONAL STOCK FOOD" with a combination of ground corn, oats and rye—and they will not only keep healthy, but also fatten up in a way to astonish your neighbors. The average pig does not digest more than half of the grain fed. The other half is wasted. "INTERNATIONAL STOCK FOOD" tones up the digestive apparatus, insures perfect digestion, and thus saves this waste in grain. "INTERNATIONAL STOCK FOOD" is a purely vegetable preparation—a wonderful tonic—that keeps hogs well and vigorous, and protects them against the ravages of Pneumonia and Cholera. 78

Make a nice profit on your "fall" pigs by feeding "INTERNATIONAL STOCK FOOD." Get a pail to-day from your dealer.

INTERNATIONAL STOCK FOOD CO., LIMITED **TORONTO**

Melba Praises This—
The Piano You Should Own

Toronto, October 8, 1913.

Dear Sirs,—I beg to thank you for the very excellent piano sent to my hotel, and also your New Scale Williams Concert Grand used at my concert gave complete satisfaction.

Faithfully yours,

Nellie Melba

You should send for your copy of the Autographed Biographies of 25 Celebrated Musicians who use this greatest of Canadian instruments. Write to-day.

New Scale **Williams Piano** 3B4T

The Williams Piano Co., Ltd. Oshawa, Ont.

Dealers Everywhere

"Sovereign" Sheathing Felt

Trade Mark Registered

Makes Houses Draft-Proof

SOVEREIGN Sheating Felt is as effective as several layers of ordinary building paper. It is thick, tough and wind-proof, and will prevent even a particle of draft from passing through walls or floor. Being really light-weight RU-BER-OID Roofing, it will last as long as the building.

For every extra cent you spend on SOVEREIGN Sheathing Felt you will save dollars in fuel, and will have a more comfortable home.

Get a sample from the nearest RU-BER-OID dealer, or write for sample and booklet to 106

Standard Paint Co. of Canada, Limited
Montreal - Winnipeg - Calgary - Vancouver.

Crop Bound.

One remedy that will sometimes effect a cure is a teaspoonful of sweet oil, then manipulate the crop contents with the fingers for some time. If this does not afford relief, try suspending the bird by the legs and carefully try to work the contents back to and out of the mouth. After the crop is emptied give no food for 36 hours, but allow the bird to drink a little water containing ' 20 grains of bicarbonate soda to a quart of water. Then feed sparingly with bread softened with milk. If the fowls are valuable a surgical operation is generally successful when done in time by cutting through the outer skin at the upper part of the crop, making an inch iocision, then through the wall of the crop itself and empty by using the finger. Then wash out the interior with a one per cent. solution of carbolic ac d. Sew up the cuts separately with white silk, leaving the ends hanging outside. Give only water containing two drops of salicylic acid per quart for two days then feed a little bread softened with milk. In a week if the wound is healed draw out the thread.

Clam shells are valuable, but are not so plentiful, commercially.

Business Methods on the Farm.

A good business man aims to have everything convenient and such a condition that he can realize a profit.

Ship-shod methods would quickly invite disaster.

The men who succeed in business are careful, energetic and enterprising.

While this is true of the business man, it is equally true of the poultry man.

The merchant in arranging his store has everything convenient, so that he can quickly place his hand on what he wants. He aims to save time and steps. The poultry man in building his houses should use the same precaution arranging them so that the most work can be done with the least labor, and in the quickest time.

The question of feed comes next. For best results in manufacture, the best raw material is used. So with poultry. For good laying, there must be good feed. Simply because a certain article of food is cheap, is no argument that it will do to feed. What is wanted in this kind of food that has in it the largest amount of ingredients to make eggs. Such an article is cheap at almost any price. Damaged or burnt grain is entirely unfit for food—not only is it injurious, but it is decBBB BBB BBB BB ious but it is devoid of the elements necessary for making eggs. Hence, it is dear food even at half the price of good grain. It s poor economy to buy something that is cheap in price only.

Then comes labor. Cheap labor is not economical labor by any means; some mean are dear at one dollar a day, while others are cheap at twice that amount. A man's work must not be measured by his pell-mell, rush style. It is how quickly he does rush style. It is not how quickly he does the job, but how well.

Sex-Limited Inheritance.

A considerable number of characters have been found to behave differently in the two sexes. One of the most striking cases of this kind is the barring of the feathers in the Plymouth Rocks. If a barred Plymouth Rock male be crossed with a Brown Leghorn hen all of the progeny will be barred like the Plymouth Rocks. But if a barred Plymouth Rock female be mated with a Brown Leghorn male, the results are quite different. All the male offspring will be barred, while all the female offspring will be black. The female barred Rock transmits the black color to both male and female offspring, and this black color covers up the Brown Leghorn color; but the barred Plymouth Rock female transmits the barring only to her male offspring.

The same thing is true of the high egg-laying capacity in fowls. If a male is pure with reference to high egg-laying capacity, then he will transmit high egg-laying quality to all his offspring, both male and female, though of course there is no way of telling that a male has high egg-laying capacity except from his female offspring. But a female of high egg-laying quality transmits this capacity only to her male offspring. It follows that a female can inherit high egg-laying capacity only from her sire, while a male may inherit this character either from his sire or his dam, or both, This shows that in order to develop a strain of fowls having the high egg-laying capacity we must give even more attention to the males used than to the females. A daughter of a hen with high egg-laying capacity is of no value as a breeder, unless this daughter has inherited this high egg-laying capacity from her sire.

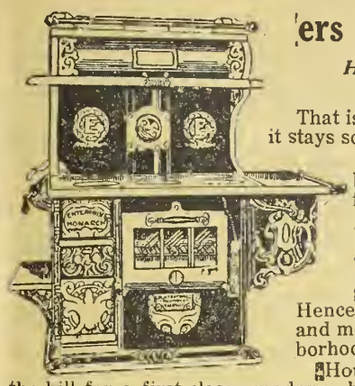
Many other important applications of the various laws of Mendel could be given, but it is hoped that the illustrations and the preceding articles wil, enable the practical breeder to make use of these laws in his operations.—W. J. Spillman, in Breeders' Gazette' Gazette.

Champion Hen.

The college hen that attracted world wide notice by laying 99 eggs in 100 days has broken the world's record of 282 eggs in a year by having laid 283 eggs nine days before the year expired. Since September 16 she has laid an egg every day, and the prospects are that she will continue to da so at the end of the year for which the record is kept. She lives and lays at the Oregon Experimental College. The highest previous record was made by a Missouri Experiment Station hen which laid 281 eggs in a year.

"Goods that Don't Come Back Make Customers that Do Come Back."

Hardware Dealer's Magazine



That is one thing about the MONARCH—it stays sold. And why shouldn't it ?

It is good to look at; a reliable baker; easy to operate; saves time, fuel and labour. In short the—

Enterprise Monarch

gives good service for a lifetime. Hence every MONARCH sold stays sold, and means the sale of more in the neighborhood.

Housekeepers want it, because it fills the bill for a first-class, modern, handsome steel range at moderate price.

The Farmer's wife wants it because it burns wood or coal and has a large copper reservoir which heats water quickly.

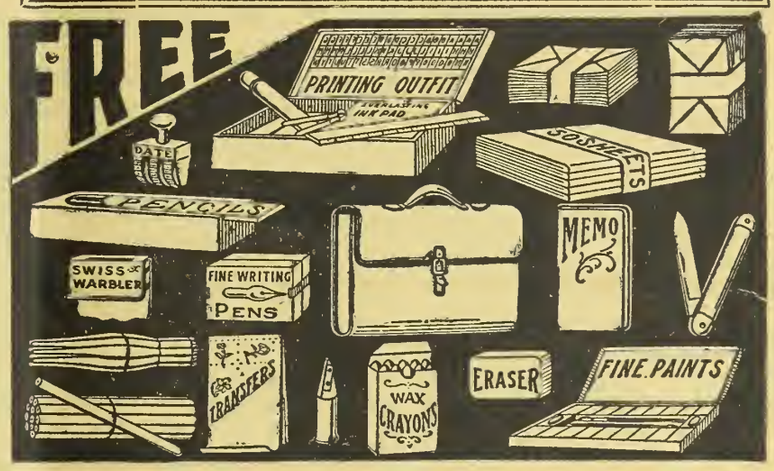
The Farmer wants it, because it does not waste fuel nor give him bother with frequent repairs.

WE GUARANTEE EVERY MONARCH SOLD

Write us for illustrated circular and particulars.

Manufactured By the Enterprise Foundry Co. Sackville, N.B.

Sold by all Enterprise Dealers



FREE This 150 PIECE Complete Scholar's Outfit FREE

BOYS AND GIRLS, NEVER BEFORE IN CANADA HAS SUCH A GRAND PREMIUM BEEN OFFERED AND SO EASY TO GET.

READ WHAT THIS GRAND SCHOLAR'S OUTFIT CONTAINS.

1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water color paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 complete dater good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it, this scholar's complete outfit is FREE. We are determined to sell a million bottles of Rose Perfume this year, and are sparing no expense to reach this mark.

Rose Perfume is a great improvement on the old style of perfume and goes twice as far. Everybody buys it because it is so good, and a present is given away with every bottle.

We give you one of these grand scholar's outfits **IF YOU WILL AGREE TO SELL ONLY 30 BOTTLES OF ROSE PERFUME AT ONLY 10c PER BOTTLE.** Any boy or girl can sell 30 bottles easy. No trouble at all.

We send you the Rose Perfume free and trust you until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits.

Try. If you can't sell the Rose Perfume send it back to us.

Address to-day **THE ROSE PERFUME CO., Dept. S., 50** Toronto, Ont.

Pratts Animal Regulator

DO you want to make more money? Then start, RIGHT NOW, to feed Pratts to your horses, cows, sheep and hogs. Pratts CAN'T hurt them, because it is NOT a stimulant but a mild, natural tonic and health regulator. Every ounce of feed is converted into rich, red blood and firm, solid flesh with the aid of Pratts.

"Your Money Back If It Fails."

Order a pail TO-DAY.

At your dealer's, $3.50 per 25-lb. pail; also in packages at 25c., 50c. and $1.00.

PRATT FOOD CO. of Canada, Limited, TORONTO. S-4

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

CHAPTER XV.

I Make Another Beginning.

Mr. Dick and I soon became the best of friends and very often, when his day's work was done, went out together to fly the great kite. Every day of his life he had a long sitting gt the Memorial, which never made the least progress, however had he labored, for King Charles the first always strayed into it, sooner or later, and then it was thrown aside, and another one begun. This patience and hope with which he bore these perpetual disappointments, the mild preception that he had that there was something wrong about King Charles the First, the feeble efforts he made to keep him out, and the certainty with which he came in, and tumbled the Memorial out of all shape, made a deep impression on me. What Mr. Dick supposed would come of the Memorial, if it were completed; where he thought it was to go, or what he thought it was to do; he knew more than anybody else, I believe. Nor was it all necessary that he should trouble himself with such questions, for if anything were certain under the sun, it was certain that the Memorial never would be finished.

It was quite an affecting sight, I used to think, to see him with the kite when it was up a great height in the air. What he told me, in his room, about his belief in its disseminating the statements pasted on it, which were nothing but old leaves of abortive Memorials, might have been a fancy with him sometimes; but not when he was out, looking up at the kite in the sky, and feeling it pull and tug at his hand. He never looked so serene as he did then. I used to fancy, as I sat by him of an evening, on a green slope, and saw him watch the kite high in the quiet air, that it lifted his mind out of its confusion, and bore it (such was my boyish thought) into the skies. As he wound the string in, and it came lower and lower down out of the beautiful light, until it fluttered to the ground, and lay there like a dead thing, he seemed to wake gradually out of a dream; and I remember to have seen him take it up, and look about him in a lost way, as if they both had come down together, so I pitied him with all my heart.

While I advanced in friendship and intimacy with Mr. Dick, I did not go backward in the favor of his staunch friend, my aunt. She took so kindly to me, that, in the course of a few weeks, she shortened my adopted name of Trotwood into Trot; and even encouraged me to hope, that if I went on as I had begun, I might take equal rank in her affections with my sister Betsy Trotwood.

"Trot, said my aunt one evening, when the blackgammon-board was placed as uaual for herself and Mr. Dick, "we must not forget your education."

This was the only subject of anxiety, and I felt quite delighted by her referring to it.

"Should you like to go to school at Canterbury?" said my aunt.

I replied that I should like it very much, as it was so near her.

"Good," said my aunt. "Should you like to go to-morrow?"

Being already no stranger to the general rapidity of my aunt's evolutions, I was not surprised by the suddeness of the proposal, and said: "Yes."

"Good," said my aunt again. "Janet, hire tire the grey pony and chase to-morrow morning at ten o'clock, and pack up Master Trotwood's clothes to-night."

I was greatly elated by these orders; but my heart smote me for my selfishness, when I witnes*ed their effect on Mr. Dick, who was so low-spirited at the prospect of our separation, and played so ill in consequence, that my aunt, after giving him several admonitory raps on the knuckles with her dice-box, shut up the board, declined to play with him any more. But, on hearing from my aunt that I should sometimes come over on a Saturday, and that he could sometimes come and see me on a Wednesday, he revived; and vowed to make another kite for those occasions, of proportions greatly surpassing the present one. In the morning he was down hearted again, and would have sustained himself by giving me all the money he had in his possession, gold and silver too, if my aunt had not interposed, and limited the gift to five shillings, which, at his earnest petition, were afterwards increased to ten. We parted at the garden-gate in the most affectionate manner, and Mr. Dick did not go into the house until my aunt had driven me out of sight of it.

My aunt, who was perfectly to public opinion, drove the grey pony through Dover in a masterly manner, sitting high and stiff like a state coachman, keeping a staedy eye on him wherever he went, and making a point of not letting him have his own way in any respect. When we came into the country road, she permitted him to relax a little, however; and looking at me down in a valley of cushion by her side, asked me whether I was happy?

"Very happy indeed, thank you, aunt," I said.

She was much gratified, and both her hands being occupied, patted me on the head with her whip.

"Is it a large school, aunt?" I asked.

"Why, I don't know," said my aunt. "We are going to Mr. Wickfield's first."

"Does he keep a school?" I asked.

"No Trot," said my aunt. "He keeps an office."

I asked for no more information about Mr. Wickfield, as she offered none, and we conversed on other subjects until we came to Canterbury, where, as it was market-day, my aunt had a great opportunity of insinuating the grey pony among carts, baskets, vegetables, and hucksters' goods. The hair-breadth turns and twists we made, drew upon us a variety of speeches from the people standing about, which were not always complimentary; but my aunt drove on with perfect indifference, and I dare say would have taken her own way with as much coolness through an enemy's country.

At length we stopped before a very old house bulging out over the road; a house with long low lattice-windows bulging out still farther, and beams with carved heads on the ends bulging out too, so that I fancied that the whole house was leaning forward, crying to see who was passing on the narrow pavement below. It was quite spotless in its cleanliness. The old-fashioned brass knocker on the low arch door, ornamented with carved garlands of fruit and flowers, twinkled like a star; the two stone steps descending to the door were as white as if they had been covered with fair linen; and all the angles and corners, and carvings and mouldings, and quaint little panes of glass, and quainter little windows, though as old as the hills, were as pure as any snow that ever fell upon the hills.

When the pony-chaise stopped at the door, and my eyes were intent upon the house, I saw a cadaverous face appear at a small window on the ground floor (in a little round tower that formed one side of the house), and quickly disappear. The low arched door then opened, and the face came out. It was quite as cadaverous as it had looked in the window, though in the grain of it there was that tinge of red which is sometimes to be observed in the skins of red-haired people. It belonged to a red-haired person—a youth of fifteen, as I take it now, but looking much older—whose hair was cropped as close as the closest stubble; who had hardly any eyebrows, and no eyelashes, and eyes of red-brown, so unsheltered and unshaded, that I remember wondering how he went to sleep. He was high-shouldered and bony; dressed in decent black, with a white wisp of a neckcloth; buttoned up to the throat; and a long, lank, skeleton hand, which particularly attracted my attention, as he stood at the pony's head, rubbing his chin with it, and looking up at us in the chaise.

"Is Mr. Wickfield at home, Uriah Heep?" said my aunt.

"Mr. Wickfield's at home ma'am," said Uriah Heep, "if you'll please to walk in there;" pointing with his long hand to the room he meant.

We got out; and leaving him to hold the pony, went into a long low parlor looking towards the street, from the window from which I caught a glimpse, as I went in, of Uriah Heep breathing in to the pony's nostrils, and immediately covering them with his hand, as if he were putting some spell upon him. Opposite to the tall old chimney-piece, were two portraits; one of a gentleman with grey hair (though not by any means an old man) and black eyebrows, who was looking over some papers tied together with red tape; the other, of a lady, with a very placid and sweet expression of face, who was looking at me.

I believe I was turning about in search of Uriah's picture, when, a door at the farther end of the room opening, a gentleman entered, at sight of whom I turned to the first mentioned portrait again, to make quite sure that it had not come out of its frame. But it was stationary; and as the gentleman advanced into the light, I saw that he was some years older than when he had had his picture painted.

"Miss Betsey Trotwood," said the gentleman, "pray walk in. I was engaged for a moment, but you'll excuse my being busy. You know my motive. I have but one in life."

"Miss Betsey thanked him, and we went into the room, which was furnished as an office, with books, papers, pin boxes, and so forth. It looked into a garden, and had an iron safe let into the wall; so immediately over the mantel-shelf, that I wondered, as I sat down, how the sweeps got round it when they swept the chimney.

"Well, Miss Trotwood," said i-Mr. Wickfield; for I soon found that it was he, and that he was a lawyer, and steward of the estates of a rich gentleman of the country; "what wind blows you here? Not an ill wind I hope?"

"No," replied my aunt, "I have not come for any law."

"That's right, ma'am," said Mr. Wickfield. "You had better come for anything else."

His hair was quite white now, though his eyebrows were still black. He had a very agreeable face, and, I thought, was handsome. There was a certain richness in his complexion, which I had been long accustomed, under Peggotty's tuition, to connect with port wine; and I fancied it was in his voide too, and referred his growing corpulency to the same cause. He was very cleanly dressed, in a blue coat, striped waistcoat, and nankeen trousers; and his frilled shirt and cambric neckcloth looked unusually soft and white, reminding my strolling fancy (I call to mind) of the plumage of the breast of a swan.

"This is my nephew," said my aunt.

"Wasn't aware you had one, Miss Trotwood," said Mr. Wickfield.

"My grand-nephew, that is to say," observed my aunt.

"Wasn't aware you had a grand-nephew, I give you my word," said Mr. Wickfield.

"I have adopted him," said my aunt, with a wave of her hand, im-

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porting that his knowledge and his ignorance were all one to her, "and I have brought him here, to put him to a school where he may be thoroughly well taught, and well treated. Now tell me where that school is, and what it is, and all about it."

"Before I can advise you properly," said Mr. Wickfield,—"the old question, you know. What's your motive in this?"

"Deuce take the man!" exclaimed my aunt. "Always fishing for motives, when they're on the surface! Why, to make the child happy and useful."

"It must be a mixed motive I think," said Mr. Wickfield, shaking his head and smiling incredulously.

"A mixed fiddlestick!" returned my aunt. "You claim to have one plain motive in all you do yourself. You don't suppose, I hope, that you are the only plain dealer in the world?"

"Ay, but I have only one motive in life, Miss Trotwood," he rejoined, smiling. "Other people have dozens, scores, hundreds. I have only one. There's the difference. However, that's beside the question. The best school? Whatever the motive, you want the best?"

My aunt nodded assent.

"At the best we have," said Mr. Wickfield, considering, "your nephew couldn't board just now."

"But he could board somewhere else, I suppose?" suggested my aunt.

Mr. Wickfield thought I could. After a little discussion, he proposed to might see it and judge for herself; also to take her, with the same object, to two or three housec where he thought I could be boarded. My aunt embracing the proposal, we were all going out together, when he stopped and said:

"Our little friend here might have some motive, perhaps, for objecting to the arrangements. I think we had better leave him behind?"

My aunt seemed disposed to discuss the point; but to facilitate matters I said I would gladly remain behind, if they pleased; and returned into Mr. Wickfield's office, where I sat down again, in the chair I had first occupied, to await their return.

It so happened that this chair was near a narrow passage, which ended in the little circular room where I had seen Uriah Heep's pale face looking out of the window. Uriah, having taken the pony to a neighboring stable, was at work at a desk in this room, which had a brass frame on the top to hang papers upon, and on which the writing he was making a copy of was then hanging. Though his face was towards me, I thought, for some time, the writing being between us, that he could not see me; but looking that way more attentively, it made me uncomfortably to observe that, every now and then, his sleepless eyes would come below the writing, like two red suns, and stealthily stare at me for I dare say a whole minute at a time, during which his pen went, or pretended to go, as cleverly as ever. I made several attempts to get out of their way—such as standing on a chair to look at a map on the other side of the room, and poring over the columns of a Kentish newspaper—but they always attracted me back again; and whenever I looked towards those two red suns, I was sure to find them, either just rising or just setting.

At length, much to my relief, my aunt and Mr. Wickfield came back, after a pretty long absence. They were not so successful as I could have wished; for though the advantages of the school was undeniable, my aunt had not approved to any of the boarding-houses proposed for me.

"It's very unfortunate," said my aunt. "I don't know what to do, Trot."

"It does happen unfortunately,"

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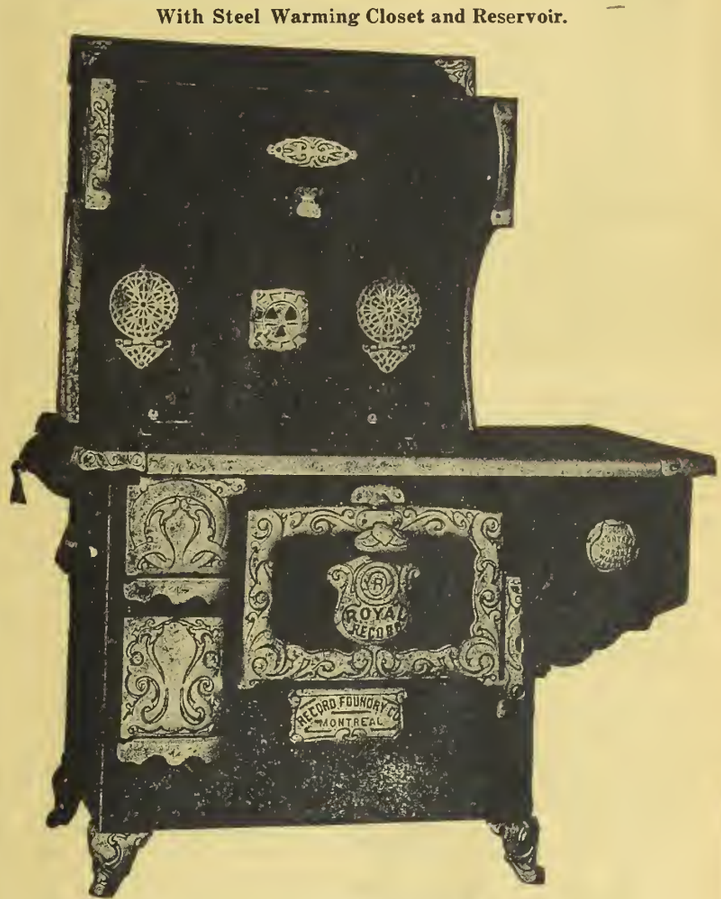

These ranges are made from the best quality blue polished steel, lined with asbestos millboard, and reinforced with the finest quality of fire-resisting cast iron wherever necessary to protect the steel.

The trimmings are finished with the finest quality nickel-plaiting, as shown in the cut. The top is made in sections, removable anchor plate style, 50" long x 28" wide, with pouch feed and broiler door. The fire-box if fitted for coal and wood, with duplex and flat grate combined, having corrugated sectional ventilated linings. The oven, made from first quality heavy steel, asbestos-lined, and properly braced with cast iron to prevent warping. The back flue or smoke box is made of cast iron, full length, to catch soot and prevent rusting.

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Toronto Novelties Co. Dept. 104 Toronto, Ont.

Financial Report of the Halifax Exhibition.

(Continued on page 115.)

praise from visitors, one American visitor expressing himself, "that it was the best exhibit he had ever seen, with but one exception, which is kept up permanently by the State in which it is located."

Now we arrive at two departments which receive the criticism.

The Fisheries Department was, perhaps, no worse than the last, or some former years, but was not an exhibit worthy of a fish Province, but the question arises, what can be done with it? Not an exhibit, with perhaps one exception, from a bona fide fisherman, notwithstanding good prizes are offered. For some years, our former superintendent, Mr. S. Y. Wilson, gave a great deal of his valuable time to this department, but was never repaid in the smallest degree for the thorough canvass he made along the shores. Whether it is advisable to cut out the prizes in this department and use the money for procuring an exhibit is a matter which should have consideration.

MANUFACTURERS' DEPT.

Nova Scotia is not alone in its trouble in getting a satisfactory exhibit in this department.

Reading the reports of different Fair Managers at Vancouver, Calgary, Regina, Ottawa, as well as our own Province, we find they have the same difficulty as we have here.

That perhaps our building does not look up to the standard is greatly due to two reasons, i. e. The gallery was vacant owing to the schools not making their exhibit, and which is not only attractive but covers a large area of the gallery which is not suitable for anything else.

Again, two large booths which have been occupying corners were removed but the average visitor would say that the exhibits which occupied these spaces this year were valuable ones and the change was fully justified.

In the Annex, while the whole of the space in the North end was applied for by automobile people, a great many were short in their intended exhibit which naturally gave the appearance of an unfilled building. Notwithstanding this the exhibit on the whole was a creditable one, some of the exhibits being very attractive and valuable.

Summing it all up from an exhibition standpoint we do not believe the term applied was justified.

Leaving the exhibition proper to go to the amusement end of the fair. Not having read of criticisms of this department, it will only be necessary to give it a passing notice, and say, that the programme before the grand stand was on the whole, the best we have ever had.

THE EXPENDITURES.

The cost of the different departments vary very slightly from former years. The amount paid in prizes is about $550 larger than last year, due to the extra money offered in the various live stock classes, which was justified, and went to the Provinces as follows:

Nova Scotia	$7,522.25
New Brunswick	669.50
Prince Edward Island	1, 432.25

Our total receipts are nearly $900 over last year, due entirely to admissions, and privileges, the receipts at the gate and grand stand being nearly 1100 more than last year, while our receipts for privileges were more than $400 larger. The receipts at the grand stand notwithstanding all the bad weather which we had in the second week, when the stand was closed on one afternoon and two evenings, paid for the whole of the attractions and speed prizes, less $86.-20. If we figure the first gate receipts from the number who patronized the stand we would have a surplus of $6,-293.45 to go to the exhibition proper.

FINANCIAL STATEMENT.

By the attached financial statement you will notice that the expenditure of the exhibition over and above receipts is $10,139.26, which should not appear as a deficit.

Putting the exhibition on the same basis as all other Provincial as well as County fairs, instead of a deficit we have a surplus of $773.64, as the amount we have paid as interest, which we would not have to pay were our grants paid in advance, would give us the amount named above as a surplus.

EXPENDITURE.

Horse dept.	$ 74.00
Agriculture	55.10
Arts	551.82
Poultry	201.46
Mines	15.75
Transportation	121.19
Educational	19.00
Horticultural	118.00
Ticket	520.00
Cattle	97.60
Fire	21.90
Manufacturers	210.75
Machinery	40.25
Speed	703.38
Domestic	55.90
Fisheries	207.75
Sheep and swine	25.00
Insurance	1,858.50
Bands	810.00
Attractions	6,325.60
Judges	624.20
Commissioners expenses	283.20
Printing & advertising	2,604.89
Police	428.35
Lodging bureau	'21.00
Maintenance	1,109.75
Expense	875.47
Postage	190.85
Watchman	506.27
Caretaker	456.25
Reception & meals	275.00
Prizes	9,745.55
Speed prizes	6,320.00
Secretary's office	2,572.00
Lighting	797.94
Interest	912.90
	$39,783.55

RECEIPTS.

Entry fees, ordinary	$ 700.45
Entry fees, speed	4,200.00
Privileges	2,832.84
Admission & grand stand	21,911.00
Balance	10,139.26
	$39,783.55

P. E. I. November Crop Report.

HAY.—The final returns from the hay crop were reported on September 10th., showing a better than average crop saved in excellent condition.

OATS.—The oat crop is better than average but not equal to that of last year. The damage from weather was much severer than in the case of wheat. Again the loss is heaviest in Prince County. From 15 to 20 p.c. of the whole crop is unfit for seed on account of the weather conditions and is probably injured in its feed value. There has also been a small amount totally lost.

BARLEY.—The crop of barley is not up to the average. The wet weather affected its growth more than that of the wheat or oats, probably because it was sown in the lower lying grounds. It was not injured by the rains to the same extent as the oats. A much larger percentage of it was out in the rains but practically all of it will make first class feed, and there is some seed saved in excellent condition.

CORN.—The corn crop was a failure this year. The season was very cold for it, and same sections it was injured by a frost early in September. It is not reported as being a full crop in any district.

POTATOES.—The potato crop is considerably below the average and is very patchy, Last year the crop in King's County was fully 50 p.c. above average. This year the crop is about 68 p. c.; Queen's 96, and in Prince 105 p.c., average about a 90 p. c. crop all round. The damage to potato crop has been very great. About half of the correspondents of King's County report potato vines being injured frost in September with the result that the tubers are small. In some sections too they are rotting Queen's and Prince Counties, particularly in the latter, many of the potatoes were in the ground through the very heavy rains of October and were caught by a frost on the first day of November. So between frosts and rot not more than an 80 p.c. crop has been harvested.

ROOTS.—The root crop is below average. The rain has had a bad effect on them and they have been more subject to injury by insects and fungus diseases than usual.

APPLES.—The apple crop in general is light and is not of good quality. Scab is very prevalent and a lot of the fruit did not color well and is smaller than usual. The early apples were about a 76 p.c. crop; the Fall ter apples about a 65 p.c. crop and Winter apples about 60 p.c.

WHEAT.—The wheat crop is much better than average but a great deal of it was lost in the harvesting. About 5 p.c. of the total crop was injured by the heavy rains and is unfit for milling purposes. More than half this injured wheat is in Prince County.

LIVE STOCK.—Live Stock of all kinds are in better condition than usual due probably to the pastures which have been good all the Autumn. There is a scarcity of Pure Bred Rams and Boars, and a large inquiry for Pure Bred Short Horn Bulls, particularly of the milking strain.

The poultry industry is making a great advance. There never was so many eggs offering for sale at this time of year, and the prices were much better than were ever before paid in this province. Dressed poultry too is somewhat scarce and is bringing very high prices. The raising of turkeys and geese is becoming more general on account of the high prices of past years, and their is considerable increase in numbers this year over last year.

REGARDING SUPPLY OF SEED FOR NEXT SPRING:—There will be no scarcity of good seed, both of oats and potatoes for next year, but it looks as if the price of both of these would be much higher than is at the present being paid, and parties having good, bright grain, true to name, would do well to reclean it for the seed market.

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One farmer in Cape Breton, N. S., doubled his crop of potatoes, in fact has just harvested a yield of 735 bushels to the acre. If he can get such a yield, why can't you?

You surely ought to have plenty of barnyard manure to use. If so, use it in **quantities** in connection with 400 lbs. Basic Slag and 16) lbs. Sulphate of Potash to the acre; cultivate well and you can get a yield similar to his. This is what he did.

Another farmer in Cowansville, Que., obtained a yield of 1,666 bushels of mangels to the acre by using 150 lbs. Nitrate of Soda, 400 lbs Acid Phosphate and 150 lbs Muirate of POTASH, increasing his yield 826 bushels over the plot fertilized with only Acid Phosphate and Nitrate of Soda.

It cost this Farmer just $3.45 to get 826 Bushels more of Mangels.

If **you** want to do likewise on **your** farm, write us and we will tell you how

POTASH PAYS

Every crop removes from the soil so much Nitrogen, Phosphoric Acid and POTASH. This is the food the plant consumes. If you wish to raise bigger crops, you must put back into the soil the plant food that the plant takes up in its natural growth.

You probably understand this, and very likely you use some sort of fertilizer, but if you are NOT using a fertilizer containing 6 p. c. to 10 p. c. of POTASH, you cannot get bigger yields of better quality. This is because a plant removes from the soil more POTASH than Phosphoric Acid.

Ordinarily, low grade fertilizers contain from 6 p. c. to 8 p. c. Phosphoric Acid and approximately 2 p. c. of POTASH. Certainly this is not more POTASH than Phosphoric Acid. You must increase this percentage to 6 p. c. to 10 p. c. POTASH. If you want to raise a bumper crop next year do this.

Insist that your dealer supply you with a 6 p. c. to 10 p. c. POTASH fertilizer. If he cannot do this, and you have to buy a low grade fertilizer, for every ton of low grade fertilizer you buy, add 200 to 300 lbs. Muriate or Sulphate of Potash and this will bring it up to a high grade fertilizer.

You can mix your own fertilizer at home if you want to. Our Agricultural Experts will tell you FREE how to do this. Get in touch with your fertilizer dealer NOW, so that he will be sure to have POTASH on hand for you when you need it. Send us your dealer's name and we will send you FREE booklets on how to increase your yield. These booklets we know are instructive and are the best on the subject, being written by Experts. Write us telling the kind of crops, you raise, giving us the name of your dealer, and we will see that you get a fertilizer high in POTASH.

You will have plenty of time this winter to study this all-important question, and how to proceed another year to get bigger yields of better quality from your farm. Write us today.

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Having Muriate and Sulphate of POTASH in Store at St. John, N. B.; Montreal and Toronto makes it easy for you to get your POTASH from us.

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A lazy, slow or torpid liver is a terrible affliction, as it holds back the bile, which is required to move the bowels, and lets it into the blood instead, thus causing Constipation, Catarrh of the Stomach, Sick Headache, Langour, Pain under the Right Shoulder, etc.

Mrs. Wesley Estabrooks, Midgic Station, N.B., writes:—"For several years I had been troubled with pains in the liver. I have had medicine from several doctors, but was only relieved for a time by them. I then tried Milburn's Laxa-Liver Pills, and I have had no trouble with my liver since. I can honestly recommend them to every person who has liver trouble."

Milburn's Laxa-Liver Pills are 25c a vial, or 5 vials for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

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Minard's Liniment Co., Limited

PILES CURED at HOME by New Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Women's Institute in Nova Scotia.

The Department of Agriculture of Nova Scotia keenly alive to the best interests of Nova Scotia, introduced into the Province this year a new movement along rather different lines from any work undertaken in the past. This work was the establishing of Women's Institutes; an organization inaugurated some fifteen years ago in Ontario as an offshoot of the Farmer' Agricultural Societies, for the purpose of imparting to the women of Ontario information more closely related to home life and women's work. Intended originally for the farmers' wives and daughters, the organization has gradually enlarged until it includes as its members women in every walk of life, who have at heart the welfare of home and community.

From Ontario the movement spread into other provinces and wherever an Institute has been established the enthusiasm has grown and the good accomplished, not only along practical lines but also tending towards greater sociability in rural districts has been almost uncalcuable. While the organization has been meeting with success in other places, it has never been found possible or expedient to establish it in Nova Scotia. This past summer, however, the Department of Agriculture, being in a position to establish the work on a firm basis, arranged for a series of meetings to be held in Pictou, Colchester and Cumberland Counties during July. The result of these meetings was so encouraging that the Department determined to push the work as rapidly as possible to arrange another series of meetings, this time in the Counties of Hants, Kings and Annapolis.

Miss Susie Campbell, of Toronto, Ont., who has been successfully connected with Institute work in that Province for several years, was associated with Miss Jennie W. Fraser in this work. Three districts in Hants, four in Kings and three in Annapolis were visited, meetings were held and many personal calls made. While this campaign did not meet with the complete success that crowned the first journey, still it was felt that good work had been accomplished. The fact that the women of some districts who felt that their time was already overtaxed and could not see the way clear to take up Institute work, requested the Department to visit them on the return trip, was sufficient guarantee that they had seen the necessity and importance of the work. Out of the ten places visited, six were ready to establish and maintain an Institute and the interest and enthusiasm displayed when the object was fully understood, was most encouraging.

To enable the members of the Institutes already formed to discuss the future development of the work, a Convention will be held from January 13th to 15th at the Agricultural College, Truro, during the Winter Short Course. Lecture and demonstrations will be given along the line of home and outside work.

The following is a list of the Institutes formed throughout the Counties already visited:

Scotch Village, Hants Co., Membership, 16, Pres., Mrs. Frail; Vice-Pres., Mrs. Alfred Cochran; Sec.-Treas., Miss Florence Walley.

Martock and Windsor Forks, Hants Co., Membership 18, Pres., Mrs. Levi Daniels; Vice—Pres., Mrs. Saunders; Sec.—Treas., Miss Queenie Palmer.

Grand Pre, Kings Co., Membership 9, Pres., Mrs. Bowser; Vice-Pres., Mrs. Crane; Sec.-Treas., Mrs. Guy Fuller.

Port Williams, Kings Co., Membership 18, Pres., Mrs. (Rev.) J. D.

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp;

BURNS 70 HOURS ON 1 GALLON OIL

Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

$1000.00 Reward

will be given to the person who shows us an oil lamp equal to this **Aladdin** in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the **Aladdin?** We want **one person in each locality** to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get **ONE FREE.**

AGENTS WANTED

to demonstrate in territory where oil lamps are in use. Experience unnecessary. Many agents average five sales a day and make $300.00 per month. One farmer cleared over $800.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and sample.

MANTLE LAMP CO. 282 Aladdin Bldg., Montreal & Winnepeg

Something New for Men

Restore Your Own Strength--No Drugs

Manly Men Fascinate the Whole World

The free illustrated pocket compendium of private advice for all men, whether young or elderly, single or married, whether well or ailing (explained below), not only contains a great fund of necessary information upon certain avoided private subjects, telling you what to avoid, what to do and what not to do, but also fully describes a new small mechanical appliance called a VITALIZER which generates a natural force and which is now being worn by men all over the world who seek new manly vigor. You, yourself, no matter where you live, may easily have one of these little VITALIZERS to try out in your own case. Therefore, please use the coupon below and get this free pocket compendium by return mail. SANDEN. AUTHOR.

How would YOU, reader, like to be strong, vigorous, vital and manly once more, without an ache, pain or weakness? If you really seek and want this new vigor, this rugged manly strength, then please call at my office or write today and get my free book that you may know the whole wonderful story of this great, drugless, self-treatment, this marvellous little VITALIZER of my invention, which you wear comfortably on your body, and which sends its steady gentle, silent supply of FORCE into your nerves, blood and organism while you sleep.

Real manhood with a perfect manly strength is not only nature's own gift, but, according to my belief, may easily be within the reach of practically any man. Of course, we all know that it is the husky, vigorous, vital fellow who attracts both women and men to him, and it is he, also, who is ever sought out and who achieves the really big things of life. Sturdy, vital manhood is, without doubt, the one great, silent universal power which fascinates us all, no matter how we may argue to the contrary. Therefore, reader, I care not what may be your age, nationality or creed, whether you are married or single, whether you are a bank president or work on the farm or in the shop, nor do I care how unstrung or nervous you may feel, or what past acts may have left you debilitated and enervated, I say to you in all seriousness, if I can show you an easy, drugless way by which you may treat yourself with the object of bringing back full vigor to your organism, then I will show you the road to new hope and new manhood. A man may be small in stature, yet as strong and attractive as a giant, or he may be big in stature, yet unstrung, nervous and unmanly. It is all a question of your own vigorous strength. Therefore, let me suggest that you call or write at once, then, after reading my book, if you decide you want to try out my little vitalizer in your own case, and will write to me sayingso, I will reply to your letter and guarantee to make an easy proposition which should enable you to have one of the vitalizers at once. At all events, you need the knowledge that my little book contains, whether you ever get a vitalizer or not, so please call or fill in and send the coupon.

NOTE—With special attachments my VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health

Free Self-Help Book For Men

I publish a little illustrated pocket compendium in booklet form, as mentioned above, which is meant to guide both single and married men along the road of Vigorous Health and Moral Rectitude, so they may be as vigorous and strong as the best, and may live to a ripe, healthy old age. There is a lot in this little compendium which every young or elderly man should know and can refer to from time to time with great profit to his own physical health. The booklet in one part fully describes my new VITALIZER, the great drugless self-treatment. If it is not convenient or if you are too far away to call, please write for this booklet today. It will come to you in plain, sealed envelope by return mail. Please use coupon. Office hours, 9 to 6.

Dr. M. F. SANDEN, CO.,
140 Yonge St., Toronto; Ont.

Dear Sirs—Please forward me your book, as advertised, free, sealed.

NAME.....

Address.....

It Pays to Advertise in the Maritime Farmer.

Hull; Vice-Pres., Mrs. Campbell; Sec.-Treas., Mrs. Newton Newcombe.

Berwick, Kings Co., Membership, 27, Pres., Mrs. Nelson Morton; Vice-Pres., Mrs. L. D. Robinson; Sec.-Treas., Miss L. O. Morse.

Lawrencetown, Annapolis Co., Membership 10, Pres., Mrs. McPherson; Vice-Pres., Mrs. Banks; Sec.-Treas, Miss Jefferson; Asst.-Treas., Miss Morgan.

Leaving the Farm.

With hopeful fears they packed their goods,
The farmer and his faithful wife,
Their thoughts returned to'rd the city great,
With all its tumult and its strife.
"The city is the place," he said,
"For country folk to take their ease;
Where all is gayety and joy,
And everything is made to please.
"Where we, with years and labor worn,
May dwell in tranquil happiness."
His patient helpmeet only smiled,
And went on folding coat and dress.
As from the farm they slowly drove,
To take the speeding railway train,
The robins piped a mournful lay,
As if to call them back again.
The cherry blossoms softly fell,
Like white down from an angel's wing;
The horses whinnied in the field;
The cattle drowsed around the spring;
And e'en the gentle springtime breeze
Seemed whispering a sad farewell;
The good wife heaved a parting sigh,
While down her cheek a teardrop fell.
The city, to the rustic pair,
As through its busy streets they'd roam,
Brought disappointment day by day,
'Twas so unlike their country home.
The evening brought no peaceful calm,
And filled with clamor were the days;
Unused to aught but rural scenes,
They felt like lonely castaways.
The crowded town oppressed them sore,
They could not find its fancied charm;
All day they thought of trees and fields;
At night they dreamed about the farm.
With weariness their hearts grew numb,
As sadness timed the rhythmic beats;
A lonelier place they ne'er had found
Than those congested city streets.
Again they quickly packed their things,
This time with buoyant, happy hearts;
Back to the country they would go,
Far from the city's crowded marts!
And as they neared their loved abode,
And passed each field and copse and glen,
The wife breathed softly, "Here is rest!"
The husband cried, "Home, home again!"

"It is a pleasure to tell you that Chamberlain's Cough Remedy is the best cough medicine I have ever used," writes Mrs. Hugh Campbell, of Lavonia, Ga. "I have used it with all my children and the results have been highly satisfactory." For sale by all dealers.

What Well-Known English Proverb Does This Picture Represent?

PROVERB PICTURE No. 1

FREE $2,000.00 IN PRIZES

In the Continental Publishing Company's Great Proverb Contest.

A Genuine Test of Skill and Diligence.

2nd Prize
Famous Gourlay Piano, Value $450.00
Puritan Design Spanish Mahogany Case.

1st Prize
FORD TOURING CAR
5 Passenger 1914 Model
The Universal Car. The car you can afford to keep and operate when you win it.

3rd Prize—Magnificent Shetland Pony with Cart, Harness and Complete Outfit
A pony that will delight the heart of any boy or girl, fit for a prince, guaranteed to be thoroughly city broken.
Value, $250.00

4th Prize
Columbia Leader Grafonola.
Complete with $50.00 worth of finest records. Value $150
A magnificent mahogany machine of the newest model.

Can You Guess the Answer to the Above Picture?

The picture shown above represents a well-known standard English proverb, a saying that you hear almost every day. Study it carefully, and when you think you have found the proverb it represents, write it out on a sheet of paper, with your name and address and promptly mail it to us.

How to Enter This Great Contest

We have compiled a series of twelve proverb pictures, each one representing a well-known, standard English proverb. Only the first of this series of proverb pictures will be published in this paper. The complete set of pictures will be sent to you right away when you guess the answer to picture No. 1 correctly.

You obtain entry to this Great Contest by finding the proverb represented by picture No. 1. This starts you on the road to sharing in the stupendous distribution of prizes given in the list below. If the answer you send in is correct, we will write and tell you so and send you

FREE a Fine Book of Standard English Proverbs and the Series of Twelve (12) Proverb Pictures, Completing the Contest

The publishers of Canada's greatest monthly magazine are conducting this great contest. Therefore contestants are assured of its absolute fairness and squareness. In order to give an equal chance to every competitor they have published a fine book of standard English Proverbs and all the proverbs represented by the series of twelve pictures have been chosen from this book. Answer proverb No. 1 correctly and this fine book will be mailed to you free. With it you will receive the complete series of twelve proverb pictures which complete the contest. Thus, there will be no waiting or delay. All the pictures will be presented to you at once and you can set to work to find the answers that can win you your share of these wonderful prizes.

The senders of the winning answers, chosen by the Judging Committee in accordance with the conditions of the contest (see simple rules given below) will be awarded the following stupendous

LIST OF PRIZES

This Contest is Absolutely Free. You are not asked to spend a cent of your money or buy anything in order to enter

1st Prize	Ford Touring Car, 1914 Model	Value,	$650.00	27th Prize	40-Piece Royal Vienna Tea Set	Value,	$8.50
2nd "	Gennine Gourlay Piano	"	450.00	28th "	High grade Ebonized Mantle Clock	"	8.50
3rd "	Shetland Pony, Cart and Harness	"	250.00	29th "	Waterman Ideal Fountain Pen	"	5.00
4th "	Columbia Grafonola, with $50.00 in records	"	150.00	30th "	Premo Camera	"	5.00
5th "	Fine Blue-White Diamond Ring	"	100.00	31st "	Gillette Safety Razor	"	5.00
6th "	5-Piece Mahogany Parlor Suite	"	75.00	32nd "	Electric (or gas) Sad Iron	"	5.00
7th "	Gennine McClary Pandora Range	"	60.00	33rd "	Pair Hockey Skates and Boots	"	5.00
8th "	Famous Singer Sewing Machine	"	49.00	34th "	Hand-Painted Parlor Lamp	"	5.00
9th "	Cleveland 1914 Bicycle	"	40.00	35th "	Set Of Table Linen (Cloth and 12 Napkins)	"	5.00
10th "	Men's 14k Solid Gold Waltham Watch	"	35.00	36th "	Cut Glass Salad Bowl 8-inch	"	5.00
11th "	Solid Gold Genuine Waltham Ladies' Watch	"	25.00	37th "	7-Piece Cambridge Water Set with Tray	"	5.00
12th "	Hamilton Ideal Kitchen Cabinet	"	25.00	38th "	Grand Rapids Carpet Sweeper	"	5.00
13th "	Solid Gold, Pearl and Amethyst Lavalier	"	20.00	39th "	Solid Gold 10k Birthday Ring	"	5.00
14th "	Spanish Leather Upholstered Rocker	"	20.00	40th "	Solid Gold 10k Birthday Ring	"	5.00
15th "	86-Piece Rogers Silverware Cabinet	"	15.00	41st "	Solid Gold 10k Birthday Ring	"	5.00
16th "	97-Piece English Dinner Set	"	15.00	42nd "	Solid Gold 10k Birthday Ring	"	5.00
17th "	7-Jewel Waltham Watch, Men's 16-size	"	15.00	43rd "	Solid Gold 10k Birthday Ring	"	5.00
18th "	7-Jewel Waltham Watch, Ladies' size,	"	15.00	44th "	Pair 10k Solid Gold Cuff Links	"	5.00
19th "	20-Volume set Chas. Dicken's Works	"	10.00	45th "	Pair of Solid Gold 10k Beauty Pins	"	5.00
20th "	English Gold Filled Hand Engraved Bracelet	"	10.00	46th "	7-Volume Set Edgar Allan Poe's Works	"	5.00
21st "	Cremona Violin and Bow Complete	"	10.00	47th "	Solid 10k Gold Fleur de Lis Tie Pin	"	5.00
22nd "	Imported Mandolin in Case	"	10.00	48th "	Real Seal Hand Bag, bronze mounted	"	5.00
23rd "	10k Ladies' Ring Set with 5 whole pearls	"	10.00	49th "	Mahogany finished Parlor Table	"	5.00
24th "	Men's Heavy 10k Gold Garnet Ring	"	10.00	50th "	Cut Glass Sugar and Cream Set	"	5.00
25th "	Golden Oak Upholstered Morris Chair	"	10.00				
26th "	44-Piece English Dinner Set	"	8.50		TOTAL CASH VALUE OF PRIZES -		$2218.50

This stupendous Contest is being conducted by the Publishers of "Everywoman's World," solely with the object of introducing Canada's greatest home journal into new homes and to new readers. In addition to the fine standard book of English Proverbs, and the series of proverb pictures, each contestant will receive a free copy of the current number of **EVERYWOMAN'S WORLD.** This is sent to you without charge because the publishers know that once this magnificent journal is introduced into the homes of the intelligent people who will enter this great contest it will be wanted every month. There is no other monthly magazine published in Canada like "Everywoman's World," and you will be delighted to have the people in your home become acquainted with a magazine so live, bright and entertaining.

Read Carefully the Simple Rules Governing Entry to the Contest.

1.—Write on one side of the paper only, your solution to proverb picture No. 1, and give your full name (stating Mr., Mrs., or Miss) and complete address. Anything else but your answer to picture No. 1 and your name and address should be written on a separate sheet of paper and should be confined to fifty (50) words.

2.—Members and employees of this firm, or relations of members or employees are absolutely excluded from competing.

3.—**Enclose with your answer two (2) two-cent stamps (4 cents).** This is to help defray postage on the Book of English Proverbs, complete series of pictures, illustrated prize list, etc., which we will mail to you.

4.—Contestants may send any number of solutions to the complete series of pictures but only one set of answers can win a prize.

5.—Different members of a family may compete, but only one prize will be awarded to any one family or household.

6.—All letters must be fully prepaid in postage. We will refuse to accept answers on which we have to pay postage.

7.—The Judging Committee will consist of five (5) prominent Toronto business men whose names will be published in due course. Prizes will be awarded to correct or nearest correct answers in accordance with handwriting and general neatness and contestants must agree to abide by the decision of the judges.

8.—Contestants will be asked to show the copy of Everywoman's World, which we will send, to three friends or neighbors who will want to subscribe.

9.—As soon as your answer is received and found correct we will write advising you and send you the complete series of proverb pictures and the Book of Famous English Proverbs, together with **a copy of the current number of "Everywoman's World."** Address your letters plainly to **Contest Manager.**

CONTINENTAL PUBLISHING CO., Limited, Dept. 22, TORONTO, CANADA.

Consult the Farmer when you want to buy anything for the Farm or Dairy. . . . . .

PIMPLES
Are an "EYE SORE."

Pimples are caused by the blood being out of order. Those little festering sores appear on the forehead, on the nose, on the chin and other parts of the body, and although they are not a dangerous trouble they are very unsightly to both you and your friends.

There is only one way to get rid of them, and that is to purify the blood.

Burdock Blood Bitters is without a doubt the best remedy on the market for this purpose.

Wm. F. Donohue, Jr., Hamilton, Ont., writes:—"About six months ago my little son's face was literally covered with pimples. I tried every preparation I was told of by my friends, but to no avail. Soon I thought I could not have them fixed up, and would have to wait, and let him grow out of them, but thanks to Burdock Blood Bitters they are all gone, and I gladly recommend it to anyone."

Burdock Blood Bitters is manufactured solely by The T. Milburn Co., Limited, Toronto, Ont.

FLORICULTURE.

Amadie writes:—Please tell me how to keep an Azalia plant in the house. It has been in the garden all summer but now it seems to be dropping its leaves and the stem is getting covered with a fine green moss. The leaves turn brown on the under side, and then fall off.

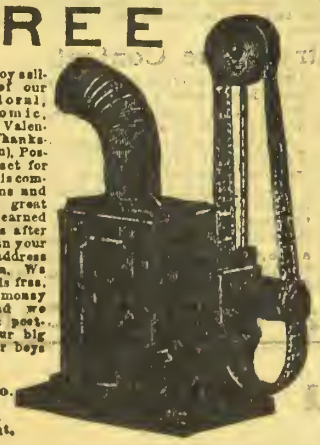
Wash the Azalia leaves with kerosene emulsion or whale oil soap. An hour or so after this application, spray thoroughly with cleab water. Azalias are better for a sprinkling of the foliage occasionally all winter.

I do not understand about the moss spoken of. Would think that a simple rubbing of the trunk with a coarse brush would remove this trouble. Never allow an Azalia to become dry and always see that the drainage is perfect, as stagnant water at the base of an Azalia is almost sure death to it. Spraying buds with clear water will also hasten their development.

To anyone who has delayed the planting of out-door bulbs until the last minute I would say be sure that you give the bed a generous coating of strawy manure at once. If the bed is in an exposed place where the snow is liable to blow off, get a few small spruce trees, sharpen the butts of the trunks and stick them down about it, these will cause drifts to form during the storms that will follow and help protect the bulbs in early spring.

Moving Picture Machine

FREE



To the girl or boy selling 40 sets of our Birthday, Floral, Scenic, Comic, (Christmas, Valentine, Easter, Thanksgiving in season), Postal Cards (6 in set for 10c). Machine is complete with films and slides, shows great pictures, can be earned in a few hours after school. Send in your name and address plainly written. We will send cards free. Return us money when sold, and we send premium post-paid. Get our big premium list for boys and girls.

Toronto Novelties Co. Dept. 165 Toronto, Ont.

Sandcrack.

Sandcrack, is a division, split, crack, or fissure, in the wall of the foot. In the fore-foot it generally appears at the inside quarter, and at the toe, or in the front of, the hind feet. According to position the separation is called a toe or quarter crack. In most cases, it is due to brittleness of the crust, and while this may occasionally be constitutional, it is invariably the direct result of rasping the wall, and especially when this is practised above the clenches to the top of the hoof. Sandcrack may also be due to contraction, which in its turn may be due to natural causes, but is certain to be aggraved, if not caused, by the pernicious practice of carving away the bars, and so-called "opening" of the heels. When found in low, flat feet, sandcrack seems to arise from want of tone in the secretions of the crust and to want of quality in the horn. For the most part prevention lies in refraining from rasping the crust, and thus avoiding the grand cause of weakness and brittleness as detailed above. But what most querists want is a "cure," and they ask for it in a way that suggests that they expect to find in some "receipt," or mixture of drugs, a means of healing or re-uniting the divided edges of the split horn; indeed, "something to heal the crack," has more than once been asked for. This is quite impossible. There are various ways of dealing with sandcrack, but the fundamental principles are the same in all. These are the approximation of the divided edges, the limiting of motion, the removal of all bearing or weight off the part of the crust affected by the split and the speedy production of new sound horn from the coronet. The best method of proceeding depends somewhat on the extent of the fissure, and the existence or otherwise of lameness. In the ordinary way sandcrack does not cause lameness until it has become sufficiently deep to expose the sensitive laminae, or until it has extended right up into the coronary band. Lameness then arises either from the insertion of dirt or sand—which possibly accounts for the name—or from granulations from the exposed sensitive laminae becoming pinched between the divided edges of the horn as the foot expands and contracts as weight is imposed or removed when the foot is lifted or placed on the ground.

If there is lameness, the shoe should be removed, and local pain reduced by poultices or fomentation, and any systemic disturbance by a dose of physic, or the administration of febrifuges. In almost all cases of foot lameness a dose of aloes seems to act like a charm. Small cracks that do not cause lameness are sometimes dealt with by firing a V in the hoof so as to leave the top of the crack in the centre of the V. The concussion of the foot is thereby diverted from the injured part of the coronet, and gives the nearest approach to rest obtainable under the circumstances. Another plan of limiting motion, preventing extension of the fissure, and keeping out foreign matter, is to wind narrow tape dipped in tar, or strong waxed cord round the hoof, filling the split with gutta-percha, heel-ball, of cobbler's wax. It may be well to mention here that this method of filling is sometimes employed to hide this serious defect in horses offered for sale. When either of these substances is put in neatly with a warm iron, and the hoof nicely blacked over, a sandcrack may easily escape the eye of the unwary. Well blacked hoof should be closely scrutinised by an intending purchaser buying from a stranger or without warranty.

Various clamps have also been devised for the purpose of drawing the edges of the crack together and retaining them in opposition, the approximation being attained in some cases by forceps, in others by a screw arrangement forming part of the clamp. These mechanical contrivances are sold by veterinary instrument makers. Cheaper, and quite as efficient, or even more so, is rivet the crack with horse nails. This operation requires considerable skill in setting the point of the nail and driving it. The nail is driven through the hoof on each side of the crack, the head partly rasped down, and the point then drawn up and clinched as in putting on the shoe. From one to three nails are necessary, according to the length and position of the fissure. Sometimes a bar shoe is employed with a view to limiting motion, but all feet are not capable of work. Then the only remedy is the French operation of stripping the hoof in the neighborhood and resting until a new foot is grown. In a case that came under my own observation the animal was a valuable hunter and the cracks reappeared after being apparently cured. In this case the operation was a success, or at least the foot continued sound until the horse was lost sight of. All these plans of treatment should be accompanied by some stimulation of the coronet to produce a rapid growth of strong, new horn, for, as I have shown, the crack will never re-unite.

The means to be adopted will vary with the severity of the case, and whether a stoppage of the work is necessary. If the animal is capable of work, repeated mild stimulation with an ointment made by mixing one part of biniodide of mercury with twelve parts of lard will be suitable. Of course, a sufficient interval must elapse between the applications to avoid making the part unbearably sore. If resting, a more active blister may be used, and one dracham each of biniodide of mercury and powdered cantharides, with oz. of lard or lanolin, will be suitable. When the soreness has passed away the foot may be swabbed, or the animal turned out in a level damp pasture, with a tip on to protect the foot. In the case of a crack extending to the coronet, the animal should be kept off work until the new horn has grown down at least an inch and a half. It need hardly be said that the ruinous use of the rasp in shoeing must be sternly forbidden, and that horses subject to sandcrack or shelly feet should have them dressed daily with lanolin or other suitable material, free from alkalis or fatty acids, to prevent undue escape of moisture and the drying up that results from the removal of the natural varnish. There is one method of dealing with sandcrack that I had almost forgotten to mention, viz., clearing out the crack, and inserting a plug of wood. It is the invention of a prominent London veterinary surgeon, but is a plan of which I have no personal experience. —F.

He works 36 hours at a stretch

And overtime when needed. Anyone can afford him, for he only costs $3.00 to buy and nothing at all to keep. Nearly half of the families in Canada have taken advantage of this and have employed him to get the family up in the morning.

Even if you have a preference about waking up, he's ready to get you up your way. If you like to be wakened gradually, he'll ring little short rings every other half-minute for ten minutes. If you're a hard sleeper and need a strong dose, he'll sing out with a long, vigorous, full five-minute ring. Either way, you can shut him off at any point.

7,000 Canadian dealers are necessary to take care of the demand he's created for himself. He's made a world's Record as a success.

He's invaluable on the farm, because he not only helps you get the hands out on time, but serves as a first-class clock to tell the *day* time by.

He stands 7 inches tall, is triple nickel-plated—has a vest of good implement steel that keeps him hardy; large, bold figures and hands to tell the time by in the dim light of morning. He is as fit for the parlor as the bedroom.

If your dealer hasn't him, send a money order for $3.00 to *Westclox, La Salle, Ill.*, and he'll come anywhere in Canada by parcel post, duty charges paid.

He bears the imprint, *Made in La Salle, Illinois, by Westclox*, which is the best alarm clock insurance you can buy.

For Colds, Sore Throat, Croup. For Aches, Pains and Wounds,

JOHNSON'S ANODYNE LINIMENT

is the never-failing remedy. Keep it in your home and be ready for both internal and external ills.

IN USE 103 YEARS

25c and 50c everywhere

I. S. JOHNSON & CO., Inc.
Boston, Mass.

Parsons' Pills
relieve constipation and headache

Concerning Potato Troubles.

(Continued from page 117.)

ed plots, 2 and 3, carrying a healthy dark green foliage, while on the unsprayed plots the tops showed marked signs of disease.

September 3rd.—On the unsprayed plot, No. 1, the foliage had fallen and the tops had nearly all died down. Plots 2 and 4, sprayed once, showed some signs of disease, but the tops on plot 3, sprayed twice, were still healthy and growing and continued so until lifting. The potatoes were raised on October 2nd, and carefully weighed, the results being shown below. All the figures are given per acre and in tons and hundred weights.

It will be seen by the results of this experiment that the effects of the spraying are two-fold; first, a large increase in the total yield, and second, a marked decrease in the proportion of diseased potatoes. The increased yield is accounted for by the much longer growing season ensured to the sprayed potatoes by the absense of disease in the topsf Early spraying in this experiment proved to be better than late spraying (compare plots 2 and 4), but the best results were obtained from spraying twice, the extra labor and expense involved being amply repaid in the resulting crop, this plot, No. 3, showing a return of over one ton per acre of saleable potatoes more than any other plot, together with the lowest proportion—less than 1 per cent—of diseased tubers.—W. H. Tompkins, in Farmers' Magazine.

If you have young children you have perhaps noticed that disorders of the stomach are their most common ailment. To correct this you will find Chamberlain's Stomach and Liver Tablets excellent. They are easy and pleasant to take, and mild and gentle in effect. For sale by all dealers.

MARKETS.

Charlottetown Market Report.

GRAIN.—Oats, White, 35c. to 36c., Black, 38c.

FEEDSTUFSS.—Bran, $26.00 to $27.00 per ton; Shorts, $1.50 per 100 lbs.; Middlings, $1.50 per 100 lbs.; Oil Cake, $2.00 per 100 lbs.; Cottonseed Meal, $1.80 per bag; Corn Meal, $2.00 per bag.

LIVE STOCK.—Butcher's Cattle, 4½c. to 5½c. per lb.; Stockers, $18.00 to $30.00; Milch Cows, $25.00 to $60.00; Sheep, 4½c. to 5½c. per lb.; Lambs 5c. to 6c. per lb.

DRESSED MEATS.—Beef (Carcass), 8c. to 11c. per lb.; Beef (Retail) 8c. to 16c.; Mutton (Retail), 8c. to 14c. per lb.; Pork (Carcass), 10c. to 11c. per lb.

HORSES.—Drafters, $150.00 to $250.00; Carriage, $150.00 to $250.00.

DAIRY PRODUCTS.—Creamery Butter, (Solid), 26c. per lb., (Prints), 27c.; Dairy Butter, 22c. to 26c. per lb. Cheese, 13½c. per lb.

POULTRY AND POULTRY PRODUCTS.—Eggs, 29c. to 30c. per doz.; Fowl, 10c. to 12c. per lb.; Chickens, 11c. to 14c. per lb.; Ducks, 12c. to 13½c. per lb.; Geese, 11c. to 13c. per lb.; Turkeys, 20c. to 21c. per lb.

FRUIT.—Apples, $2.00 to $4.50 per bbl.

MISCELLANEOUS.—Hay, $10.50 to $11.50 per ton; Straw, $6.50 to $7.50 per ton; Beef Hides, 13c. per lb.; Sheep Skins, 80c. to $1.10 each; Lamb Skins, $1.00 each.

VEGETABLES.—Carrots, 40c. to 45c.; Potatoes, 30c.; Turnips, 10c. to 11c.; Beets, 30c. to 35c.; Parsnips, $1.00 per 100 lbs.; Cabbage, 20c. per 100 lbs.

Trade has been quiet during the fall. The continued wet weather during October caused a lot of damage to grain and potatoes and caused so much delay in storing the craps that the farmers have had little time for shipping and the amount of farm produce exported is not nearly as good as if weather conditions had been normal. Prices have been fairly steady all fall. Oats is not as high as it was a year ago; but with this exception almost everything else is considerably higher. This is true more particularly in regard to eggs, pork and potatoes. The potatoes are reported not keeping well and we hear of heavy losses having been made by some shippers but think that the loss was caused largely by shipping immature early varieties. The White potatoes do not give satisfaction grown on our heavy soil with stable manure and if farmers intend growing these varieties we are of the opinion they should use commercial manures. Prices of all kinds of live stock have been fully maintained and lambs sold as high as 6 cents per pound live weight, which so far as we know is a record price for the province. A lot of oats was damaged by rain and large quantities will be unfit for sale and as these will have to be fed at home the demand for mill feeds will be smaller than usual. The quantity of hay exported this fall is much below the usual quantity as farmers did not have time to get it ready.

St. John Market Report.

GRAIN.—Wheat, $2.00 bus.; Oats, 50 c. to 52c. bus.; Peas, $2.40 bus.; Barley, $1.75 bus.; Buckwheat, 80c. to $1.00.

FEEDSTUFFS.—Bran, $25.00 ton; Shorts, $25.00 ton; Oil-Cake, $2.00 per 100 lbs.; Cottonseed Meal, $2.10 per 100 lbs.; Gluten Meal, $2.10 per 100 lbs.; Gluten Feed, $1.90 pet 100 lbs.; Corn Meal, $2.00 per bag.

GRASS SEEDS—Timothy, $4.00 per bus.; Com. Red Clover, 32c. lbs.; Mam. Red Clover, 35c. lb.

LIVE STOCK.—Butcher's Cattle, 4c. to 6c. lb. live weight; Stockers, $30.00 to $50.00 each; Milch Cows, $30.00 to $50.00 each; Sheep, $3.00 to $5.00 each; Lambs, $3.00 to $5.00; Hogs, 9c. to 11c. per lb.

DRESSED MEATS.—Beef (Carcass) 5c. to 11c. per lb.; Beef (Retail), 20c. to 25c. per lb.; Mutton, 15c. to 25c. per lb.; Veal, 8c. to 16c.; Pork, 18c. to 20c. per lb.

HORSES.—Drafters, $200.00 to $300.00 each; Roadsters, $150.00 to $252.00 each; Carriage, $200.00 each.

DAIRY PRODUCTS—Creamery Butter, 30c. to 35c. per lb.; Dairy Butter, 26c. to 30c. per lb.; Cheese, 13c. to 14c.

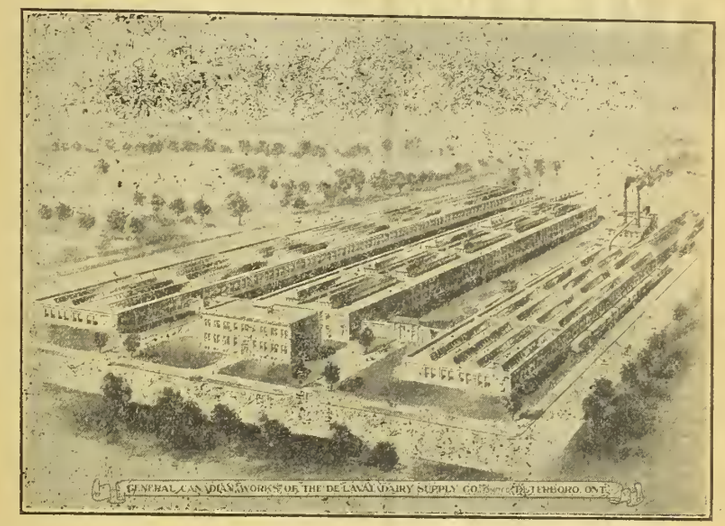
POULTRY AND POULTRY PRODUCTS.—Eggs, 30c. to 50c. per doz.; Fowl, 72c. to $1.50 per pair; Chickens 50c. to $1.50 per pair; Ducks, $1.50 to $1.75 per pair; Geese, $1.20 to $1.75 per pair; Turkeys, 28c. to 30c. per lb.

FRUIT.—Apples, $2.00 to $5.50 per bbl.; Cranberries, $5.00 to $6.00 per bbl.; Honey, $1.00 gal.; Maple Products, Sugar, 16c. to 18c. per lb.

MISCELLANEOUS.—Hay, $10.00 to $15.00 ton; Straw, $8.00 to $10.00 ton; Wool, 23c. to 25c. per lb.; Beef Hides, 12c. per lb.; Calf Skins, 18c. per lb.; Sheep Skins, 50c. to 70c. ea.; Lamb Skins, 40c. to 70c. each.

VEGETABLES.—Carrots, $1.50 per bbl.; Potatoes, $1.25 per bbl.; Turnips, 61c. to 80c. per bbl.; Beets, $1.50 per bbl.; Parsnips, $2.00 per bbl.; Cabbage, 40c. to 60c. doz.

New Home of De Laval Cream Separators and other Dairy Machinery at Peterboro, Ontario



Bird's-eye view of the New Factories and General Offices of the De Laval Dairy Supply Co., Ltd., at Peterboro, Ont.

In this Plant will be Manufactured De Laval Cream Separators, Ideal Green Feed Silos, "Alpha" Gas and Gasoline Engines and a Full Line of Creamery, Cheese Factory, Milk Dealer and Farm Supplies Machinery

Many of our readers who are users of De Laval Cream Separators, Ideal Green Feed Silos or any of the large line of dairy, creamery or farm supplies manufactured and distributed by the De Laval Dairy Supply Company, Limited, will no doubt be interested in the accompanying illustration of their new works which are being built at Peterboro, Ont.

This group of factory buildings, now rapidly nearing completion, is without doubt one of the finest plants of its kind in the country. The two wings on the right are already completed, all the machinery is installed and manufacturing has been carried on for several months. The office building which is shown in the foreground contains every modern convenience for the transaction of the company's business in the best possible manner and with the greatest dispatch and in this office is located the headquarters of the Company in the Dominion.

The construction of the buildingthroughout is of the most modern type of saw-tooth roof construction, affording maximum of light and ventilation; the materials used are concrete, brick and steel, and the buildings and equipment are designed with a view to turning out the highest grade of goods from both the standpoint of workmanship and material.

The group of factory buildings is situated in a plot of land covering fifteen acres which allows lots of room for future expansion.

Some idea of the magnitude of the plant will be conveyed by the fact that over a mile of private railroad tracks is required to serve this group of factory buildings.

In choosing the location for their new home the officers of the DeLaval Dairy Supply Company, Limited, were largely influenced by the convenience of transportation offered by the city of Peterboro, located as it is between Toronto and Ottawa, about seventy miles northeast of Toronto, on the lines of the Canadian Pacific and Grand Trunk Railways and the Trent Canal.

The De Laval Dairy Supply Company, Limited, in addition to its general office and factories in Peterboro, now have offices and warehouses in Montreal, Winnipeg and Vancouver, as well as warehouses for the convenient distribution of their goods at Calgary, Edmonton, Regina and Saskatoon.

The Company appreciate the wonderful possibilities for expansion of the dairy industry in the Dominion and accordingly have made provision for the increased requirements of our farmers for high grade dairy equipment, and they believe that the time is not far distant when Canada, instead of importing dairy products, will be seeking an outlet for them in foreign markets.

Bad Blood

is the direct and inevitable result of irregular or constipated bowels and clogged-up kidneys and skin. The undigested food and other waste matter which is allowed to accumulate poisons the blood and the whole system. Dr. Morse's Indian Root Pills act directly on the bowels, regulating them—on the kidneys, giving them ease and strength to properly filter the blood—and on the skin, opening up the pores. For pure blood and good health take

Dr. Morse's "Indian Root Pills

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The Sow During Gestation.

When a sow has been impregnated by a visit to the boar, she may be kept under observation in order that it may be known that she stands. After a few weeks have elapsed nature will commence to make a serious demand upon her for the support of her as yet very small young. It is probable that few breeders of pigs realize that the growth of the foetus is provided for by the food consumed by the sow. Her blood is enriched and maintained by the aid of her rations, and whatever tends to diminish them, either in quantity or nutritious value not only deprives her, but also her pigs, of the sustenance they require. The first to suffer, however, is the sow, for she will maintain her pigs at the expense of her own body, hence good feeding is necessary during the whole period of gestation. This, however, does not mean that after service a sow should be made fat, for that process would be unwise. When a cow or a ewe is at grass while carrying young she eats all that she requires, while the food is not of the same character as that usually supplied to a sow confined to a stye. Thus a sow will consume in a few minutes as much feeding matter in meal as would take her as many hours to graze if she were tuzned out to pasture instead. If, however, a cow were chained up in a stall and supplied with all the hay, cake and meal that she will eat, she would do herself harm, and the remark applies equally to a ewe penned in a fold. Sows are in most cases kept and fed under artificial conditions, and it is for this reason that greater attention should be paid to them than is paid to the cow or the sheep. Where, however, a breeding sow is turned out daily to grass she requires little attention, she will cost less to feed, and what is equally good, she will maintain better health and breed better pigs.

The pig-keeper should follow the example of the cow-keeper. If three acres will keep the cow, one acre will suffice for the pig and some poultry as well. It does not appear to be recognized that a pig is a grazing animal, that success in breeding depends almost as much upon her having her liberty during at least eight months of the year as upon her blood, but such is the case. No rational man would expect to breed cattle successfully from cows which are constantly stalled, the thing is impossible; air, sunshine and exercise are as necessary to live stock as they are to man. When an animal is inactive much less oxygen passes through the system, oxidation is consequently slower, the muslular system ceases to exercise its normal powers, and permanent health and vigour are rapidly impaired. That sows will breed pigs although kept in confinement we are aware, but the results are unsatisfactory and can not compare with those which follow upon their regular exercise.

A GRASS PLOT FOR THE PIG.

The pig-keeper should regard a plot of land on which his pig may graze as important as the stye. Indeed, many farmers keep their sows at liberty and shut them in the fold yard at night, so that they are not confined to the stye at all, except when they have a litter of pigs, and even then exercise is good for the sow, although not for her young. Some of the best pig-keepers I have known provide grass plots for the pigs, but these should be large enough to provide plenty of grass, and also well fenced. Nothing is more annoying to a neighbor than to find a strange sow in his garden, his potatoes or his corn. The damage committed in a few minutes may take hours to repair, even if it can be repaired at all. A hedge, however thick, is not a very safe boundary, for most pigs will go through it in time. The best fence is made of posts and rails, the latter close together at the bottom, and fixed so firmly that the leverage exercised by a strong sow with her snout will be vain. A sow at liberty should be rung, otherwise the plot of grass intended to feed her will qu-ckly be turned up with the same powerful organ, although some pigs are much les troublesome in this respect than others. The cost of feeding a sow kept in the stye from the time of service until the day she litters varies in accordance with her size, but it may be reduced by the aid of a garden in summer or with the help of turnips and mangels in winter. If these foods are not available she may be fed on middlings, which will scarcely cost less than half-a-crown a week, and may cost something more. Barley and maize meal are not so well adapted to the purpose. Where, however, a sow can be turned out during the long days of summer to graze, and there is plenty of grass, they will practically earn their living although in such a case it is wise to give them a few handfuls of corn or pulse, which may be thrown on the grass. During winter the same course may be taken, but here the grass ration may be supplemented by the roots named, above, by carrots, parsnips, or cabbage, or chat potatoes. Where there is no grass plot there should still be room for exercise, even though it be only a yard. Many pig-keepers are glad of this advantage if it is much better than nothing

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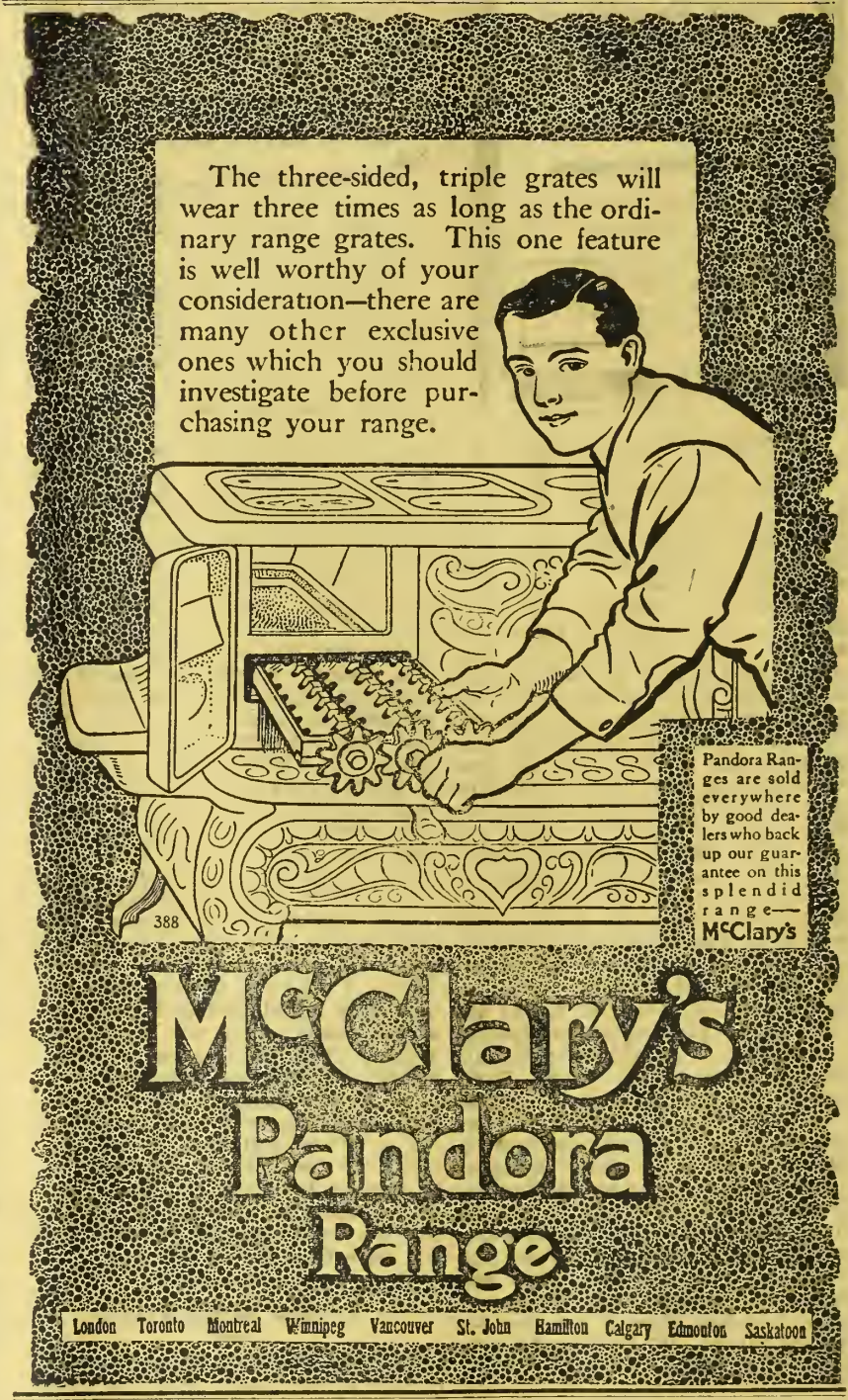
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obtain forage in spring and summer, such as clover, vetches, lucerne, or sainfoin.—James Long, in Irish Farm and Home.

Sifting the Grain Feeds.

A grain-sieve is an accessory which should be found in every stable, for the purpose of sifting the oats and chaff before serving a grain feed, in order to rid them as far as possible of the dust they contain. There is a not inconsiderable amount of dust present even in well-cleaned oats, while chaff is generally still more dusty, and dusty provender is well known to have a detrimental effect upon a horse's wind. In fact, badly saved oats and hay, containing an excess of dust, may actually be the cause of horses going wrong in their wind; hence it is most desirable to sift the grain and chaff well before use. The dust seen in the forage is not the ordinary kind of dust, but consists of broken up debris from the outer husk covering the oat grains or from the stalks and leaves of the hay, which is produced as the result of fermentative acting set up after the grain or hay has been harvested. If garnered in a bad condition—that is, after suffering much exposure to rain during the harvesting process—oats and hay will contain an unusually large amount of dust, while an even worse degree of dustiness is caused if the oats or hay are mildewed or mouldy, owing to dampness. Apart from its usefulness for sifting the food, a grain-sieve is also about the most suitable kind of receptacle that can be used in which to carry the feeds of grain and chaff from the bin to the manger.

Lifting Up a Horse's Hind Leg.

The safest method of lifting up a horse's hind leg, supposing one is not sure that the animal is quiet to handle about the hind limbs, is the following:—Assuming it is the near leg it is wished to hold up, one should stand on the horse's near side, close to its body and about midway between the fore and hind leg, facing to-to it, the left man should then be placed on the quarter and gently run down the thigh till the ham string just above the hock joint is reached, this being very firmly gripped. By keeping a strong grip on the ham-string and pressing on it, the horse will be prevented from kicking with the leg, should it feel so inclined. Having thus obtained some control over the limb, we now bend down, grasp the front of the pastern in a back-handed manner with the right hand, and—while slightly relaxing the hold on the ham-string, but still keeping the left hand there—lift the foot off the ground. To keep the leg up it is best to rest it at the pastern joint upon one's left thigh. Thus held, it is comparatively easy to support, even should the horse bear much weight on it in its efforts to place the foot on the ground, while if the animal attempts to free the leg by struggling with it, this may be successfully countered by merely pressing hard upon the ham-string with the left hand, which should remain in position there all the time. An important point to observe is that the leg, when held up, should not be drawn sideways away from the body, for that will hurt the horse and incite it to struggle in order to free the limb. It should be kept in line with the body, but one can draw it out backwards. In letting the leg down again one should keep the hand on the ham-string until the foot is on the ground, so as to prevent any attempt to lash out when the right hand lets go of the pastern. To insure a still greater degree of safety against a possible kick when attempting to lift up the hind leg of a horse of whose temper one is doubtful, one may as a preliminary first of all hold up its fore-leg on the same side. The right hand is used for this purpose (presuming it is near the side leg that is to be picked up), and while holding up the fore-leg one bends forward and grasps the ham-string of the hind one with the left hand. Having thus secured some hold over the latter, one lets go of the fore limb, and proceeds to lift up the hind one in the same manner as described above. By holding up the fore-leg the horse is completely prevented from kicking with the hind leg before one has caught hold of it.

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Fire Insurance Companies rate RU-BER-OID Roofing as "First-Class", and insure at the "base" or lowest rate buildings covered with it. RU-BER-OID will not catch fire from flying cinders or burning brands, and the one-piece, air-tight, fire-resisting RU-BER-OID Roof helps to smother a fire starting within.

KA-LOR-OID (Colored RU-BER-OID) has the same fire-resisting qualities, and in its soft, permanent shades of Red and Green it makes most attractive roofs. 109

ROOFING

Condition Powders.

At no season are condition powders more in request than during the autumn change of coat. Any country chemist will make them up. Here is a good recipe for a condition powder suitable at this time of year: 3 oz. each of gentian, aniseed, ginger, anh nitre, 4 oz. of fenugreek, and 1 oz. of powered capsicum. The whole to be thoroughly blended. From one teaspoon to one tablespoon full is given on alternate days, the powder being mixed with a feed of corn, which should be slightly damped, so that the powder may adhere to it. Another useful recipe is as follows: Two parts each of sublimed sulphur, nitre, black antimony, and fenugreek, and one part each of carbonate of iron and powdered turmeric. The dose for a full sized horse is one tablespoonful.—Argus.

will relieve the pain and soreness. bind it over the affected parts and it pen a piece of flannel with it and strengthening plasters. Chamberlain's liniment is cheaper and better. Dam-

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Write for a free copy of the book "What the Farmer Can Do With Concrete."

Farms—1913-1914.

By instructions of the Hon. Minister of Agriculture a distribution of superior sorts of grain and potatoes will be made during the coming winter and spring to Canadian farmers. The samples for general distribution will consist of spring wheat (5 lbs.), white oats (4 lbs.), barley (5 lbs.), and field peas (5 lbs.). These will be sent out from Ottawa. A distribution of potatoes (in 3 lb. samples) will be carried on from several of the experimental farms, the Central Farm at Ottawa supplying only the provinces of Ontario and Quebec. All samples will be sent free, by mail.

Applicants must give particulars in regard to the soil on their farms, and some account of their experience with such kinds of grain (or potatoes) as they have grown, so that a promising sort for their conditions may be selected.

Each application must be separate and must be signed by the applicant Only one sample of grain and one of potatoes can be sent to each farm. Applications on any kind of printed form cannot be accepted. If two or more samples are asked for in the same letter only one will be sent.

As the supply of seed is limited, farmers are advised to apply early; but the applications will not necessarily be filled in the exact order in which they are received. Preference will always be given to the most thoughtful and explicit requests. Applications received after the end of January will probably be too late.

All applications for grain (and applications from the provinces of Ontario and Quebec for potatoes) should be addressed to the Dominion Cerealpostage. If otherwise addressed delay and disappointment may occur.

Applications, for potatoes, from farmers in any other province should be addressed (postage prepaid) to the Superintendent of the nearest Branch Experimental Farm in that province.

J. H. Grisdale.
Director, Dominion Experimental Farms.

Principles of Housing Sheep.

In preparing winter quarters for sheep a house constructed of the following plan will constitute good accommodation for the flock.

Have a frame building on a good elevation of ground with high ceilings, single board walls well battened, a good shingle roof, and lots of windows and doors so arranged that one or more mey be opened at all times without causing any draught.

Above all have a good-sized yard for the sheep so they may have lots of exercise, as this is one of the things of greatest importance, especially to the breeding eye.

My own pen has a shanty roof built at the end of my barn. The walls are single board and battened. I have also found the barn floor a good sheep pen. The main object is to keep the sheep dry, give lots of fresh air, and exercise and keep all other stock away from them.—G. H. Mark, Victoria Co., Ont., in Farm and Dairy.

To guarantee strictly fresh eggs they must be shipped twice a week, though in the depths of winter one can safely put the shipping down to once every week, and then the eggs will be guaranteed.

Tailoring for Men and Ladies

Goods by the yard for heavy long coats and suits. Buttons and trimming a specialty.

We earnestly request you to give us a call Winter Fair week and look over our goods, They are English imports and our prices are keenly cut.

We claim to have a greater knowledge of cloth than possibly any other firm in the province, having been 20 years studying the cloth problem, on the home makers markets.

Value to **you** is the result of this experience.

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Special courses for MEN and for LADIES open FREE to all students from the Maritime Provinces. In the past these courses have been attended by people of all ages from sixteen to over seventy.

In the Men's Short Course

instruction will be given in Judging, Feeding, and Management of Live Stock of all kinds, Soil Cultivation, Crops, Seeds, Horticulture, Dairying, Veterinary Practise, Poultry, and, if requested, classes will be provided in Entomology, Botany, Chemistry, etc.

The Ladies Course

will include Dairying (especially Butter and Soft Cheese making), Poultry, Gardening, Floriculture and Domestic Science. A women's Institute Convention will be held on January 13th and 14th.

The 1914 Short Course promises to be the best course yet held. Do not fail to attend.

All Railways in the Maritime Provinces will give single fare on Standard Certificate plan.

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GIFTS GALORE ARE OFFERED

In Your EATON Catalogue

JUST THINK!—Christmas is almost with us. A few more weeks and then the joyous season begins. With it comes, of course, the usual tokens of goodwill—the giving and receiving of gifts. "What shall it be?" is the premier thought in most minds, and to many it becomes a great problem indeed. Those of you who have a copy of our Fall and Winter Catalogue need have no such experience. We say this advisedly, because we believe that if you will but take the trouble to look through your catalogue you will find it a veritable storehouse of worthy merchandise. Further than that, there are many pages which list just such articles that are of popular choice and pleasurable interest.

THE TIME TO BUY IS NOW—AND THE REASON WHY

So many conditions may later arise that it is well for us to buy gifts early. To put off your purchase too long often brings disappointment. Sit down now and give this matter your earnest consideration and make your choice while stocks are large and varied. Do not forget, also, that ours is not primarily a Christmas catalogue but a comprehensive showing of articles of daily use in the home or the personal requirement.

If you have mislaid your catalogue, or have not now one from any reason, we will be glad to mail a copy free if you will send us your name and address.

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- SMOKING SETS
- SHAVING SETS
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- UMBRELLAS
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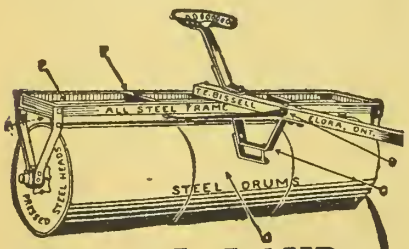

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are all steel except the Pole. They are braced and stayed to stand all kinds of hard work and wear well. The entire frame, bottom and all, is built of steel. The (18) anti-friction Roller Bearings make light draught.

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Treatment of Mare After Weaning.

Beyond examining their udder morning and evening for two or three days to see that is does not become unduly filled with milk and shows no undue heat, brood mares do not ordinarily call for any special attention after their foal has been weaned and separated from them. Their milk generally dries up pretty quickly of its own accord, especially when they are brought into regular work or are already being worked. If necessary, a little milk may be drawn off with the fingers for a few times, so as to relieve the tension, until the flow finally subsides, but it is a great mistake to empty the udder, for that will only result in encouraging renewed secretion. If the flow appears unduly active, as may be the case when the foal is weaned at an early age, and if the udder in consquence becomes much distended, an application of vinegar, repeated once or twice if required on successive days, will do good, this having the effect of making the vessel contract and reducing fresh secretion. Should the udder harden and get hot, a useful remedy is to rub some goose fat well into the skin twice daily. Lanoline may also be used for this purpose, but it is not so good. Some use linseed oil; this, however, is the least effective. Sometimes physicking is resorted to after the foal has been weaned, in order to check the milk flow, but ordinarily there is no need for this drastic measure, and it ought certainly not to be resorted to unnecessarily, for it might easily do harm. If a medicinal agent should be required, probably the best is a dose of Epsom salts, which will exert a distinctly trying effect on the lacteal secretion. The dietary of mares after weaning may be as usual, and there is generally no harm in leaving a mare out at grass if she is to be kept turned away. Only in cases when she still has much milk, and trouble on that score is apprehended, will it be advisable to keep her up and put her on dry fare for a few days till her milk leaves her.

Care of the Feet, Mane and Tail.

The care of the feet, mane and tail is probably more often neglected than any other step. Besides the usual daily brushing of the mane and tail, we should at frequent intervals wash them. Washing with warm water and castile soap, rinsing with cold water, and then rubbing till almost dry, gives good results. Washing not only cleanses the tail thoroughly, but induces a great growth of hair. The care of the hoof means cleaning out the sole with a hoof hook, washing out the sole and the outside of the hoof with water and sponge and wiping them quite dry with a rag. Many times this means the discovery of nails picked up, or stone bruises, and if carefully attended to there would be little trouble with hoof diseases. It is essential that the hoof be wiped dry after each washing, for if it is left to dry alone the hoof soon becomes brittle and liable to crack. The use of hoof preparation is sometimes visable. A very light application of vaseline is all that is ever necessary for a healthy hoof.

Skim milk is one of the by-products of the dairy that is usually undervalued. It is valuable when given to the growing chickens and laying hens, and is well nigh indispensible to the greatest success in pig raising. When feeding skim milk, it should always be remembered that protein, or muscle forming food, is its most valuable consistent, and that therefore it ought to be balanced up by other foods containing fatty elements of some sort.

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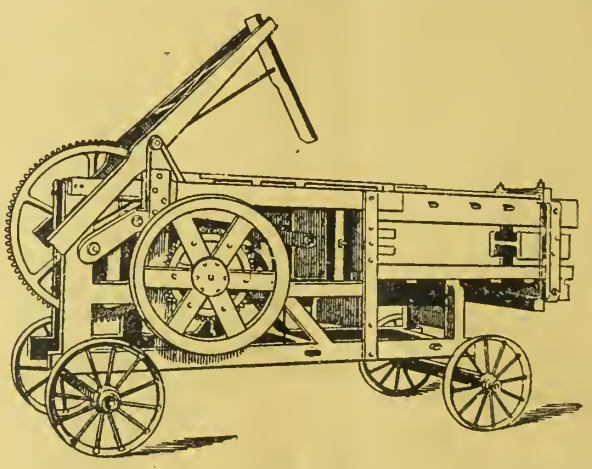

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Volume 19. SUSSEX, NEW BRUNSWICK, DECEMBER 9, 1913. Number 5.

Influence of the General Purpose Cow on the High Cost of Living

By Bliss M. Fawcett. Upper Sackville, N. B

THE general topic of conversation people is the high cost of living these days, amongst all classes ing. The subject has become so universal that, whenever an exhibition is opened, invariably the speakers wonder about the cost of food stuffs these days as compared with former years. All statesmen, leaders of Government, and the Cabinet members of Canada and the United States, never finish a speech without referring to the troublesome question of how to account for the high price of every-thing necessary to sustain life.

This state of things has been going on for some years. Every person has an idea of the direct explanation of the matter, but still, day by day, and month by month, the prices soar higher than ever. Some people blame the governments, and get wonderfullyagitated that our representatives will allow such a state of things. Others will bluster away and blame large co-operations for joining together and raising prices to add fresh feathers to their nest. Then a good number, mostly those who do not know a bullock from an elephant, will add coals of fire on the head of the meek and lowly agriculturist and declare that he alone is the cause of making them pay double for everything neccessary to keep body and soul together.

And still the prices rise and the lamentations become louder and louder, till now, from the Atlantic to the Pacific, the cry goes forth, "What shall we do to exist?" Surely they say, there is a remedy. To relieve the strenuous situation all classes of people are clamoring for higher salaries. Brotherhoods of trainmen meet by hundreds and demand an increase or they will refuse to move a train. Al labor organizations are agitating for better conditions, even the humble senators of Canada, during last season declared they could not live at Ottawa for six months on $3,000 but must in future have $5,000, annually.

The universal cry then is, "Oh, brother man, relieve us, we beseech thee, of the terrors now, and those that are to come."

John Gardhouse, Esq., of Ontaro, at the live stock convention at Ottawa in 1912 told us, that in order to keep up the high standard of the Shorthorn cattle, it would be necessary to pay more attention to the milking qualities of that breed.

I will go farther and say that I believe the only sound solution of the high cost of living is in the milking Shorthorn or the general purpose cow.

Now I hear men say "what an extravagant expression, that a Shorthorn with a large udder can possibly be the means of relieving all Christendom of the motly question of, 'Where withal shall I be clothed.' "

Yet it is a stubborn fact, my Canadian farmer, that unless we restock the old farms of this fair Dominion with a different class of stock from what we now have that we can never produce what has been our privilege for years past.

We know pretty well if we have farmed at all that live stock is the bank of any good farmer. We know also that all humanity must eat beef, pork, butter, cheese, etc., daily..

I have said that I believe the Dairy Shorthorn is the only panacea for renewing the old worn out farms and the only animal that will give a profit, not only as a milk producing but an animal capable of raising a steer which when finished will bring the highest market price.

Barnann has said "that the people like to be fooled part of the time; but you couldn't fool all the people all the time." We well know there are two distinct classes of Shorthorns. One class will produce from 6,000 to 10,000 pounds of milk annually and raise a steer large and rangy with plenty of bone, which when fattened, will bring from six to seven cents a pound, live weight, and average 1600 pounds at 3 years of age.

The other class is a low down animal, short-legged, very compact and has been bred for years to appear in the show ring, so square and blocky that the judges universally say, this is almost a perfect animal. This creature's dam would not produce enough milk to raise a pair of twin boys.

That beast, my dear Canadian beef eater is the one animal that has caused you to dig deep into your purse to pay for the juicy steak.

Well now, says the beef ring judges, isn't that preposterous indeed, to say such things. Haven't we, for years, been getting the exhibitors to get the animal more symmetrical and so square back of the shoulder and broad in the back that at least, this beast has not only beaten everything in Canadian and United States fairs, but has brought when sold, as high as 13 cents a poand, live weight.

Yes, gentlemen, this is all true enough and so correct that I say again and again that this very animal is the direct cause of the high price of meats the world over.

I don't intend to say anything against fat stock shows or exhibitions because I believe they do a lot to benefit the agricultural class and to help make life worth while.

But I will say, Mr. Editor, that the everlasting education of so much perfection in the show ring has caused many a Canadian farmer to try and be the individual who will be honored at the fair with this beautiful beast for he is certainly beautiful to behold, yet to produce this model the milking qualities have been neglected altogether.

In many cases the calf has been taken from its dam and reared by one or two dairy cows, as its own mother would not produce enough butter fat to oil a pancake griddle for an ordinary sized family.

I say in that so many farmers have followed this line of education that now the world finds itself face to face with a beef famine. This is so because it does not pay any man to raise a calf to maturity by taking all its mother's milk for the first six months of its life.

In fitting the exhibition steer only one individual can get to the top. His competitor, with an animal perhaps almost equal to the other goes home without any prize money and cost more to rear than his carcass will realize for beef. He tries the game a few times and finally says it doesn't pay unless we get the red ribbon. Finally he stops and finds himself with a dozen cows with udders about the size of a goat's. me truly concludes it doesn't pay to raise a calf for the beef alone.

That being the case he wonders to himself. What will I do? I will get Holsteins, Jerseys, Ayrshires or Guernseys and become a dairyman. So he does and makes a success of it, too, but does that help the beef industry? Not a bit. If he raises the steer calf, from any of these breeds, what happens? Why, he is put on the Toronto or Chicago markets half fattened with no beef build and is sold for 2 to 3 cents a pound and is used for canners or fox feed. Next time he gives the calf at birth a tap under the ear with a hammer and gives the carcass to the cows. This process has been going on for years. Less cattle are raised year by year, while the population has increased and more beef is consumed than formerly.

Now I hear the people say, "where oh where, is this wonderful animal that can do so much to relieve the people of this fair Dominion."

Is she like the new theology, a development of the monkey that has only recently breathed the breath of life? Or is she the animal that all humanity has so long sought alter, "the missing link." It is quite probable she sailed with "Noah in the Ark" as he would scarcely have dared to set forth on so long a voyage without any of the dairy breeds when so much milk and beef was required to feed his flock.

We look to the dear old mother land, Great Britain, now-a-days for almost everything that will better the conditions of man. We point with pride to the many excellent Shorthorn bulls that have been imported from Scotland costing the Canadian breeder one hundred guineas each.

Where we have failed is in not importing from England enough of the dairy type of Shorthorns. We know very well that many farmers have their own herds of from 10 to 30 cows that produce milk equal to the best dairy breeds on earth.

My father, who is now an old man, imported fifty years ago, one of those animals landing him at Baie Verte in a sailing vessel. As a boy my mother took me to the barn and gave me my first lesson in milking. the progeny of this animal. Many the cow have we had from that stock that required 1½ pails to hold her milk. A good number of these bulls at that time were placed asound this section of New Brunswick.

In consequence of breeding quite generally this kind of animal hundreds of excellent beef animals were raised complete,y filling the markets of the Maritime Provinces. Thirty years ago prices were good in Great Britain with no embargo. The town of Sackville where I live, had the grand distinction of shipping the first cattle from the Provinces if not Canada that ever crossed the Atlantic. I had the pleasure of taking over 100 head the last shipment ever sent from this section. They sold at auction in October, at Forfar, Scotland, in competition with thousands of Scottish cattle and averaged £21 each.

Shortly after this, Canadian cattle had to be slaughtered on arrival, and in consequence, not a beast has left these shores for twenty-five years.

Somebody will perhaps conclude that those 100 steers must have been pretty good stuff. Yes they were, but hundreds could be gathered at that time, that were just as good. And they were of the offspring of the general purpose cow, never seeing new milk but perhaps the first two weeks of its life.

Everybody kept a good number of hogs to use up the large quantities

With this kind of farming the turn off was butter and cheese, beef and Pork. What has happened since that date the Ontario Breeders of Short-Shorthorns have imported from Scotland hundreds of the low set bulls to suit the education given in the show ring.

In turn some of us have bought many bulls from Ontario. They have been bred to the good old General purpose type and repeated so many times to the low set bulls that, now we find ourselves with cows giving about half what they did in former years.

The result is that not one quarter the number of cows are kept, as, were here 25 years ago.

You will perhaps begin to see now my city brother why you pay so high for your beef.

Unlessa change is made, and that, very soon, our surloin roasts will cost so much that only the rich will be able to buy them.

Wellthe beef ring judge says, you blame the low set shorthorn for all this trouble, give us the remedy.

Certainly Sir, first, at all the Fat Stock shows and exhibitions in Canada and United States, give large preuims to the General purpose cow and her offspring.

In giving rewards make it compulsary that a statement of the quantity of milk that the dam has given annually be handed in when entries are being made.

Then when a rangy well built steer comes into the ring with some daylight under him and looks as though he hadn't all his life been getting all the butterfat of two cows and then everything that would tempt the beast to lay on more flesh.

I say when he appears tell the people this is the chap that is the salvation of the nation.

Then let a number of us wait on the Provincial Governments of Canada and say, we wish you to import from England a large number of the heavy milking shorthorn blood, whose dams have produced nothing less than 6,0-00 lbs. annually. Have them sold in different parts of the Provinces, and to be owned by the Govt. until they are 10 years old.

Have them exchanged three different times, during the 10 years, after which the bull becomes the property of the last owner. In this way either private individuals or agricultural societies could purchase an animal, and after 10 years it would become the owner of the purchaser.

I will venture the assertion that I believe these bulls well selected will sell at auction and pay cost price.

What would happen in 10 years of such an education?

People from Vancouver to Halifax would begin again to raise stock. In three years hundreds and thousands more steers would be offered for sale. In 10 years this North American continent would be growing cattle enough to supply its own markets and have enough and to share with the mother land.

I will assert again that if this policy is carried out that many vexed questions will be solved.

Instead of the boys rushing to the cities as they do now, they will see that nothing on earth is so uplifting as the noble pursuit of digging into the earth and making it produce every living thing so necessary for the voyage through life. By keeping more stock he will see the futility of his soil increased. Go with him into the meadows and behold the contentment of a well fed herd of animals.

Go into the market and you will find (not produce imported from the ends of the earth to feed the people) but instead there will be everything of every kind grown in our own fair land.

I say my brother farmer, restock the old farms with the General purcow then the north winds of winter the draughts of summer or the floods of spring will in no wise disturb us, because our barns will be filled with plenty and no man need want.

Come back from the city my boy, roll up your sleeves to the shoulder, don't be afraid to milk half a dozen cows at any time. In doing these things the rose will come to the cheek, our fathers will rejoice that the prodigal has returned. Your purses will need enlarging.

Peace and contentment will rule in the land, and our beloved Canada will "blossom as the rose."

Respectively.
BLISS M. FAWCETT.
Sackville, N. B.

This picture is one single hill of potatoes in each case grown from home mixed fertilizer and a high-grade factory mixed article. The hills represent an average for the field and the rows were side by side. Everything was equal so far as we knew with the exception of the difference in the fertilizers. The home mixed goods cost about $29.00 per ton, while the factory mixed article cost $42.00. There was as much difference in the crop as the picture would indicate.

A Live Agricultural Society.

The annual meeting of Agricultural Society Na 23, held at Kingston, November 25th was one of the best in the history of the society. Owing to the awakened interested in the more economical purchase of commercial fertilizers a very large number of the members were present at the meeting and close attention and enthusiastic interest marked the proceedings throughout.

The President, Mr. Geo. Bruce, of Kingston presided at the meeting. The first business of the meeting was the presentation of the financial and annual reports by the secretary, Mr. A. R. Wetmore, of Clifton. The reports showed the society to be in a flourishing condition. In addition to the handling the usual quantity of fertilizer and seeds, the society had during the past year purchased a number of pure-bred Jerseys and Ayrshires, which later were sold by public auction to the members of the society.

Followingthe reports of the secretary the subject of purchasing commercial fertilizers and of reducing the cost was discussed. The judge gave an outline of a scheme which would reduce the price paid at present by the society by about eight dollars and fifty cents per ton and mean a saving of practically fifteen hundred dollars to the members of this society. Arrangements could be made with the bank to make this purchase for cash providing the directors of the society sign a bond guaranteeing the payment for fertilizers so purchased. ference held in St. John recently between Dr. Landry and his agricultural officials and the secretaries of the Agricultural Societies. At this conference it was agreed that, if the societies would combine and buy fertilizing ingredients, though a committee, as one individual the government would guarantee the bonds of that committee. If this scheme is carried out, and every effort is being made to make it go, a further reductiom in the price would be made. The societies would get the benefit of the purchasing of large quantities and of buying seed from the syndicates.

The secretary also spoke of a con-

R. J. Murray of St. John, who has been interested for some time in reducing the cost of fertilizers, and H. B. Durost, Provincial expert on fertilizers were present at the meeting and both followed the secretary and pointed out the benefits of purchasing through co-operation and from the use of universal fertilizers.

The proposal as set before the meeting was well received and the close of the meeting was marked with enthusiasm. The following resolution was moved by Mr. E. S. Carter of Rothesay and carried Resolved, That this society authorizes its directors to make such financial arrangements with any banking institution as will enable them to purchase fertilizer ingredients for the lowest cash price.

A Season's Work with Fertilizers.

Editor Maritime Farmer
Sussex N. B.

Dear Sir,

An outline of results from the work undertaken in the Sackville and Westmorland society last season with raw chemicals as a source of fertilizer for our crops may be of interest to some of your readers.

Our attention has been drawn to the desirability of using this class of fertilizer material from many experiments on different crops in a small way and this past season our executive decided to purchase in quantities for the members. We bought in car lots and had the farmers come to the car upon its arrival and get his supplies, thus doing away with much handling and storing. The large percentage of the mixed goods were made up for potatoes and would analyze what is commonly known as a 4. 8. 10 p.c. mixture.

To make mixture of this kind we would take 1000 lbs. of high grade Acid Phos., analysing 16 p.c. Available Phos. Acid and put that on the barn or shed floor and spread it all out level. This is not lumpy and is all ready for mixing. Next we would take 400 lbs. Muriate of Potash and place that evenly over the Acid. Phos., Next would come the Nitrate of Soda and we want 440 lbs. of this. This material is generally more or less lumpy and in order to make it fine we put on the bare floor and spank it with the back of a shovel or tamp it with a block of wood with handle attached. After this is stirred and pounded for a few minutes it is ready for the other pile and is placed on top.

The pile is now shoveled over twice doing it of course as carefully as you can, seeing that the shovel full is distributed over the surface of the whole pile. The material is now ready for use and may be placed in bags or barrels. While the amounts mentioned here will give you a few lbs. short of a ton weight you will get the ton value and besides will not be paying freight and handling a lot of useless fillor.

A ton of material made up in this way is a very high article and you can easily see it could not contain much filler to the ton, but in making up what is called a low grade article as for example a 2.6.5 p.c. (high grade) 750 lbs. and Muriate of Potash 200 lbs. This only makes a total weight of 1170 lbs. and in order for the manufacturer to make this up to 2000 lbs. or a ton a large amount of useless material must be added, because I must say right here that only the guaranteed available part of fertilizer is paid for and to make one of this analysis it only requires the amounts mentioned.

Now in mixing these materials I must say that any farmer who can handle a barn shovel can do it and do it well. The material will give no trouble in a potato planter and now we come to the results. Our members were all satisfied perfectly and some even go so far as to say that they will not buy commercial fertilizer at all after this, il they cannot get raw chemicals' Some of us never had such crops (potato) io our experience, while for turnips a different composition of the materials gave the growers immense yields.

A few words as to the cost and I am done. Factory mixed goods with the first mentioned analysis usually retail for about $45.00 per ton fall payment. Of course we bought our chemicals for cash and a ton of this mixture would only cost the farmer $30.00. Fertilizer with the second mentioned analysis usually retails for about $33.00 per ton, while this of ours could be sold for about $16.00 per ton.

We are showing our continued faith in this matter by already placing our orders for enough chemicals to mix 200 tons of fertilizer. No more expensive goods for us. If there is any particular point I have not made perfectly clear in this matter I will

be only to pleased if possible to give the desired information.

Trusting that these few remarks may be of use I am

Respectfully

Sackville and West. Agr. Sc.

C. Fred Fawcett, President.

Glengarnock Victor II. is King of all Grades.

J. D. McGregor of Brandon has pullled off the Grand Championship of the International Live Stock Show of Chicago, the bigest show of its kind on earth.

Glencarnock Victor II. has downed all comers in the steer classes, and there were scores of them. He was first in the class as a grade yearling then champion of all grades and cross-breds, and then champion of all yearlings, and finally grand champion over all pure breds and grades. He was bred by J. D. McGregor. His sire was Golden Gleam, and he is out of the same dam as last year's champion. His grand-dam was an ordinary red nurse cow. He has been fed on nothing that cannot be grown on any Canadian farm—namely, barley and oat chop, turnips, oat sheaves, prairie hay, and a very little linseed meal. He would not know corn if he met it.

The greatest triumph of all was that he was fed by young Harry Bowman, a boy not yet seventeen, who had no special training as a feeder, but he has cared for his calf from birth, and Mr. McGregor would not allow him to be interferred with by any of his older and more experienced feeders.

It is the first time in the history of the International that the Sweepstakes Grand Championship of the show has been won twice in succession by an individual breeder. Once previously Ames College won two years in succession. It is the third time the championship has gone to Canada. In addition to this win, J. D. McGregor also won this morning the first place in the class, three steers out of one sire. These steers were all the get of Golden Gleam, who sired the grand champion.

In the sheep barns Ontario continued to do herself proud. The grand championship to John Campbell of Woodville was awarded almost at the moment when the McGregor steer topped the cattle rings, and was an exact repetition of the performance last year. In 1912 Campbell won the pure-bred Shropshire wether, this time with a very handsome grade of the same breed. Experts pronounced him a superb sheep. The champion car lot of sheep came from Idaho and were fed by Knollin and Finch.

Canada won the bulk of honors for fat Lincolns, having the champion wether, owned by H. M. Lee,, Highgate, Ont., who also won three firsts. Fat Cotswood classes were all won by J. B. Brien, Ridgetown, who also won the championship in the Dorset division. Fat Oxford prizes, including firsts and championship, went to R. H. Stone.

There were 783 entries of Percheron horses, and the major portion of these entries were on the ground, Chicago has had some magnificent shows of Percherons in the past, but nothing to touch the 1913 show in either numbers or quality. Every large Percheron stud farm in the United States was represented, and not a few of the smaller ones. Robert Graham of Claremont, Ont., was one of the judges.

R. R. Ness, Howick, Quebec, made a big sweep in Ayrshire winnings.

Middleton Wool and Fur Company.

For several years past our townsman, E. T. Neily has been studying the sheep raising problem. While living on his farm at Brooklyn and caring for a small flock of sheep, along with the other branches of farming, he had an excellent opportunity to become acquainted with the problem.

As he watched the steady decline of the sheep industry in the Maritime Provinces and the growing demand for all the products of the sheep he saw the improving conditions of this department of animal husbandry. The fact that during the last dozen years theprices for mutton and lamb have increased by a 100 and for wool and pelts by 50 to 75 per cent and that the markets are calling for all these products convinced him that there is a profitable field of investment in sheep raising if but conducted in the right way.

After moving to Middleton last year Mr. Neily began to talk the sheep industry to our citizens, and found such a ready response that he decided to organize a company. Accordingly on March the first last the Middleton Wool & Fur Co. Limited, was organized with authorized capital of $30,000. The directors of the company are: Dr. S. N. Miller, president; Capt. J. H. Charlton, vice-president; E. T. Neily, managing director; Mayor Gouncer; Dr. F. S. Massinger; A. W. Allen and Capt. F. A. Brown. J. R. Allen is secretary-treasurer, W. G. Parsons, solicitor the prices for mutton and lamb have bankers.

The first intention was to raise $6000 or $7000 capital and start sheep ranch in a small way, but as the problem was examined and the experience of sheep ranches in other places compared, it was seen that the best results would be obtained by securing a caretaker especially trained in the work, that he could superintend a large as well as a small flock, and that the sheep must be guarded both night and day. The advantages of going into the enterprise on a larger scale than at first intended were therefore recognized. The readiness of our citizens to subscribe to the stock list also encouraged Mr. Neily to enlarge his plans.

At present about $12,000 of capital has been subscribed, nearly all of which has been paid up. The remarkable fact in this connection is that stock is practically nearly all held in Middleton. When we consider the readiness with which in the past our citizens have subscribed capital in distant enterprises and their reluctance to invest at home, this result is creditable both to Mr. Neily and our citizens;

On Saturday last I accompanied Mr. Neily on a visit to the company's ranch. I was agreeably surprised to see the progress which, in a quiet way, has been made. Probably many of our readers scarcely knew that there was a real sheep ranch within two or three miles of Middleton.

The ranch is located in that rich, but little developed territory to the westward of Middleton midway between the Post road and the Brooklyn road. Over 130 acres of this fertile land lying just south of the H. & S. W. railway line was purchased from E. T. Neily and Isaac Moore and about 370 acres to the North of the Brooklyn road and extending up the side and over the North Mountain was bought from Chas. Wright and Oscar Neily.

An elevation in the first mentioned block of land afforded a suitable place for winter quarters for the sheep. Accordingly in September last a contract was given to W. K. Beals to erect four barns each 75x20 feet. A residence close by is also now being completedf

Beforetheir plans were carried out, however, James A. Teifer, of the live stock branch of the department of agriculture, Ottawa, was consulted. After a visit to Middleton Mr. Telfer wrote, "Having made a personal inspection of the property and given the matter some careful thought, I cannot help but say that for sheep farming the situation is ideal, and by careful management the business should be made to return large profits to the shareholders."

In October the sheep, which were selected in the province began to arrive on the ranch. There are now 200 sheep on the grounds and 100 more are expected before the end of the year. The intention is to work into thoroughbreds, and the Oxford Down is the breed that has been chosen. On Monday four fine thoroughbred rams of this breed arrived from Ontario for the company.

For caretaker W. A. Hayden has been engaged. He was reared on a sheep farm near Birmingham, England, and is a trained shepherd. He informed me that he is much pleased and the prospects are excellent for successful sheep raising.

On the land purchased from Mr. Neily by the company there has been a large skunk colony for many years Skunk raising is something which Mr. Neily has also been studying for some time and he believes it is the safest and one of the most profitable lines of fur farming. The price of pelts which a few years ago was fifty cents is now from $4.00 to $10.00, probably averaging $5.00. Skunks multiply rapidly, as each female raises a litter of from four to eleven yearly.

Five acres of the ground occupied by the skunk colony is being enclosed and protected below the ground after the manner of a fox ranch. Twenty enclosures twenty yards square are being made within. Five dens will be made in each of these yards.

About 120 skunks are now on the ranch. A winter burrow in which they can hibernate is being built in each yard. Five females and a male will spend the winter in each of these. In the spring at breeding time the males will be femoved and each female will be given a separate den.

The nearer the skunk is to a perfect black the more it is worth. It is the intention to import black males from a noted ranch near Chicago and breed toward the pure blacks.

The aim of the company is to increase the capital to about $20,000 With this secured the number of sheep would be increased to 1000, the skunks to 500 and possibly the breeding of thoroughbred horses and cattle would be taken up.

With the fine property secured, the enterprise well organized, the readiness with which all the products of the sheep can be disposed of at high prices and the hardiness and prolificness of the skunk, Mr. Neily believes that his enterprise offers to investors something which will prove highly remunerative and comparatively free from risks.—F. E. Cox, Middleton.

The Multiplying Power of Good Seed

In connection with the proposed auctioning in pint lots of Paul Gerlach's prize winning bushel of Marquis wheat, grown at Allan, Saskatchewan and successful in capturing the sweepstakes award at this year's Dry Farmed Products Exposition, Secretary Burns has made a statement that is worthy of attention. He says:

"Planted next year on a seed plot 40x40 feet and properly cared for, a pint of this wheat should yield enough good seed by the third year to plant a 240-acre farm."

When one remembers that it takes 64 pints of seed to make a bushel, and that one pint would have an increase 55,360 times to plant 240 arres with one bushel to the acre, it looks like as though this is asking that single pint of seed to do something almost miraculous. But let us do a little figuring. Supposing one obtains a yield from 25 bushels rom one bushel (not at all an impossible or unusual result where good care is given and good seed is used) we find that by the end of the third season, continuing at this rate of multiplication, one has 15,625 pints, equal to 240 bushels, with still 265 pints left over. This would enable one to seed the 240 acres with just a trifle over one bushel and one pint per acre.

There is a useful moral to be pointed right here. Many farmers despise small lots of seed and make little or no effort to keep them separate for multiplication purposes. They have not grasped the fact that small lots multiply rapidly and that, no matter how small the nucleus, it is worth caring for if it is really of superior quality. A few years ago one of our leading Canadian farm journals even went so far as to condemn the sending out of three pound lots of pure seed from the Central Experimental Farm at Ottawa, claiming in effect that no self-respecting farmer would ever multiply such a trivial amount to any practical proportions. The writer of this article, out of his own personal experience with these identical samples of seed, knows that such a contention is all wrong, and that three pounds of seed, or even one pound of seed, can produce enough to seed a whole farm in a very short number of years. Why, our new hybrid varieties of grains, like the Marquis wheat, for example, have been bred up from a single kernel!

Let no farmer who has a small lot of seed of high grade quality despise its lack of bulk and lose it by throwing it into the thresher with the rest of the crop or doing away with it in some other foolish way. Take care of it; beat it out with astick the first year if necessary; no one will be hurt by having to do this. And in three years it may seed the farm. Take care of all superior lots of seed, no matter how small.

Island Seed Oats Give Results in Australia.

At a meeting of the Banner Oat Club held in Summerside recently the secretary had several very pleasant communications to read to those present. Among them were the following:

"Dear Sir,—Your letter of inquiry dated Nov. 15th duly received. In reply I have much pleasure in stating that the seed oaes purchased from the Banner Oat Club of Prince Edward Island were received in good condition last spring and were distributed to different parts of the municipality by members of the Good Seed Association of Melbourne and in every case they have proved entirely satisfactory.

This has been a good year for oats in this part of the township.

One of the farmers told me over the phone this morning that he had threshed four hundred bushels of splendid oats from your seed from fifteen bushels sown. This is a fair example of how your oats turned out. I need not say more.

Wishing the Banner Oat Club every success, I remain,

Yours sincerely,

J. J. Brightin, Sec'y-Treas.

Upper Melbourne Agricultural Association, November 22nd, 1913.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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DECEMBER 9, 1913.

DATES OF ISSUE.

December 23
January 13-27

SHORT COURSE AT THE AGRICULTURAL COLLEGE, TRURO

Arrangements are being completed at the Agricultural College, Truro, Nova Scotia, for the most complete Short Course held in the history of the institution. The buildings which have been in the course of construction during the past two years, are now completed; the faculty has been augmented; and the laboratories and class rooms and stable equipment are all in the best of order.

In previous years, with much less accommodation, the college management have been able to cope with a Short Course class of considerably over 300. The provisions now made will make possible the carrying on of even larger classes and with much less crush.

Never has the college been in such a shape to give instruction in live stock! In the dairy stables are to be found a collection of cows, several of which will probably be producing during the Short Course from three to four lbs. of butter per day. Only last week a two-year-old old heifer bred on the College Farm produced 18.3 lbs. of butter in seven days. The opportunity to examine such stock both in the stable and in the judging pavillion is an education in itself. Great interest too will attach to the dual purpose Shorthorn herd which is being gathered together on the College Fgrm and which will form the centre of some interesting discussions on the place of the dual purpose cow in the Maritime Provinces. Equally interesting will the instruction be in horses, sheep, swine and poultry!

The facilities for instruction in Horticulture have been very much improved during the past year and it is planned to give in addition to the instruction in orcharding, a most thorough course in vegetable gardening. In this connection the Horticultural Superintendent is just now making a specialty of mushroom growing and it should be a matter of peculiar interest to see these valuable fungi that can be sold at from 50c to $1.00 per lb. growing and being harvested.

Equally interesting and instructive will be the work in the various departments, but it is impossible in the columns of a paper to give any accurate idea of the extent and thoroughness of the instruction. Every farmer and farmer's son in the Maritime Provinces who can arrange to leave home from January 6th to 16th should certainly plan to be present.

A Short Course too will be given for ladies at the same time and Miss Fraser, who has been appointed Superintendent of Women's Institutes in Nova Scotia, is preparing a most interesting and attractive program for this course. Instruction will be given in Domestic Science, Dairying, Poultry Raising, Flower and Vegetable Growing, etc.

All that it costs any student from the Maritime Provinces to attend this Short Course is a single railway fare and board for ten days. Tuition is free. In previous years students have attended whose ages have ranged all the way from sixteen to over seventy years and we are safe in stating that from no single line of educational work has so much good accrued to the larmers of the Maritime Provinces.

CHEAPER FERTILIZERS FOR THE FARMERS

The much mooted question of cheaper agricultural fertilizers for the farmers of New Brunswick, has after years of discussion at the New Brunswick Farmers' and Dairymen's Association meetings shaped into definite action.

A week or two ago several interested farmers met Dr. Landry, Minister for Agriculture and J. B. Daggett, Secretary for Agriculture in St. John and laid a scheme before them which met with the approval of the Department.

A central organization is being incorporated which will be unpolitical and known as United Farmers Limited, whose bonds will be guaranteed by the Government. They will purchase fertilizers and fertilizing ingredients direct from the sources of supply and supply it to the farmers at cost plus incidental expenses through their agricultural societies. The executives of the local agricultural societies will give the bonds of their societies to the central organization for whatever amount they may purchase. The societies will in turn collect the cash or its equivalent given by the users of the fertilizers.

So great will be the saving to our farmers in the purchase of even small quantities of fertilizers that they cannot afford to remain outside the membership of their nearest agricultural society. In some cases the saving will amount to fifty per cent. of current prices.

WHAT EDUCATION IS DOING

Is it any wonder that the boys and girls have been anxious to get off the farm, until, if perhaps they have been compelled to remain there by untoward circumstances or have not had the vitality or strength of character to tear themselves away, they have become so dulled in mind and body that relief from their burden of toil and isolation would have failed to bring its desired end?

It were not possible that this should have been the condition of every farm or every farmer, but it has been sufficiently true to have made an almost irreparable injury to the standing of the farmer among the men of all other business and professions. And there has been a change. Education is bringing the profession and the practise of farming into a condition which is somewhat commensurate with its importance as that which provides life and comfort for the people, turns the wheels of commerce and makes possible all that we enjoy and all that life worth living as well as possible. Education is making the life and work of the farmer less a sordid pursuit, which it never should have been. Education is making the farmer the independent man that song and legend have long declared he ought to be. Education is bringing home to the youth of the farm, the young man and maiden, the joys, the beauties and the satisfaction of the country and is keeping them upon the farm where they belong and where we most need them.

A long time ago, no, not so very long ago there was an idea prevalent that education would take a young man or a young woman away from the farm. The education of that day would and did do just that thing. But the education of today, the education of the farmer, is a different education. It is not the narrow kind that left a man fit for only a profession which required good clothes every day in the year; it is an education which fits him for the most noble profession of all, and for the work on which all mankind is dependent.

Today the man who sneers at education is to be pitied; always he was to be pitied, but in these days more than ever, for the sneers show how little he has kept pace with the progress of the times.

FARMYARD MANURE

Farmyard manure constitutes the basis of successful farming and should be cared for as much as any crop on the farm. The main thing is to maintain its quality, as bulk may add notning to its value. In many respects farmyard manure is the most important factor, because to a considerable extent the yield of the other crops is more or less dependent on it, so that in securing a large quantity of good manure, the farmer is aiding very materially in increasing the yield of the others. Profitable farming must have a foundation, and the best foundation is manure, far it not only influences the yield, but improves the quality of the products of the farm, and as the better quality realizes an enhanced price, the aim should be to excel in this respect. The fault of many who accumulate a large manure heap is that they rely too much on the quantity. The more concentrated the plant food in the heap, the lower the cost of spreading; hence quality should be maintained by not allowing of loss from rains or by overheating of the heap.

All manure, it makes no differecne whether it is hauled in the autumn, winter or spring, should bespread at once, and should never be left in piles, even for a short time, if one is to secure the greatest benefit from its application. This principal in the use of farm manure is not to be overlooked by the progressive and up-to-date farmer, and on all farms where the best results from manurial fertilizer are obtained the product of the stables is distributed upon the land as fast as it is made. The old-time piling method is an expensive one, not only from the standpoint of the real value of the manure, but in the matter of hauling as well. When left in piles the manure is leached by rains and the soil enriched by it is only of limited area, whereas, if it is finely and evenly spread over the entire surface the benefit derived is general and of far greater importance. In spreading manure, the finer it can be made and the more evenly it can be distributed over and through the soil, where it may be of use to the roots of all plants, the better results can be expected from it. Because of this fact the spreading becomes an essential element of the successful use of barnyard manure. In the past, spreading by hand has been the most common, and, in fact, about the only manner of distributing the material over the soil, but now the machine spreader worked by horse power is largely used and with most excellent and profitable results. Where mechanically distributed the manure is made very fine and reaches every root of the soil, just where it is of the most use and value. Whenever it is possible, we believe, the farmer should use a manure spreader, as it will be found one of the best paying investments ever made upon the farm. It will pay not only because it prepares and distributes the manure in the best possible manner, but because it will save much time and labor in handling. The saving of labour alone, where one has a large quantity of manure to apply annually, will soon go a good way in paying for the machine, to say nothing about the great additional gain secured from the use of the manure itself.

STATE AGRICULTURAL CONVENTIONS

The beginning of the year will introduce the annual provincial conventions season for 1914. This is an important period in the history of any Province. It is the season of the year that a rendering of accounts is made, the balancing of the books, the taking of an inventory and the planning for renewed energy for the work of the new year. The agricultural associations of all kinds have formed a kind of co-operative interest in holding their annual meetings, which is highly advantageous to the farmer and stockman, and every other specialty of an agricultural kind.

The organization of the persons engaged in each line of agricultural employment into associations for the mutual advantage of its members is the greatest incentive possible in the improvement and building up of these special lines of industry. This co-operative influence is a stimulus to better work, more study and direct investigation into the merits of the occupation, as a permanent source of revenue. It is the means of profitable production in our wordly pursuits, that is left entirely to our own choosing, and our best efforts should enter into every avenue of education that will assist in bringing results.

(Concluded on page 171)

Colchester and Cumberland Boys Win Generous Prizes

A former Nova Scotian who is now residing in New York and on whom Dame Fortune has besyowed a fair share of this world's goods, very generously donated a sum of money in 1912 to encourage turnip growing in the counties of Colchester and Cumberland, N. S. The college authorities at Truro were named as the custodians and awarders of the prizes.

The prizes were open for contribution to boys between 15 and 20 years of age who grew the best acre of turnips on their father's or guardians' farm, the assessed valuation of which did not exceed $3000.

So successful was the competition conducted in 1912 that the donor repeated his generous offer in 1913 and following is a list of the prize winners:

The first prize was $75.00, 2nd, $50.00, 3rd, $30.00 and 4th, $20.00.

It was further stipulated that the money was to be used:

1st.—For acquiring an agricultural education.

2nd.—Purchasing improved pure-bred live stock.

3rd.—Underdraining or otherwise the farm.

4th.—In such manner as may be approved by the following committee.—Prof. M. Cumming, Chas. Hill or F. L. Fuller.

The fields were judged by a scale of points, totalling 100, and in addition to the above named prizes the Provincial Government gave the 5th, 6th and 7th highest score $5.00 each, and the 8th and 9th $3.00 each, in each County.

The judging was done by S. J. Moore and F. L. Fuller of Truro and H. E. Brown, of Wallace Bay.

In Cumberland County there were fifteen competitors, with the following winners:

1st.—Manford Oulton, Lorneville, score, 90½.

2nd.—Roy Jackson, Lorneville, score 89½.

3rd.—Donald Tuttle, Wallace Bay, score, 88½.

4th.—Russell Wells, Wallace, score 85.

The next three winning $5.00 prizes were:

Laurie A. Brown, Pugwash, score, 83½.

Chas. T. Plimmer, Wallace Bay, score, 83½.

Lyman Chapman, Hastings, score, 83.

The next two winning $3.00 prizes were:

Geo. I. Herrett, Windham Hill, score, 82.

Alton B. Forshner, Wallace Bay, score, 81.

In Colchester, there were fourteen boys after the money, the successful ones being:

1st.—John A. Semple, Brule, score, 89.

2nd.—Frank S. Crowe, Old Barnes, score 88½.

3rd.—Earl Jennings, Masstown, score, 87.

4th.—Albert Burrows, Valley, score, 86.

The next three winning $5.00 prizes were:

Jas. Creelman, Halfway Brook, Stewiacke, score, 85½.

Lloyd Johnson, Cross Roads, Up. Stewiacke, score 84.

Baxter Fulton, Bass River, score, 82½.

The two winning $3.00 prizes were:

H. Kilminster, Mid. Stewiacke, score, 81½.

Wallace Bowers, Great Village, score, 81½.

This is the second year for the competition and last year, owing to the season being a very wet one, the results were largely due to soil conditions.

This year, although the best field did not come up to last year's yield, the present year's average is very much larger.

The outstanding feature this year was the advantage of thorough and continuous cultivation. Close observation of last year's growth helped many of the competitors. On the whole, much better seed was used and while last year some of the boys in their anxiety to win used too much stable manure and the result was rough turnips, this year these boys got better results with less stable manure and a little commercial fertilizer and plenty of cultivation. Others experimented with different kinds of fertilizers and adopted other methods which go toward the development of the highest type of farmers.

Another feature worthy of note was that the best turnip fields in the Province were those in the Competition. The largest yield was 1350 bushels per acre. The average of the prize winning fields was 1181 bushels.

That the gentleman who donated the money for this competition is generous is obvious, yet he is more than generous. In electing to encourage the growth of a crop which occupies such a prominent place in successful farming, and one the growth of which our Maritime Provinces is particularly well adapted, he has shown excellent judgment. Futhermore, the conditions of expending the money go to promote the highest ideals and the more lasting benefits to agriculture. If there are other sons of Maritime Canada who have the welfare of our Provinces at heart, they cannot do better than to follow so worthy an example.

Implements cost money. Put them under cover—NOW.

A Good Road in Compton County, Que.

Successful Ploughing Match at Lennoxville, Que.

Encouragement of Ploughing Matches

Ploughs have been modified to suit modern ideas of cultivation, but the change has been more towards speed in turning over the soil than in better methods of doing this. May it not be that speed in ploughing has been gained at te expense of efficiency in the work done?

Good ploughing is not so much a question of good ploughs as good ploughmen. Of late years we have depended more upon the plough itself than upon the man between the handles. Improvement in ploughing can be brought about by training men and boys to do better work.

In Ontario and Quebec there was a time when the annual ploughing match was an event of unusual importance in many localities. Interest in these competitions seems, unfortunately to have died out, particularly among the younger men. While they may not have been all that could be wished for from an educational standpoint, they were certainly an incentive to good ploughing. The scope of such matches could be widened to include contests in soil cultivation on stubble land and testing the different kinds of implements for cultivating the soil. Usually there are prizes given for the best plough-team and equipment. Why not extend this valuable feature by giving several prizes for teams and also for colts, thereby encouraging the raising of good horses? A few pithy addresses on farm topics would make the occasion still more instructive and interesting.

To get the best results from a ploughing match, it should be managed by the local Farmers' Institute or some kindred organization. Municipal Councils might very properly be urged to contribute, because undoubtedly the money so spent would assist greatly in improving the crops and stock of the neighborhood.—J. F.

Farm Machinery--Its Great Abuse

While it is true that many farms are not equipped as they should be with proper machinery, it is also true that hundreds of dollars are lost in unnecessary outlay, and thousands in unnecessary depreciation.

During the Agricultural Survey work conducted by the Lands Committee in 1913, some interesting facts in this connection were revealed. A farmer near Moosomin, Sask., who, after twelve years, was giving up farming, held an auction sale. His binder brought $80 and his other machinery sold proportionately high. It had all been well housed each year and the necessary repairing and painting had been done. On a neighboring farm a binder which had been used for only three years, but left out of doors and neglected during that time, went to the scrap heap and a new one was purchased. Conditions similar to the latter obtain over the whole of Canada, but more frequently in Western Canada. An implement house costs money, but if the depreciation on housed and well-cared-for machinery is only one-third or less of that on machinery left out of doors, it is good business to put a roof over the implements.—F. C. N.

A Good Road in Compton County, Que.

The above illustration shows what can be accomplished by men who always find time for improvements, even on the roads which adjoin or

pass their premises. Once the road is put in good order it takes but little time to keep it up. The split-log drag is kept in a convenient place, and at such times as is found necessary is run over the road, filling up ruts or any depressions. Each farmer takes his turn with the drag. Should extra labour be required it is mutually agreed upon.

If more farmers would be as public spirited there would be better roads and the cost and time to the farmer would scarcely be missed, and much good would be accomplished.

HORTICULTURE.

"I Guess It Will Do."

Within the past week a farmer came to me about spraying his apple trees, saying, "I have been over those which promise a fair bloom and I guess it will do."

Asked as to the relative importance of spraying the non-bearing trees to insure protection for next year, and his reply was, "Yes, I suppose I ought to go over them all, but I guess it will do."

How many of us take this position in our work; not alone in spraying fruit trees, but also in our general field of operations? When we escape direct calamity, it is counted clear gain; when bad results follow gradually, we content ourselves with the thought that "perhaps bad luck would come, anyway," and "it is no use to expect to get cream every day."

Apply guesswork to manufacturing and mills would be ruined, to machine shops and engines would not run, to banking and business would be at a standstill. Is farm work an exception? I remember the orchardist who, having sprayed thoroughly for several years, allowed a public demonstrator to experiment one season. In this experimental work a check plat was necessary, so, through the orchard, two rows of trees, fourteen to a row were left without spraying, the result being little fruit of those twenty-eight trees that year and not a normal crop for three years after. Failing to protect that one year, the injury by pests and diseaes prevented wood growth and bud development as indicated. You cannot caunt results by years. Things lap over and what we do today must be done not with an eye single to the crop of this year, but with the desire to open the way for better things next year and thereafter. If anyone should express thanks over the coming of the dreaded San Jose scale, he would be thought fit only for a straight jacket and close confinement in an insane asylum, yet it is a fact thas, in other New England States, the appearance of this deadly pest has resulted in the production of better fruit than ever was grown before. Spraying for the destruction of this scale has cleaned up orchards and protected trees. The heavy losses reported, of those orchards being wiped out by this pest, only tells of those who "guess it will do," and neglected the dormant spray. There's a right time to do everything, and if so, there must also be a wrong time, and the wrong time to spray for codling moth is before the blossoms open and petals drop, just as the wrong time to spray for the curly-leafed aphis or scab fungus is when we spray for protection against the codling moth. When will men learn that things must be done at the right time? The coming of the potato bug and the blight spore has been a blessing to every potato grower who sprays at the right time and with the right preparations. Those who spray to kill the bugs and "guess that will do," wake too often to find that the profits have gone in rotten potatoes. The only safe rule to follow with potatoes or apple trees is to spray, at the right time and with the right combinations, just as though certain there will be an infestation by every pest and the coming of every disease known.

There is no cure for injury inflicted, and our only salvation lies in complete protection. The man who waits until the potato slugs begin to eat before getting his sprayer started has, by negligence, invited loss. So it is with blight, or scale, or aphis, or codling moth. Never has Central Maine been threatened as this year with damage by the tent caperpillar, yet men will be found in every community who "guess they won't do much harm." When the leaves are stripped from the trees and the danage done, such men will be the first to talk about a dispensation of Providence.

There are difficulties in the path of the worker of 1913 not realized, if met, twenty-five years ago, but the recognition has brought also knowledge of means of protection, and there is no excuse for neglect.

Everywhere results are minimized simply because of failure to apply the simple means of protection. It costs 5 to 6 cents per tree for the dormant spray of lime-sulphur, before the buds of leaves start. It costs 5 cents per tree for the second spraying, when the buds are red, for the destruction of aphids and protection from scab, and 5½ cents for the third, after petals fall. This class of work will also destroy the San Jose Scale.

Now let us see, here is an expense of 16 cents per tree, large tree, figuring labor at $2 per day and horse at $1, but not allowing for wear and tear of sprayer. One-half cent will cover this, so that the total would be 16 cents for the year's work, spraying the apple trees. Is this burdesome? In view of the protection insured, the greatly increased per cent. of No. 1 apples sure to follow, it is the best investment the owner of an orchard can make. It means health and vigor to the trees, it means larger and better apples, it means practical freedom from worms and defects, but there's no chance for guesswork here. Whatever is done must be done thoroughly and this what pays everywhere.

Winter Protection of Young Apple Trees

Editor Maritime Farmer:—

Precautions must be taken to prevent injury from mice, rabbits, etc. Many failures in apple growing here and elsewhere are caused by these pests and a large annual toll in the form of dead trees is annually exacted by them. As far as possible crops harboring and attracting such pests should be avoided and the accumulation of litter, trash, weeds, long grass, etc., which furnish suitable winter quarters for these animals, prevented. Mice work under the snow and damage from them may be prevented by tramping the snow solid around the tree after the first few snowfalls. This method of protecting is, however, somewhat dependent on the weather. The cheapest and safest protection is secured by wrapping the trunks cylinder fashion with paper, wood veneer or some such material. Good strong building paper, as light as possible in color gives satisfaction. This may be placed round the trees in the fall, not tightly, but leaving an inch or so of space between the inside of the paper and the bark of the tree. The soil should then be mounded up around the bottom of the paper to a height of six inches or so. Veneer tree protectors, made of thin material, one-eighth inch thick, 12 inches wide, and costing about ½ cent each will last two and three years and afford good protection. The paper or veneer as the case may be should be removed in the spring, about the middle of April.

SUN SCALD.

This form of damage is very common is some localities, so common, in fact, that a tree which escapes it is a rarity. The greater part of the damage occurs in late winter, or during the warm spring days when the snow is going off. During the warm afternoons the sun, reflected from the snow against the south-west side of the tree trunks, becomes very warm. The trunks are thoroughly warmed on that side. They are thawed out, and the bark becomes soft, sappy and pliable. Then, when the sun goes down the temperature falls again to zero, the bark is again frozen tight. The next day the same thing happens and so day after day the young bark freezes and thaws, and by this means is torn to shreds. When spring arrives the bark is killed and broken open. The various kinds of fungi get in and the damage which begins by freezing and thawing ends with the spread of canker and other troubles all round the trunk of the tree. The best preventatives of sun scald are low heads and veneer and paper cylinder protectors. High-headed trees, which are of doubtful value anywhere are altogether undesirable in places where sun scald is bad. The protectors of paper or wood veneer recommend above for mice and rabbits will also give practical immunity from sun scald. This trouble is a very serious one. It is not uncommon to find entire young orchards ruined by it. In sections where this trouble is prevalent great pains should be taken to protect young orchards from it. For the benefit of the fruit growers, the Fruit Growers' Association has secured about 3.000 veneers and will fill orders for them at cost price. Apply to: The Secretary, N. B. Fruit Growers' Association, Fredericton.

Fire Blight of Apple Threatened.

At a recent Massachusetts fruit meeting Mr. Kinney, from the Pacific coast, spoke about fire blight of apples, telling what a serious matter it has become in the west. He also intimates that fire blight in New England. What are the facts? Is it anything like the pear blight.—A subscriber.

The fire blight of the pear and apple is the same, but in the past has given apple growers in New England little troible. Concerning this matter Prof. A. G. Gulley, of the Connecticut station has the following to sat: "While fire blight on the apple is identical as to disease, it is not as to results. I understand there is an epidemic of the disease from Lake Michigan east, far more serious than for some years past. Two years ago I saw if for the first time in the east

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PURITY

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One Cent a Word Ads.

Two letters last week from one cent a word advertisers, express to the Maritime Farmer their appreciation of the gratifying results following their investments. In each case tne amount invested was trivial. But it brought profits in the way of increased prices for articles offered for sale that surprised the advertisers. While one cent a word ads. are cheap, they are wonderful little messengers. They work while you work, or while you sleep for that matter, telling your story to thousands of Maritime Farmer readers. They never remain idle for a second; so when you want to sell something or buy something or do a hundred and one other things you want the public to know about, mail your one cent a word ad. to the Maritime Farmer, Sussex. As has been observed before the results will surprise you and the profits amaze you. In like manner if you want to get something, read the little ads. They may discover for you just what you have been looking for. Cash must accompany all ads. No ad. less than 25 cents.

in a young apple orchard. Now it is very common in Connecticut. It is not quite so bad on the apple as on the pear, since it does not always kill the tree, even if not removed.

"The remedy is to remove the disease, that is, cut it out of the tree. cutting well below any evidence of the trouble, no matter how much of the tree is removed. This will usually stop it in the apple, and often does so in the pear tree. However, cutting back of the pear does not stop it this season. The college has removed nearly a dozen large trees this year, some of which were nearly killed from the start. My hope is that the present serious outbreak may not run long. I regard the appearance of fire blight on the apple in the east as much more serious than being found on the pear, this at least, in Connecticut."

For the benefit of readers not familiar with the disease, it may be said it is easily recognized by the brown, dead leaves clinging to the dying branches, giving the appearance of having been scorched by fire, whence comes the name. Sometimes only a single branch or small twig is blighted, and in other cases the whole tree. It is a bacterial disease, and the minute organisms multiply rapidly, germs passing the winter in the growing bark layer of the twig. Later these germs may ooze out through a break in the bark along with the juices of the tree. The disease is favored by abundant moisture, and there are three points of attack; the flower, the opening leaf bud, and exposed portions of tissue upon the branches. In the case of the apples, the most common source of attack is through the blossom, according to J. J. Thomas, of New York.

The Maple Sugar Industry.

It may surprise many to learn that the maple sugar and syrup crop in Canada is worth about two million dollars per year. In the Province of Quebec, the industry has maintained a strong foothold, more especially in those countries that contain more or less rough and rocky land. In Ontario it also bulks large, and in New Brunswick and Nova Scotia considerable quantities of sugar and syrup are made each spring.

During recent years the industry has shown signs of decline, and in order to encourage the improvement the Hon. Martin Burrell, Minister of Agriculture, has authorized the preparation of a bulletin which should give it considerable support.

One cause of the decline is given as the poor quality of much of the goods made. On the authority of extensive dealers it is estimated that fully six ty per cent. of maple products do not grade above No. 4, and that this vast amount has to be sold for not more than half the price per pound of No. 1 goods, of which about 10 per cent. is made. On this account it is pointed out in the bulletin that makers are losing each year on quality alone, fully one million dollars.

The bulletin goes fully into the subject of syrup and sugar making, describing clearly the necessary equipment and its operation, and gives useful information on marketing. An interesting section describes the making of maple vinegar and the collection and preparation of sugar sand which constitute two valuable by-products of sugar making.

The work, which is from the pen of Mr. J. B. Spencer, B. S. A., Editor of the Publications Branch, is gotten up in very attractive form, containing very beautiful illustrations portraying sugar making scenes, ancient and modern. To show the appearance if sugar and syrup of different grades, plates of samples of each are presented in natural colors. This work, which is designated "The Sugar Making Industry in Canada," will be sent free to those who apply for it to the Publications Branch of the Department of Agriculture at Ottawa.

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If you can get a Suit valued at $25.00 in Canada for $12.50 from Catesbys in London--Will you buy it?

We undertake to prove to you that you can—if you buy from us.

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When, therefore, we guarantee to sell you a suit made of fine English cloth, cut in the best Canadian, New York or London style (as you prefer), laid down at your door, all duty and carriage charges prepaid, for a price about one-half of what you would have to pay in Canada, isn't that worth looking into? Of course, it is.

Then sit right down now, fill out the coupon below, mail it to our Toronto office, and get our latest Style Book and patterns. With this book is a letter explaining our system of doing business and a self-measurement form which is so simple that you can't go wrong in using it, We'll also send testimonials from a hundred satisfied Canadians who regularly buy from us.

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If you don't want to cut this paper, write a postal o letter, and we'll send the patterns anyway, but to get them you must mention Sussex Maritime Farmer.

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This shows the most popular style of suit worn by well dressed men in Canada. The materials used are specially selected for this shape of suit.

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DAIRYING.

Accidents to Dairy Cows.

The old saying is that accidents will happen in the best of regulated families, and I think this old adage will prove true when applied to dairy ing. Accidents will happen in the best managed dairies, at least, accidents keep happening in my dairy, not every day, but occasionly. Not more than two months ago a cow came up at night from the pasture with her hip capped; that is, the cap at the end of the hip bone was knocked off. Of course cows recover from this after awhile, but she was lame for two or three weeks so we couldnt let her run with the herd. She finanland now limps but little She finally got better and now limps but little.

But it damaged her. We had her in the test for the register of merit and the accident caused her to shrink so in milk that she is entirely out of it for this period of lactation. There is no particular plade to lay the blame, it was simply au unavoidable accident, and we will have to suffer the consequences.

Another good cow got her teat injured. It looks as if she stepped on it in getting up, but how she did it is more than I can see. On one side of the teat the hide is all scraped off and it extends over the end of the teat so that the scab pratically closes up the opening. It is a very sore thing. You have to take the scrap off from the end of the teat every time you milk, and the cow resents it. You can't blame her. She doesn't know any better. It is getting better now, but the cow in this condition will not give a normal flow of milk. She is a fresh cow and may practically recover from it, and yet I doubt it. Any little thing like this in the beginning of the period of lactation simply gets the cow out of sorts and she doesn't do as well as she would if the accident had not happened. I wish I knew how to prevent all of those accidents, but I haven't learned yet, and I doubt if I ever will, or anybody.—Colon C.

Milking Time.

Although considerable storied romance hangs about the evening hour of milking, there is a practical side to it which should be recognized by every dairyman. In these days of a multiplicity of statues, many states have promulgated laws for the guidance of milk producers, while large creamery owners and milk companies have added rule to rule in their efforts to satisfy the public as to cleanliness and sanitation. All these things should open the eyes of the farmer to the necessity of exercising the greatest care at milking time.

In the first place the pails used for milking should be thoroughly clean. This does not mean cleaning with cold water but scalding and re-scalding and then an exposure to the effects of air and sunshine. I like the partially covered pail best, as the covering keeps out a good many particles of dirt and rust, but of course more work is required to keep it clean.

A great many do not recognize the necessity of approaching the cows with gentleness. I have seen a cow that would not give more than half the usual mess if milked by a stranger. There are some cows of such a nervous temperament that the greatest care is always necessary. A harsh word would practically stop the flow of milk. While this is not true to the same extent in all cows, yet it is well to remember that steady, careful handling of the herds will increase the flow of milk while arbitrary methods will cause a decrease.

If a cow is inclined to be restless at milking, gentleness will almost always prove more effective than the kick of a number ten boot—which so many hired men and even owners of herds, themselves, often resort to. If a cow kicks she can often be cured of the habit by tying her close to a partition. Then crowd her close to the side when sitting down to milk. In this position she cannot use her feet with much effect, and unless she is too badly confirmed in the habit, she will soon submit to the inevitable.

Ropy Milk.

When milk becomes ropy or slimy eight to twenty-four hours after it is drawn, the difficulty is caused by bacteria getting into the milk and is not due to unhealthy cows. The trouble may orginate from cows standing or passing through mud holes.

Where difficulty is experienced with ropy milk everything with which the milk comes in contact has become infected and the remedy is to sterilize all pails, strainers, cans, separator and everything with which persisted in far several days the the milk comes in contact. The cow's udders and the milker's hands should also be carefully washed before milking. If this treatment is thoroughly trouble will usually disappear.—W. J.

The Dangerous Pitchfork.

Have a place to hang up the pitchforks, or make a rack to lay them on. They are dangerous anywhere else.

Carrying the pitch-fork up the ladder into the hay-mow or bringing one down, is a dangerous operation, considering that a person might fall, or the ladder slip.

Throwing the fork down before descending the ladder from the mow is another foolish trick; attempting to toss it into the mow is still more dangerous.

We simply keep one fork in the haymow and one below, around the stalls, mangers, etc., which does not necessitate carrying one up or one down the ladder during the feed-hour.

Handled carefully there is little danger of thepitch-fork injuring anything, but if thrown around and menace to the life and limb of every handled carelessly, it is a constant living thing on the farm.

We rarely lay a pitch-fork down anywhere on the ground. Most painful and serious losses caused by such carelessness are very frequent. It takes but a moment to hang the fork up after using it, and the habit not only avoids the above named dangers, but one always knows right where to find the fork when it is needed.

We have known a fork left sticking in a pile of hay "just for a minute" to painfully, wound some of the stock. A fork stuck in the side of a straw or hay-stack looks safe enough, but a nearly getting killed by sliding down young man friend of ours came very on just such a fork last summer, and we have heard of different cases where men have been instantly killed in this manner.

Withall our careful handling of the pitch-fork we have very narrowly averted several serious accidents with it. One common error made by many is that of putting hay in the mangers while a horse or cow is eating, especially after dark, when one has no lantern. The animal, being touched on the nose or about the head with the fork-tines, suddenly jerks its head and thus it is apt to sink the fork still deeper into its flesh, perhaps putting out an eye. The excitement and

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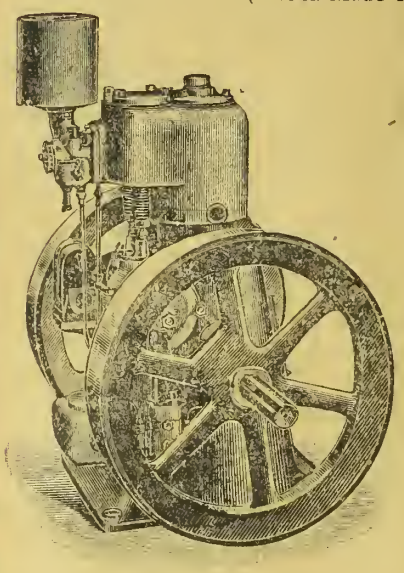

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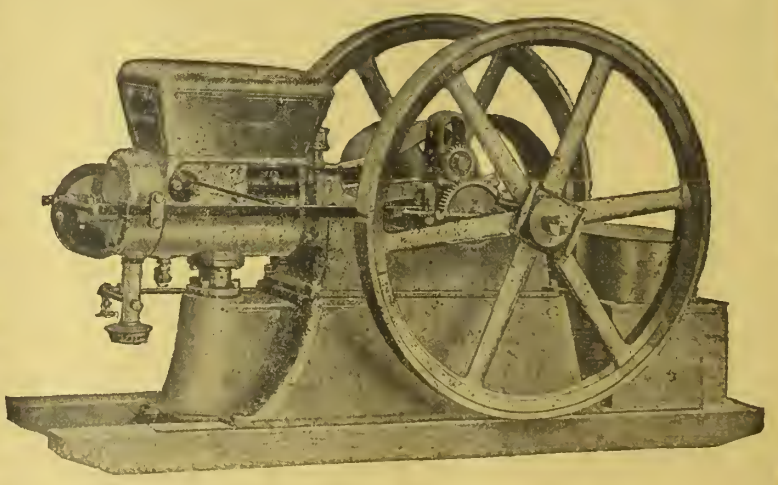

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It Pays to Advertise in the Maritime Farmer.

sudden movement of the animal also causes a dangerous mix-up of man, beast and pitch-fork, which is liable to result in serious injury for all.

We have received painful bruises and slight wounds which easily could have been much more painful and dangerous, by careless handling of a pitch-fork around the horse and dairy stalls, in cleaning out manure, passing between the stock and partitions, etc. Ever so slight a touch of the keen tines of the fork causes the animal to jump and kick. This often results in the fork sticking into the flesh of the animal, causing still more kicking and struggling, thus endangering the very life of the animal and its attendant, as we have known the fork to enter the flesh so far in such instances that it required great effort to remove it.—M. C.

The Dry Cow.

There is no class of people in this country who pay heavier for their mistakes than the farmer, and the dairy farmers heaviest of all. It is true misfortunes will happen on the best of managed farms, but the man who brings a certain amount of forethought and sound judgment to bear on his business is bound to come out better than the man who trusts to luck. Among all the animals on the average farm the dry cow, as a rule, gets the least attention, and milk-selling farmers with a contract running for a fixed quantity daily are the worst sinners in this respect. Heavy in-calf cows that ought to be dry are often forced by the feeding of large quantities of concentrated foods to prolong their milking period unduly, while the owner is anxiously waiting for other cows to calve down to take their place. Then when the long expected happens the poor stripping cow is hastily and very often imperfectly dried off, and either turned on to a pasture with not enough on it to keep a rabbit, or in winter time is put on the worst hay of the place, and it often happens that cows so treated, and that are often in high condition when turned out, get very poor by the time they calve again.

Well, after years of experience among dairy cattle, I have come to the conclusion that the manner in which the stripping and dry cows of a dairy herd are managed makes or mars, to a far greater extent than the average farmer thinks, the success of that hard at the milk-pail during the ensuing season, and I will go farther and maintain that from 25 to 50 per cent. of the various losses and accidents incidental to dairy farming are the direct results of bad management with the in-calf cow. I will give a case to prove my ascertion. About twelve years ago a young man took a capital dairy farm in this district of about 200 acres. He was the son of a tradesman, and was over twenty when he started to learn farming. However, he reckoned he new more about farming than most of his neighbors, and was not an easy man to proffer advice to. He kept a dairy herd of about forty-five cows, and weaned ten or twelve calves each year. He was very keen on the production of milk, which he sold. He would keep his cows well as long as they gave a drop of milk, letting them lie in at night and coddling them all the ways to get a quart of extra milk out of them. Judging by my own experience, some of his milk must have cost him half-a-crown per gallon. I have seen him year after year turn out those cows as they became dry in the middle of winter, utterly regardless of the fact that they had been lying in by night for a couple of months or so. They were generally in good condition when turned out, but with only a bit of rough hay and missing the shelter they would fairly melt. Some of them would abort their calves, some would go screws, others had bad udders, and they were all more or less chilled. The calves he weaned from them were chilled before they were born, and half of them generally died before they were a year old. He kept the farm for about ten years, and during the last half-a-dozen years of his tenancy I do not think he sold as many beasts, except screws at about 30s. each. He finished up with the rottenest lot of cattle I ever saw together in my life. He left the farm cursing it and all belonging to it, and complaining bitterly of his bad luck. He certainly paid more dearly for his mistakes than some people. His successor is doing very well on the same farm. It is the alternate fattening and starving that plays havoc with the in-calf dairy cow, and, worse than all, the alternate lying in and out. If you can't keep cows in right through let them stay out altogether—they won't hurt with plenty of food and good shelter. There are thousands of dairy cows wintered out in the district every year, and where they are wintered on sound dryland, with plenty of sheltering hedges and easy access to water, and not too many in a lot, they do very well, especially if they have 2 or 3 lbs. of cake per head daily on towards calving time. I would rather winter them out altogether than house them day and night. Although cows so housed will get in good condition, neither they nor their calves when born are nearly so healthy as the cows wintered out.—Farm and Home, England.

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You are a very busy man. Every minute of your time is valuable—is worth money to you. For instance, the time you would save by cutting ensilage with a Renfrew Standard gasoline engine you could put to advantage on some other task. Yet cutting ensilage is only one of the numerous ways in which a Renfrew Standard engine saves precious time and labor for the busy farmer.

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We have letters by the score from farmers telling us that they wouldn't know how to get along now without a Renfrew Standard engine. They say, too, that they are sure there is no other gasoline engine so efficient as the Renfrew Standard.

Certainly there is no engine that starts so easily; for the Renfrew Standard starts without cranking in all kinds of weather, hot or cold, fair or rainy.

And where else will you find an engine that runs so smoothly, and is so perfectly balanced, that it does not "creep"—does not need to be anchored down? Where is there another engine that has no pipes, fittings, cooling pumps or fans to leak, freeze or get out of order? Where another engine so simplified, so free from complications, so easy to understand?

The Renfrew Standard is the kind of gasoline engine you want and need. And if you will tell us the size of your farm and general requirements we will give you the value of the knowledge of our experts in choosing the size of engine. But be sure and write for our free booklet and circulars. Do so today—Now.

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Compare the "BISSELL" with other disks

Thousands of Farmers have tested the "Bissell" Disk Harrow in the same field with other makes and found that the "Bissell" HAS THE GREATEST CAPACITY.

The plates are the correct shape. They cut, turn and pulverize the soil where others only scrape the ground and set it on edge.

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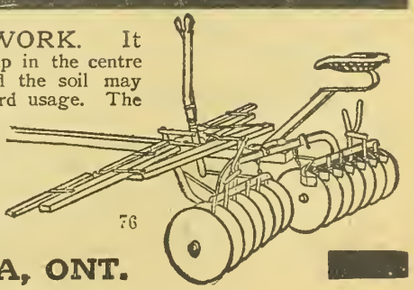

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T. E. BISSELL CO., LTD., ELORA, ONT.

LIVE STOCK.

Sore Mouths in Pigs.

There are two kinds of sore mouth in young pigs. One kind is caused by the little pigs cutting each other with their sharp tusks. This kind is not very serious, but it often turns into the Infectious sore mouth, which is very dangerous, since it spreads from pig to pig and may kill a fourth to a half of the litter.

I suggest that all breeders read very carefully concerning this form of sore mouth trouble in pigs. The cause of it is a germ which is found everywhere in dirty bedding and damp, wet yards, and around manure piles. In rooting in dirty yards or pens, or in sucking the sow's udder, it is very easy for pigs to get these sore mouth germs in their mouths. If the mouths have already been cut because of teething or fighting with other pigs, trouble will start at once. The sore spots in the mouths will become larger and larger, then they will become ulcers and the flesh will fall away. About this time the pig becomes very dull and stupid and refuses to suck any more. In three to ten days he generally dies, or if he recovers will never be much good.

In treating pigs for sore mouth, the first thing I would do would be to separate all the sick litters from the well ones. Then I would dissolve two ounces of potassium permanganate or two ounces of good coal tar dip in a gallon of warm water. I would put this in a pail or tub and stick each effected pigs head into it, taking care of course not to leave any animal in long enough to drown. Do this once or twice a day for five days. At the same time wash the sow's udder off with some of the disinfectant. It will also help to take a syringe and wash out each pig's mouth thoroughly with one of the two solutions twice daily. If the sores seem to have any dead matter on them, scrape it away and touch them with lunar caustic.

What is all this for? By all this we are simply trying to kill the germs that cause the trouble. Both the coal tar dip and the potassium permanganate solutions are death to germs. By sticking the pigs' heads in one of these solutions, we kill the germs that are sticking about the heads, and also kill a lot of those which may be in the mouth. By syringing the pigs' mouths, we kill more of them, and by washing off the sow's udder we kill those germs wnich may be sticking there ready to get into the mouths of the little pigs. If any sores appear on the nose or face, put on an ointment which is made by mixing one-half ounce of iodine and eight ounces of vaseline.

Sore mouth can generally be prevented by keeping the pens and yards as clean as possible and disinfecting them with coal tar and whitewash. But even then sore mouth occasionally breaks out, and it will be necessary to stop the spread of the disease by coal tar dip solution or some other germ killer. It is always a good plan to break the sharp little teeth of young pigs off close tot he gums so as avoid the simple kind of sore mouth which may become the serious sort.—Wallaces' Farmer.

Corns on Horses' Feet.

This expression is applied to nearly all bruises of the rear half of the blood vessels from injury (pressure from an improperly fitted shoe, or permitting the shoe to rem in on for more than five weeks). Corns are apparent to the eye as yellowish, reddish, or bluish discoloration of the horn of the sole and white line. The horn tubes are penetrated by blood from the ruptured blood vessel. The discoloration may be so slight that if the foot be improperly pared, the corn may be entirely overlooked. We have corns on the wall, sole and bars. Corns affect principally the inner half of the hoof, and the fore feet are almost exclusively the seat. There are two reasons for this:

First, because the fore feet support the greater part of the body weight.

Secondly, because the heel of the fore foot is first placed upon the ground during progress, thus receiving much more concussion than the heels of the hind feet.

1. Dry Corns. This corn is dry and seldom causes lameness.

2. Suppurating corns. Considerable pus is formed, causing severe lameiness.

3. Chronic Corns. This corn is either soft, moist or lardy and there is an intermittent lameness aggravated by improper shoeing.

Some feet are predisposed to corns, viz., narrow, deformed hoofs, deformity of the limbs, badly trimmed, wide flat feet, excessively weakening the sole bars and frog, permitting the toe to grow to long, shortening one-quarter too much, so that the foot is unbalanced, shoeing a heavy horse with to light a shoe, thus permitting the shoe to spring down on the heel. Permitting the feet to become to dry and brittle, thus reducing the elastic properties of the horn. Nailing the shoe to far back, thus preventing the natural spread of the hoof, when placed upon the ground. Applying the shoe to hot when being fitted. Insufficient concavity of the shoe in flat feet. Horses which have never been shod rarely have corns, thus proving that corns are due to errors in shoeing.

TREATMENT.

First, removal of the cause by paring the hoof to the proper angle; shorten the toe and cut down the quarters if too high. Put on a level shoe. If calks must be used, use both toe and heel calks, never toe without heel, nor heel calks without toe, unless for a special purpose. A leather sole should always be used under the shoe, and place a dressing over the sole of the following mixture: Pine tar, 8 ounces; Venice turpentine, 1 ounce; spirits camphor, 1 ounce; compound tincture benzoin, 2 ounces. Mix and smear plentifully over the sole, after which apply oakum and the leather pad.

When there is a suppurating corn, the shoe should be left off for several days, and drainage for the pus established. Poultices of flaxseed should be applied, in which has been placed about two ounces of creoline. When the lameness has been removed, the horse should be carefully shod, using a bar shoe with a leather sole, and the above dressing. The after-care of the hoof consists in keeping it cool, moderately moist and pliant.

Red Water of Cattle.

The disease is characterised by great prostration and general debility of the bodily powers, with which the urine assumes a redness of more or less intensity. For some time it was the opinion that the kidneys were the organs peculiarly at fault. As a result of certain causes, the liver is the structure that is primarily disorganised. The immediate causes of the disease of red water among cattle may be found in the food the animal attacked is fed upon. Stall-fed cattle are scarcely ever affected, unless a large quantity of turnips grown on very poor soil, or a deal of undecorticated cotton cake constitutes a big

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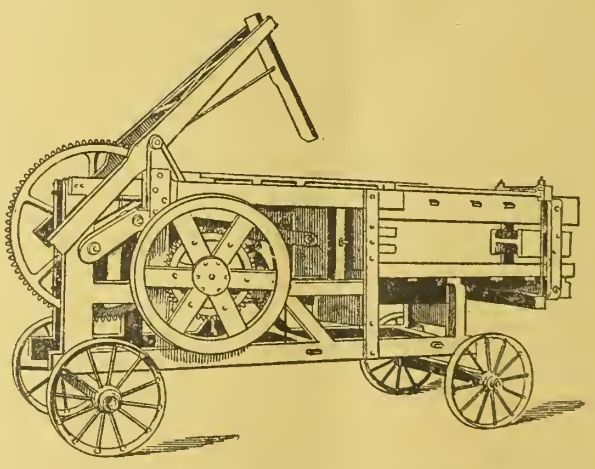

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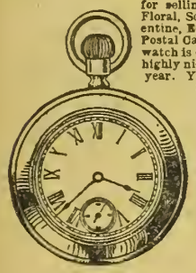

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share of their diet. Decidedly the majority of cases originate from putting cattle on grass on badly drained, impoverished meadows in the spring, and contains but little or no nutriment; or during the autumn when it when the herbage is extremely watery is coarse and indigestible, and mingled with dead leaves. In hot summers, also, and when all good vegetation is scorched up, the disease may make its appearance in the herd.

SYMPTOMS.

Perhaps, in a general way the most noticeable symptoms are a yellowness of all the visible mucous membranes of the body, with an undue looseness of the bowels, and in some cases marked diarrhoea. Both these indicate the primary disturbance of the liver. The animal is off its appetite, and ails in this way for a day or so, when fever sets in, gradually becoming greater in degree, accompanied by an obstinate constipation; thirst, and suspension of rumination. In a milch cow the secretion of milk goes off very rapidly. The urine is passed very frequently, at the onset being scarcely tinged, then the stain becomes more marked, and, finally, the redness may be of such intensity that the disease receives the name of black water. Emanciation becomes extremely marked, owing to the impaired state of the blood, and the patient appears to be dying from starvation. The pulse is feeble, the heart's action jerky and audible, the respiration short, quick, painful, and accompanied by a moan. The horns legs, and ears generally cold throughout the attack. The duration of the disease in acute cases is from three to five days, which will either carry the patient off, or bring about a favorable change in its conditikn. Some cases after the animal rallies assume a chronic form, but only for the patient to become worn out, and finally die in a week or so in an extremely emaciated condition.

If one makes a post-mortem examination of the carcase no trace of inflammation will be discernible in any of the structures of the body. Frequently the lungs are watery and slightly congested, and the same may be said of the kidneys. All the organs will be much emaciated, almost bloodless, similiar to those of an animal which has been bled to death. The liver is enlarged and softened, and all the tissues present a more or less yellowish cast.

TREATMENT.

Bearing in mind that great debility is present, and the essential blood constituents incapable of performing their functions, it can be readily seen that neither purgative treatment, nor bleeding—another favorite remedy—is necessary. The animal must be got into a comfortable shed, and made as warm as possible, clothing the body and bandaging the legs being good aids to keeping up the general circulation. When obstinate constipation is present, give a pint of linseed oil or a small dose of Epsom salts, and if the patient is very week, stimulants may be usefully employed; tincture of gentian and ginger in combination with perchloride of iron. The animal must be well nursed and drenched frequently with linseed or oatmeal gruel, the food of the best quality, varied and rendered as appetising as possible. Green meat should be withheld until the strenght is well restored. The stimulant and tonic medicine may be continued for some length of time, and as the animal picks up, a little common salt, nitre, or bicarbonate of potash given in dry food will prove beneficial. It must be added that when recovery takes place there must be a complete change of management, and anything at all of a character likely to bring on recurrence of the malady particularly avoided.

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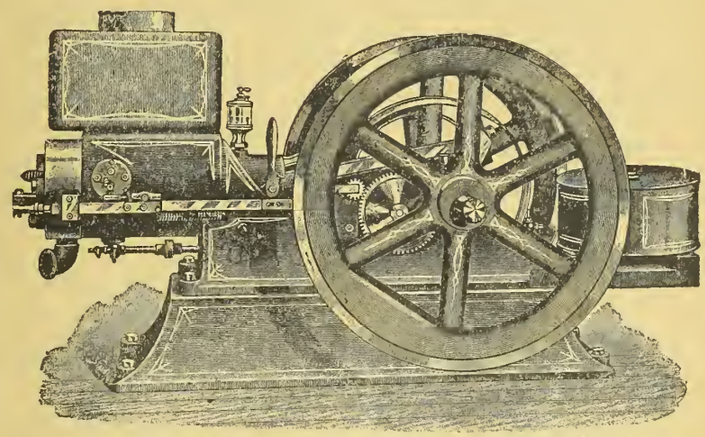

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On a test of 876 horses fed on a ration of bran and shorts and 792 horses fed on a ration of oats on a daily service of seven hours' work, it was demonstrated that the former was of equal value with the latter. The horsefed the bran and shorts ration performed three and one-half more hours per week than the lot fed on oats, but the former lost in weight while the latter made an average gain of 10 pounds.

The Paris Omnibus Company, employing nearly 10,000 horses, changed the rations gradually from 18.7 pounds of oats and 1.8 pounds of bran to a corn ration. One month was consumed in the transition and at the end of four months the horses had made an average gain of 25 pounds but were less spirited and ambitious to perform their work. In an experiment by the London Omnibus Company it was found that a corn ration was superior to oats to fatten horses, but the nervous force decreased and the mortality among the horses increased. It was developed that a mixture of 12 pkunds of oats and 6.6 of corn made an economical ration for horses performing fast work in the omnibus service of Paris.

The Hoof

In discussing this subject from experience, observation and conjecture, let me state that I can only hope to give a few fundamental facts, but which to every horse owner are of great importance. The importance of the condition of the hoof cannot be over-estimated; especially are good feet necessary to the horse, for, adds a writer in the Farm, Stock and Home, to whom we are indebted for this article, his value is lessened according to the degree his work is interferred with. While other animals are not used for pulling purposes, yet they should have good feet, so that they may get to the feed trough and pasture, those that are kept for breeding purposes as well as those who are to haul a big load to the market.

The hoof is divided into three different parts—the wall, the sole and the frog. The wall is the part seen when the foot is flat on the ground, and is divided into the toe, the quarters, the heel and the bar. The toe is the front part of the wall (hoof) and is the toughest part of the wall. We find the quarters situated at the side of the hoof. The walls here are not as thick as at the toe, and are nearly straight up and down. At the back part we find the heel, a process of hoof; it looks like a bar; this bar acts as a brace to the quarter. The outer surface of the wall is rounded and covered by a protector, which is called the peroplic band. This can be best seen when a horse's hoof has been well washed off, as it is after it has travelled in wet grass or crossed some water, when the hoof has a shining appearance. The membrane is to keep the moisture in the hoof and to protect it from water.

All parts of the hoof grow downward and forward with equal rapidity the rate they grow being largely dependent upon the amount of blood supplied to the pododerm (quick). They grow faster when the horse is not shod. When given no exercise, dryness of the horn and too great a length of the hoof hinder the proper growth.

A perfect hoof is a product of breeding, and with this must follow a rich protein ration, because the hoof is nitrogenous in composition. Corn is unfavorable for the production of a hard, tough and dense growing hoof; I say this from my own personal experience; and for this reason corn alone should never be fed to a growing colt. If this advice was followed, accompanied by exercise and proper trimming of the colt's feet, we would not see so many poor, deformed horses' feet. I would give them plenty of good feed, and at the proper time remove the overgrowth of hoof, regulating the bearing surfaces by increasing the volume and improving the flow and quantity of the blood flowing to the pododerm. This will favor a rapid growth of horn of good quality. Irregular hoof is not infrequent, and is caused by the improper distribution of the body weight over the hoof; this we call an unbalanced foot. If by ignorance one side wall is cut shorter than the other, and that mistake is repeated again and again, the result will be a crooked foot. Colts standing in the stable too much cannot wear down their hoofs, and at least every two months let them stand on a platform or a level barn floor for treatment, and

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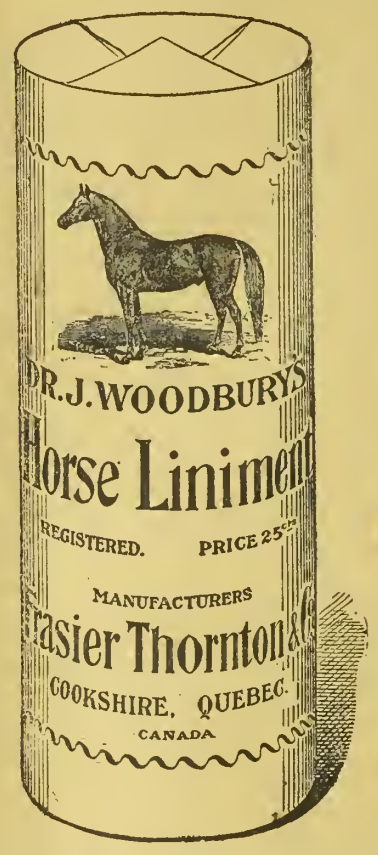

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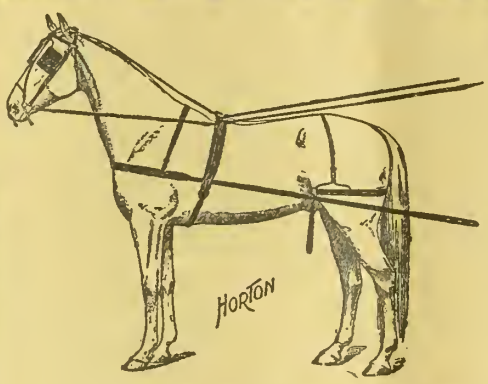

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when you are through rasping the walls back you can tell if you have done a good job or not. Never use anything but a rasp and a pair of pinchers to cut and trim back a hoof. The lower edges of the wall should be well rounded to prevent chipping. The hoofs that are becoming crooked should have the wall shortened in such a manner as to straighten the the foot axis.

In regard to shoeing, I look upon shoeing as an evil from a physiological view-point. And yet it is a necessity in many ways. The hoof never rests in a healthy animal; at the toe it takes 11 to 12 months to grow down from the coronary band to ground at the quarters 6 to 8 months, and at the heel 3 to 5. This shows that we must not let the shoes stay on very long at a time before resetting them. In trimming the foot for the shoe the frog must not be touched further than to cut away the loose tags or layers that are too loose to form a protection. The frog should extend below the walls about the thickness of a common shoe. The shoe should always cover the entire bearing surface of the wall.

Breeding

Mares usually come in season and may be bred on the eighth or ninth day after the foal is dropped. If they fail to respond at this time they may be tried on the 27th or 28th day from time of foaling. Mares that are in strong vigorous condition seldom, if ever, refuse service at one or other of these periods. The development of the foetus is very slow until about the sixth month, so that by weaning the suckling foal at the end of the fifth month the task of the dam is reduced. For the first five months she works and nurses her foal; for the next six months she works and builds up the foetus. It is important to know that the chief growth of the foetus occurs during the sixth, seventh and eighth months of pregnancy. The growth during the last three months is comparatively slight, so that from the standpoint of bone and muscle building required in building up the foetus, the mare needs more care from the sixth to the eighth month inclusive. It is therefore wise policy to supply an abundance of nourishing bone and muscle building food during the months when the most active development of the foetus is taking place, and to lighten the work to a reasonable extent if it be possible to do so.

Breeding Age

As a general rule it is not wise to breed mares until they are about three years of age, as early breeding tends to stunt the growth of the animal. In the case of very large, strong draft fillies that will weigh 1,400 lbs. at two years of age, there is no objection to breeding, providing special care is taken to feed more liberally than usual. Breed large draft fillies seems to broaden them out, and if they are permitted to skip breeding the following year, they will be fully as heavy at five years as the mares that were not bred until three years of age. This plan often gives advantageous results in fillies that are overgrown, awkward and lacking in good proportions.

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Do you know, my friend, that there is a wonderful new way to apply a certain, great, natural FORCE to your body, and by which you may, without effort, trouble or inconvenience, treat your own self in the privacy of your home for debility and lost vitality, without using a single drug or medicine? This great FORCE, as a restorer of vitality and as a means to overcome those weaknesses which result from indiscretion and unnatural practices, is to-day being used all over the civilized world, and I give it as my honest opinion, based upon a vast observation and study, that any man anywhere, who leads a decent, manly life and who applies this marvellous FORCE in a scientific and rational way, can, without employing a single drug, be restored again to a state of perfect, rugged health and vigor, without a remaining ache, pain or weakness.

As we all know, these debiliating weaknesses handicap a man in every condition of life, while, on the other hand, a perfect speimen of vigorous, robust, lusty manhood is ever admired by both women and men alike, while, of course, it is certainly only such a man who can attain the really great success of life. Therefore, I say to you, no matter what your size, whether you are small or large, no matter what your occupation, no matter whether you are a college graduate or workng on the farm or in the factory, no matter whether you are young or elderly, it is all a question of your vigor and your vitality, and if I can give you a good, abundant supply of this same great power of VITAL FORCE, then it is easy to believe that I can completely restore your vigorous health, can overcome the evil of past indiscretions so you will be exactly the same in your influence over people, exactly the same in your manly bearing as other manly, strong-nerved, warm-blooded fellows of your acquaintance.

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FARMER ADS. BRING RESULTS.

The Result of New Biunswick's First Egg Laying Contest.

The New Brunswick Agricultural Department offered prizes to the different Poultry Associations of New Brunswick of $60 to each Association for a six months Egg Laying Contest, of ten (10) hens to each pen.

They found there was a great deal of interest taken in this, and it showed what could be done where systematic care and attention were given to poultry and a correct account kept of the number of eggs received and the cost of producing them All the Poultry Associations have spoken highly of the benefits that have been derived from this Egg Laying Contest. The results which have been obtained from Seth Jones, Poultry Superintendent, are as follows:

Westmorland County Poultry and Pet Stock Association, Twelve (12) entries.

1st prize, N. J. Govang, Moncton, R. C. White Leghorns, 1112 eggs; 2nd prize, Samuel Steeves, Sunny Brae, White Wyandottes, 1074 eggs; 3rd. prize, Watson Lutz, Moncton, Barred Plymouth Rocks, 1015 eggs; 4th prize George McEacheren, Moncton, Blue Andulusians, 968 eggs.

Charlotte County Poultry and Pet Stock Association, Eight (8) entries:

1st prize, C. F. McGarity, Milltown, W. F. Black, Spanish, 1187 eggs; 2nd, R. W. Whittock, St. Stephen, S. C. White Leghorns, 118 eggs; 3rd, H. D. Dinsmore, St. Stephen; S. C. Rhode Island Reds, 961 eggs; 4, F. M. McCready, St. Stephen, R. C. Rhode Island Reds, 946 eggs.

York and Sunbury Counties Poultry and Pet Stock Association, Two (2) entries.

1st prize, John Oldham, Fredericton, Black Minorcas, 984 eggs; 2nd, Ernest Pringle, Stanley, R. C. Brown Leghorns, 936 eggs.

Carleton and Victoria Counties Poultry and Pet Stock Association Thirteen (13) entries.

1st prize, Mrs. A. D. Hovey, East Brighton, White Leghorns, 1643 eggs, 2nd, Mrs. A. D. Hovey, East Brighton, White Orpingtons, 1579 eggs; 3rd Hartland Poultry Yards, Hartland Barred P. Rocks, 1140 eggs; 4, R. A. McKay, Centreville, White Wyandottes.

The Crate Fattening of Poultry.

Practical experience has shown that crate feeding is not only a very satisfactory but also an economical method of fattening poultry. The saving of the amount of feed required to produce one pound of gain is quite marked, and the feeder is enabled to observe to greater advantage the progress being made by individual birds. He can also, if necessary, curtail the duration of the feeding period in the case of birds which have attained their maximum weight and are ready to be placed in the furnishing crate.

Crate fattening cannot with success be carried on in a haphazard way. The feeder requires to understand the principals of what he is at and to give the necessary attention to the details of his work. In order to teach the proper method of feeding poultry in crates the Live Stock Commissioner at Ottawa has had prepared a seasonable illustrated pamphlet on the subject which explains clearly the construction of a fattening crate, the constituents and preparation of proper rations, the method of feeding, killing and dressing birds and information regarding packing for market. The work which is designated Pamphlet No. 2 of the Live Stock Branch is available to all who apply for it while the edition

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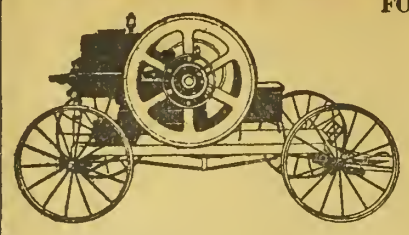

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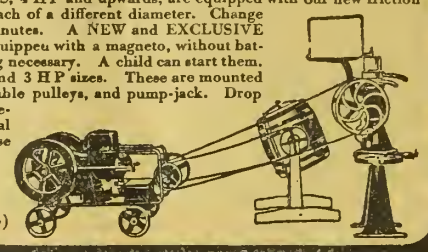

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lasts to the Publications Branch of tht Department of Agriculture at Ottawa.

Old Hens.

Why it is old birds are tolerated is past my comprehension. Every week in poultry papers fanciers are recommended never to keep their birds more than a second summer, yet some people, simply because they have a certain love for one pen, or because they have laid a large number of eggs, will not kill them off, and this is one of the reasons why poultry farming at the present time is often so unsatisfactory, and egg-production, especially in winter, is on a reduced scale. Yearling hens are 'not anywhere near as good layers as pullets; some of them do very well, but others can not be depended on. A man who wants a big quantity of winter eggs must keep pullets, because they are sure to lay well if he looks after them in proper fashion.

The exact time to kill off two-year-old hens is also most important; many farmers I know usually sell fifty or sixty birds all at the same time; they like the idea of getting rid of a big quantity. This is a handy method no one will dispute, but it means that quite a large number of birds must be sacrificed while still laying. The best plan is to carefully examine each bird, and when it is found that they are not laying, they should be sold off singly to customers in the district. Buyers of old hens can easily be found at a good price per pound live weight. Or another plan one d ozen birds can be selected out each week, and sent to the nearest poulterer. This system is better than getting rid of fifty or one hundred birds in one lot. If half of the birds would only lay six or ten eggs each, surely these eggs are worth having, especially at prices now prevailing!

Those who have old hens that are entering the moult should get rid of them quickly. The markets are crying out for good, heavy hens, and willing to pay high prices, but as soon as large numbers are offered prices will drop very quickly, and instead of making 60 to 75 cents per head little more than half this amount will be made. If most of the eggs have been obtained from a flock of birds little time should be lost in getting rid of the non-layers. It is only by careful work in this direction that big profits can be made.

Sprouting Oats for Winter Feeding.

Many of our readers, no doubt, have tried the feeding of sprouted oats to hens during the winter; a great many more have not. Sprouted oats supply during the winter about the best imitation of summer pasturage that is possible to obtain.

As to the method of preparing these, one poultry expert, Mr. Bourlay, says:

"The method of preparing sprouting oats is as follows:—

"The quantity of oats required is soaked overnight in a bucket of water and then placed in boxes or tins which should have holes bored or punched through the bottom to allow drainage. No soil of any description is used, but a layer of the grain is placed in each box or tin to the depth of about one inch. These receptacles containing the oats are then placed in a dark place and the grain is well watered once daily with an ordinary water can fitted with a rose spray. As a dark place in which to sprout oats, we use large tanks which are covered with old sacks in order to keep them dark, but packing cases would serve the purpose equally well. It is necessary to place the tins or bricks or pieces of wood so that they are raised from the floor of the sprouting chamber; otherwise they are likely to be partially submerged in water which is liable to accumulate from the daily watering. After the grain has been in the dark chamber for four or five days an examinaeion will show that it has begun to throw out fine white roots, and this is quickly fallowed by young shoots or sprouts which rapidly grow until in ten or twelve days' time you have the tin or box full of lovely green sprouted oats which the fowls will eat greedily. If left too long, the sprouts lose their fresh green color and gradually turn yellow. While the oats have been sprouting, the roots have also been growing rapidly, and by the time the green food is ready it will be found that the grain has been bound together into a solid mass by these, so that it is necessary to cut the mass into sections with a spade or sharp knife. The oats should not be watered for twenty-four hours before feeding in order that the roots and grain may dry out to a certain extent. When ready for use turn the whole mass out of the receptacle in which it has been grown, and cut up with a sharp spade or knife into blocks, and give to the birds who will eat both the roots and the green growth. It is occasionally found, on turning out a tin of sprouted oats, that a certain amount of fermentation has set in at the bottom of the roots. In such cases it is necessary to cut off the affected parts, for, if fed to the poultry, it is liable to cause disease."

Nova Scotia Hen Holds World Record

Rev. W. B. Crowell, of Arcadia, has a pullet of the Barred Plymouth Rock variety, which has beaten the world's record in laying the largest number of eggs in one year. Her product during the time specified was 292 eggs.

Rev. Mr. Crowell sent to the American Poultry Journal attested ment of her day by day record, which was acknowledged by Dr. Prince T. Woods, managing editor. This journal is the leading poultry journal in America, and it sends the following with its acknowledgement:

"It looks as if "Lady Morley' (his pullet's name) is world's champion to date. Oregon Experimental station is a close second with a crossbred hen with 291 eggs to her credit. Expect to use the data in December editorials."

Mr. Crowell has a flock of sixteen pullets of the same variety, each of which produced 205 eggs in an average of 283 laying days this year.—Yarmouth Herald.

A patch may not be a handsome thing, though sometimes one is handsomely put on; but "handsome is that handsome does." A patch usually tells a handsome story, as well as covering what might be rags and disgrace. It tells a story of the thrift that is determined to save, pay its bills and owe no man anything. Hence, all honor to the patch.

If honey granulates or candies, it may be liquefied by setting the vessel containing it in another vessel containing hot water; not too hot, or it will spoil the color and flavor, and honey contains the most delicate of all flavors.—that of the flowers from which it was taken. It may take half a day or more to melt the honey.

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"I shipped a car of Hogs to South Omaha about 10 days ago. There were 7,500 hogs on the market that day. I had given mine International Stock Food. For my 64 heads, I received 25c. per hundred pounds more than any of the other sellers. Hogs all around my pen sold at 25c. per 100 lbs. less, so I topped the market for the day and week. Say, I sure felt proud. I lay it all to using International Stock Food".
JOHN WELLS, HARVARD, Nebraska.

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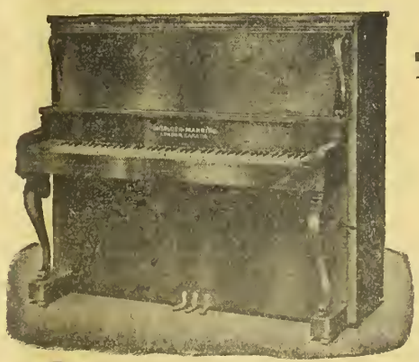

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

said Mr. Wickfield. "But I'll tell you what you can do, Miss Trotwood."

"What's that?" inquired my aunt.'

"Leave your nephew here, for the present. He's quite a fellow. He won't disturb me at all. It's a capital house for study. As quiet as a monastery, and almost as roomy. Leave him here."

My aunt evidently liked the offer, though she was delicate of accepting it. So did I.

"Come, Miss Trotwood," said Mr. Wickfield. "This is the way out of the difficulty. It's only a temporary arrangement, you know. If it don't act well, or don't quite accord with our mutual convenience, he can easily go to the right-about. There will be time to find some better place for him in the meanwhile. You had better determine to leave him here for the present!"

"I am very much obliged to you," said my aunt; "and so is he, I see; but—"

"Come! I know what you mean," cried Mr. Wickfield. "You shall not be oppressed by the receipt of favors, Miss Trotwood. You may pay for him, if you like. We don't be hard about terms, but you shall pay if you will."

"On that understanding," said my aunt, "though it doesn't lessen the real obligation, Ishall be very glad to leave him."

"Then come and see my little housekeeper," said Mr. Wickfield.

We accordingly went up a wonderful old staircase; with a balustrade so broad that we might have gone up that, almost as easily; and into a shady old drawing-room, lighted by some three or four of the quaint windows I had looked up at from the street: which had old oak seats in them, that seemed to have come of the same trees as the shiny oak floor, and the great beams in the ceiling. It was a prettily furnished room, with apiano and some lively furniture in red and green, and some flowers. It seemed to be all old nooks and corners; and in every nook and corner there was some queer little table, or cupboard, or bookcase, or seat, or something or other, that made me think there was not such another good corner in the room; until I looked at the next one, and found it equal to it, if not better. On everything there was the same air of retirement and gentility that marked the house outside.

Mr. Wickfield tapped at a door in a corner of the panelled wall, and a girl of about my own age came quickly out and kissed him. On her face I saw immediately the sweet and placid expression of the lady whose picture had looked at me downstairs. It seemed to my imagination as if the portrait had grown womanly, and the original remained a child. Although her face was quite bright and happy, there was a tranquility about it, and about her—a quiet, good, calm spirit,—that I have never forgotten; that I shall never forget.

This was his little housekeeper, his daughter Agnes, Mr. Wickfield said. When I heard how he said it, and saw how he held her hand, I guessed what the one motive of his life was.

She had a little basket-trifle handing at her side, with keys in it: and she looked as staid and as discreet a housekeeper as the old house could have. She listened to her father as he told her about me, with a pleasant face; and when he had concluded, proposed to my aunt that we should go upstairs and see my room. We all went together, she before us. A glorious old room it was, with more oak beams, and diamond panes; and the broad balustrade going all the way up to it.

I cannot call to mind where or when, in my childhood, I had seen a stained glass window in a church. Nor do I recollect its subject. But I know that when I saw her turn round in the grave light of the old staircase, and wait for us, above, I thought of that window; and I associated something of its tranquil brightness with Agnes Wickfield ever afterwards.

My aunt was as happy as I was, in the arrangement made for me, and we went down to the drawing-room again, well pleased and gratified. As she would not hear of staying to dinner, lest she should by any chance fail to arrive at home with the grey pony before dark; and as I apprehended Mr. Wickfield knew her too well, to argue any point with her; some lunch was provided for her there, and Agnes went back to her governess, and Mr. Wickfield to his office. So we were left to take leave of one anoth-

She told me that everything would be arranged for me by Mr. Wickfield, and that I should want for nothing, and gave me the kindest words and the best advice.

"Trot," said my aunt in conclusion, "be a credit to yourself, to me, and Mr. Dick, and Heaven be with you!"

I was greatly overcome and could only thank her, again and again, and send my love to Mr. Dick.

"Never," said my aunt, "be mean in any thing; never be false; never be cruel. Avoid those three vices, Trot, and I can always be hopeful of you."

I promised, as well as I could, that I would not abuse her kindness, or forget her admonition.

"The pony's at the door," said my aunt, "and I am off! Stay here."

With these words she embraced me hastily, and I went out of the room, shutting the door after her. At first I was startled by so abrupt a departure, and almost feared I had displeased her; but when I looked into the street, and saw how dejectedly

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

[illegible] drove away without looking up, I understood her better, and did not do her that injustice.

By five o'clock, which was Mr. Wickfield's dinner-hour, I had mustered up my spirits again, and was ready for my knife and fork. The cloth was only laid for us two, but Agnes was waiting in the drawing-room before dinner, went down with her father, and sat opposite him at the table. I doubted whether he could have dined without her.

We did not stay there, after dinner, but came up-stairs into the drawing room again; in one snug corner of which Agnes set glasses for her father, and a decater of port wine. I thought he would have missed its usual flavor, if it had been put there for him by any other hands.

There he sat, taking his wine, and taking a good deal of it, two hours: while Agnes played on the piano, worked and talked to him and me. He was, for the most part, gay and cheerful with us; but sometimes his eyes rested on her, and he fell into a brooding state and was silent. She always observed this quickly, I thought, and always aroused him with a question or caress. Then he came out of his meditation, and drank more wine.

Agnes made the tea, and presided over it; and the time passed away after it, as after dinner, until she went to bed: when her father took her in his arms and kissed her, and, she being gone, ordered candles in his office. Then I went to bed too.

But in the course of the evening I had rambled down to the door, and a little way along the street, that I might have another peep at the old houses, and the grey Cathedral; and might think of my coming through that old city on my journey, and of my passing the very house I lived in, without knowing it. As I came back, I saw Uriah Heep shutting up the office; and feeling friendly towards everybody, went in and spoke to him and at parting, gave him my hand. But oh, what a clammy hand it was! as ghostly to the touch as to the sight! I rubbed mine afterwards, to warm it, and to rub his off.

It was such an uncomfortable hand, that, when I went to my room, It was still cold and wet upon my memory. Leaning out of the window, and seeing one of the faces on the beam-ends looking at me sideways, I fancied it was Uriah Heep got up there somehow, and shut him out in a hurry.

CHAPTER XVI.

I Am a New Boy in More Senses Than One.

Next morning, after breakfast, I entered on school life again. I went, accompanied by Mr. Wickfield, to the scene of my future studies—a grave building in a court-yard, with a learned air about that seemed very well suited to the stray rooks and jackdaws, who came down from the Cathedral towers to walk with a clerkly bearing on the grass-plot—and was introduced to my new master, Doctor Strong.

Doctor Strong looked almost as rusty, to my thinking, as the tall iron rails and gates outside the house; and almost as stiff and heavy as the great stone urns that flanked them, and were set up, on the top of the red-brick wall, at regular distances all round the court, like sublimated skittles for Time to play at. He was in his library (I mean Doctor Strong was), with his clothes not particularly well brushed, and his hair not particularly well combed: his knee smalls unbraced; his long black gaiters unbottoned; and his shoes yawning like two caverns on the hearth-rug. Turning upon me a lustreless eye that reminded me of a long forgotten blind old horse who once used to crop the grass, and tumble over the graves, in Blunderstone churchyard, he said he was glad to see me; and then he gave me his hand; which I didn't know what to do with, as it did nothing for itself.

But, sitting at work, not far off from Doctor Strong, was a very pretty young lady—whom he called Annie and who was his daughter, I supposed—who got me out of my difficulty by kneeling down to put Doctor Strong's shoes on, and button his gaiters, which she did with great cheerfulness and quickness. When she had finished, and we were going out to the school-room, I was much surprised to hear Mr. Wickfield, in bidding her good morning, address her as "Mrs. Strong;" and I was wondering if she could be Dr. Strong's son's wife, or could she be Mrs. Doctor Strong, when Doctor Strong himself unconsciously enlightened me.

"By-the-Bye, Wickfield," he said, stopping in a passage with his hand on my shoulder; "you have not found any suitable provision for my wife's cousin yet?"

"No," said Mr. Wickfield. "No. Not yet."

"I could wish it done as soon as it can be done, Wickfield," said Doctor Strong, "for Jack Maldon is needy, and idle: and of those two bad things, worse things sometimes come. What does Doctor Watts say," he added, looking at me, and moving his head to the time of his quotation, "Satan finds some mischief still, for idle hands to do.' "

"Egad, doctor," returned Mr. Wickfield, "if Doctor Watts knew mankind he might have written, with as much truth, "Satan finds some mischief still, for busy hands to do." The busy people acheive their full share of mischief in the world, you may rely upon it. What have the people been about, who have been the busiest in getting money, and in getting power, this century or two? No mischief?"

"Jack Maldon will never be very busy in getting either, I expect," said Doctor Strong, rubbing his chin thoughtfully.

"Perhaps not," said Mr. Wickfield, "and you bring me back to the question, with an apology for digressing. No, I have not been able to dispose of Mr. Jack Maldon yet. I believe," he said this with some hesitation, "I penetrate your motive, and it makes the things more difficult."

"My motive," returned Doctor Strong, "is to make some suitable provision for a cousin, and an old play-fellow of Annie's.

"Yes," I know, said Mr. Wickfield, "at home or abroad."

"Ay!" replied the Doctor, apparently wondering why he empasized the those words so much. "At home or abroad."

"Your own expression, you know," said Mr. Wickfield. "Or abroad."

"Surely," the Doctor answered. "Surely. One or other."

"One or other? Have you no choice? asked Mr. Wickfield.

"No," returned the Doctor.

"No?" with astonishment.

"Not the least."

"No mottie," said Mr. Wickfield, "for meaning abroad, and not at home?"

"No," returned the Doctor.

"I am bound to believe you, and of course I do believe you," said Mr. Wickfield. "It might have simplified my office very much, if I had known it before. But I confessed I entertained another impression."

Doctor Strong regarded him with a puzzled and doubting look, which almost immediately subsided in

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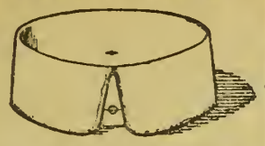
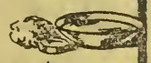
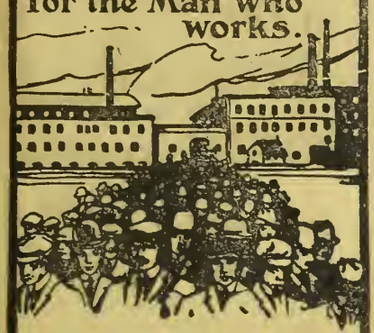


Look like linen—feel like linen, but outwear a dozen linen collars. No laundry bills—a little soap and water only required to keep them fresh and clean.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

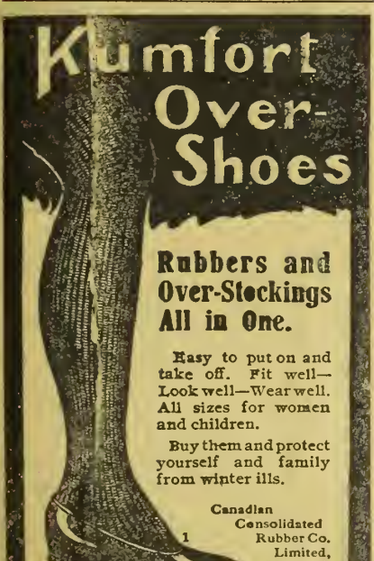


For the Man who works.



The Arlington Company of Canada Limited TORONTO

Kumfort Over-Shoes



Rubbers and Over-Stockings All in One.

Easy to put on and take off. Fit well—Look well—Wear well. All sizes for women and children.

Buy them and protect yourself and family from winter ills.

Canadian Consolidated Rubber Co. Limited, Montreal.

All Dealers

LET'S GET ACQUAINTED!

You have the

RAW FURS

We have the MARKET for them and the MONEY to buy them.

Why not exchange YOUR FURS for OUR MONEY. It means MORE MONEY for you. A trial shipment will prove it. Think it over.

A postcard from you will bring you our latest price list and shipping tags. References furnished. Goods held separate on repuest.

Hiram Johnson, Limited

494 St. Paul St., Montreal

Mail Dept. "F" The Raw Fur Dealers

to a smile that gave me great encouragement; for it was full of amiability and sweetness, and there was a simplicity in it, and indeed, in his whole manner, when the studious, pondering frost upon it was got through, very attractive and hopeful to a young scholar like me. Repeating "No," and "not the least," and other short assurances to the same purport, Doctor Strong jogged on before us, at a queer, uneven pace: and we followed: Mr. Wickfield looking grave, I observed, and shaking his head to himself, without knowing that I saw him.

The school-room was a pretty large hall, on the quietest side of the house, confronted by the stately stare of some half dozen of the great urns, and commanding a peep of an old secluded garden belonging to the Doctor, where the peaches were ripening on the sunny south wall. There were two great vines in tubs, on the turfs outside the windows: the broad hard leaves of which plant (looking as if they were made of painted tin) have ever since, by association, been symbolical to me of silence and retirement. About five-and-twenty boys were studiously engaged at their books when we went in, but they rose to give the Doctor good morning, and remained standing when they

"A new boy, young gentlemen," said the Doctor; "Trotwood Copperfield."

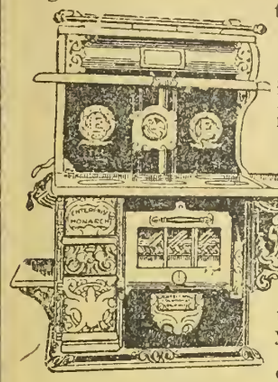
One Adams, who was the head boy, then stepped out of his place and welcomed me. He looked like a young clergyman, in his white cravat, but he was very affable and good-humored; and he showed me my place, and presented me to the masters, in a gentlemanly way that would have put me at my ease, if anything could.

It seemed to me so long, however, since I had been amongst such boys, or among any companions of my own age, except Mick Walker and Mealy Potatoes, that I felt as strange as ever I had done in my life. I was so conscious of having passed through scenes of which they could have no knowledge, and of having acquired experiences foreign to my age, appearance and condition as one of them, that I half believed it was an imposture to come there as an ordinary little school-boy. I had become, in my Murdstone and Grinby time, however short or long it may have been, so unused to the sports and games of boys, that I knew I was awkward and inexperienced in the commonest things belonging to them. Whatever I had learned has so slipped away from me in the sordid cares of my life from day to night, that now, when I was examined about what I knew, I knew nothing, and was put into the lowest form in the school. But, troubled as I was, by my want of boyish skill, and of book-learning, comfortable by the consideration, that, in what I did know, I was much farther removed from my companions than in what I did not. My mind ran upon what they would think, if they knew of my familiar acquaintance of the King's Beach Prison! Was there anything about me which would reveal my connection with the Micawber family—**all those pawnings**, sellings, and suppers—in spite of myself? Suppose some of the boys had seen me coming through Canterbury, way, worn and ragged, and should find me out? What would they say, who mad so light of money? if they could know how I had scraped my half-pence together, for the purchase of my daily saveloy and beeer, or my sauces and pudding? How would it affect them, who were so innocent of London life and London streets, to cover how knowing I was (and was ashamed to be) in some of the meanest phases of both; all this ran in my head so much, on that first day at

There's Cold Weather Coming!

And for Stove Satisfaction at a Modest Price

you should install the Right Range. Now we are safe in saying that no range sold in Eastern Canada gives such satisfaction, and hence has secured the same measure of popularity as the



ENTERPRISE MONARCH STEEL RANGE.

Since its introduction hundreds have been sold and we believe there is not a single owner of a MONARCH that would not give it her heartiest recommendation.

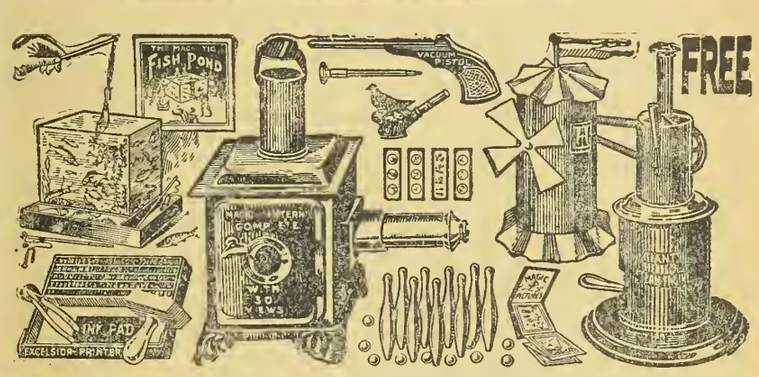
The Monarch will do all the work that any range can do; it cooks, bakes and heats well, and with the least expenditure of fuel.

It burns wood or coal, provides plenty of hot water, is well equipped and designed to save trouble in cleaning and operating, and is built to stand the test of hard work and wear.

Just keep it clean, and it's a delight to the eye—and the pocket—every day in the year.

Write us for illustrated circular, if your dealer does not handle this popular range.

Manufactured By the Enterprise Foundry Co. Sackville, N.B. Sold by all Enterprise Dealers



FREE Giant Toy Outfit for Boys FREE

Here it is boys, the famous Giant Toy Outfit. Just what you have been wanting all your life and right here, easy to get without a cent of cost.

READ WHAT EACH OF THESE WONDERFUL OUTFITS CONTAINS:

First, a dandy Giant Steam Engine, with beautiful burnished brass and Russia iron body, exhaust valves, nickel plated fly wheel and substantial metal base. We give you with it a lithographed tin water wheel to wind mill, and when your engine is running you can fasten a belt to the fly wheel and operate the mill or any other toy you desire. Next, we give you the finest little Magic Lantern ever seen. Made of Russia Iron, with high grade lamp and extension lenz complete to show any number of beautiful views and you get thirty pictures (six slides) with each lantern. Then comes the famous Vacuum pistol game that you have all seen. This fine revolver shoots a harmless rubber tipped arrow that sticks to whatever it hits. It is a complete game with pistol, arrow and a fine colored target all complete in a box. Next you get this fine Excelsior Printing Outfit, with tweezers, type holder and everlasting ink pad, and a complete set of the famous game of Magnetic Fish Pond, the funniest, most entertaining game ever devised. Then besides all those grand, big presents, each outfit comprises the great "Little Rip" ten pin game, a book of funny Austrian Magic disappearing pictures, and last but not least, the famous Swiss Marble and Canary Bird Whistle, a wonderful entertainer. ALTOGETHER 9 BIG PRESENTS. COUNT THEM!

Boys! Just look at the picture of all those grand presents and then imagine what fun you and all your friends can have with such a wonderful outfit. It's the easiest thing in the world to win them all. Just send your name and address to day and you will get by return of mail only 35 handsome bottles of the delicious Royal Japanese Perfume to sell among your friends at only 10c. a bottle. Six different delightful odors—White Rose, Arcadian Violet, Heliotrope, Lilac, Jockey Club, Carnation, etc. They are so delicious that everyone buys two or three bottles on sight. It is no trouble at all to sell this few; it won't take you an hour. Return our $3.50 when sold and we promptly send you the complete Giant Toy Outfit—every article you see in the picture—exactly as represented and listed above, absolutely free. Hurry boys! and grasp this chance of getting the most complete outfit of toys ever offered. We are spending thousands of dollars to introduce this delightful perfume throughout the Dominion. Write to day. We arrange to stand payment of all express charges on the outfit under our reimbursement system.

Address— REGAL MANUFACTURING CO. DEPT. G, 274 TORONTO, ONT. 58

WOODEN pails and tubs are as much ou of date as the scythe and the sickle—and just as unpractical.

Eddy's Fibreware

gives superior results—for less money. Pails, tubs, dairy utensils, etc.. made of this material are light, tight and durable. They have no hoops to drop off—no seams to crack. And they outwear the wooden articles many times over.

Ask Your Dealer

"ust as Good as Eddy's Matches."

Her Cough Racked Her Terribly.

DR. WOOD'S NORWAY PINE SYRUP Effected A Cure.

Obstinate coughs and colds yield to the greatful, soothing and healing power of Dr. Wood's Norway Pine Syrup, and for the racking, persistent cough, often present in consumptive cases, it will be found exceedingly beneficial and pleasant to take. The use of it is generally indicated wherever symptoms of throat, or lung troubles appear, but especially so with all persons of a consumptive or catarrhal tendency, as its prompt curative properites speedily remove the danger, and restore the throat and lungs to a sound healthy state if used in time.

Mrs. Edward Patterson, Young's Cove Road, N.B., writes:—"I have had occasion to use Dr. Wood's Norway Pine Syrup, and can say that it is certainly a good medicine. About a year ago I contracted a severe cold which settled on my lungs, and left them in a very weak state. The cough racked me terribly, and I was in despair until a friend advised me to give Dr. Wood's Norway Pine Syrup a trial. I got a bottle, and before I had it half gone I found relief. I used two bottles, and have never been bothered since. I would not be without it in the house."

Price, 25c.; family size, 50c. Manufactured only by The T. Milburn Co. Limited, Toronto, Ont.

Doctor Strong's, that I felt distrustful of my slightest look gnd gesture; sunk within myself whensoever I was approached by one of my new schoolfellows; and hurried off, the minute school was over, afraid of committing myself in my response to any friendly notice and advance.

(Continued in next issue)

Dairying, Fruit and Cold Storage.

Without cold storage the dairying and fruit industries would be greatly handicapped as much valuable produce would be destroyed by decay. Under such circumstances the cost of living would have mounted much higher than it has, and there would be little hope of establishing outside markets. Because these several lines of industry are closely allied they are all grouped under a single branch of the Dominion Department of Agriculture, that of the Dairy and Cold Storage Commissioner.

This Branch, under Mr. J. A. Ruddick, has become a far reaching organization extending from the milking sheds and the orchards even to the great markets of the United Kingdom. Through the Dairy division encouragement is given farmers to increase the production of their herds, instructions are issued to reach the best methods of turning out fine butter and cheese. The Fruit division seeks to enlighten growers on the condition of crops, to teach correct methods of productiob and marketing and to establish confidence in the value of Canadian fruit. The Cold Storage service assists institutions that require refrigeration to erect proper warehouses; during warm months aid is given railways that carry fruit and da ry products to maintain low temperatures in their cars; and help is provided to secure cool temperatures to export produce while on the ocean. The Extension of Markets division exercises a close supervision over the handling of perishable farm produce in transit and, as opportunity offers, transportation companies are advised of needed improvements in their equipment. Besides other duties it keeps a careful register of the wholesale weekly prices of all manner of farm produce and publishes these in the Annual Report of the Branch.

The duties of this Branch of government service enumerated are by no means complete, but they serve to indicate the nature of its work which bears a close relation to the cost of living. They are selected at more or less random from the Annual Report for the past fiscal year, which contains a large amount of useful information. This volume, which is made up of a general review by the Commissioner and eight appendices, is available to those who apply for it to the Publications Branch, Department of Agriculture, Ottawa.

PILES CURED at HOME by New Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Swine Fever.

Is known by several local names. such as pig thphoid, red soldier, the rose, the purples, pig distemper, and on the Continent two serums are used as a preventive, one form the lung and intestine form, another for the hog cholera form. Wallis Hoare's "System of Veterinary Medicine," says, "It is now universally accepted that a filtriable ultra-visible virus is the true cause of swine fever, and that the so-called swine fever bacillus or bacillus choleroe suis, when presebt in the blood and tissues of pigs suffering from the disease, is probably a secondary invgder, but an important acessory factor, most probably responsible for the characteristic lesions of the disesse." The serum is used generally as a preventive, but is sometimes used as a curative, but is not advised by the German authorities on account of its expense, etc.

Two serums are injected subcutaneously by means od sterilized syringe on the inside of the leg, and one other part of the body—generally behind the ears. In Germany the pigs are injected when a few days old, and it is held that it renders them more or less immune to swine fever for life. When a herd is attacked all those animals not showing symptons or having a slight attack, are injected so as to prevent its spred, those having it badly are killed. The styes, etc., are disinfected, and the usual precautions to prevent its spread are also taken. It is claimed that this method reduces the mortality quite 60 per cent.

It is recommended to use the serum again in later life, as the body lases its immInity to a certain extent. The preventive dose varies from seventy-drops to 300 drops, according to the size of the pig. As in its preparation the serum is defiltered, mixed with a suitable antiseptic, it is perfectly safe, and does not give the animal a mild attack of the disease. It is claimed that the serum, if properly stored in air-tight sterilized bottles, will remain good for years. Veterinary surgeons and owners have for years, owing to the disease being included in the Diseases of Animals Acts, been forced to slaughter all cases of the disease, so that treatment, etc., has been in England at a standstill, and we can only fallback on the foreign reports for stastics, etc., as to the result of various serums employed as preventative and curative. Nearly every country with the exception of England is using free,y in one form or other the various serums emand with the small pig population of the world, compared with the number of consumers of pork and its products, it is to be hoped that some means of preventing its spread or satisfactory method of treatment will be discovered, as the scourge is responsible for more deaths in pigs than all the other diseases put together.—Southern Vet.

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp;

BURNS 70 HOURS ON 1 GALLON OIL

Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

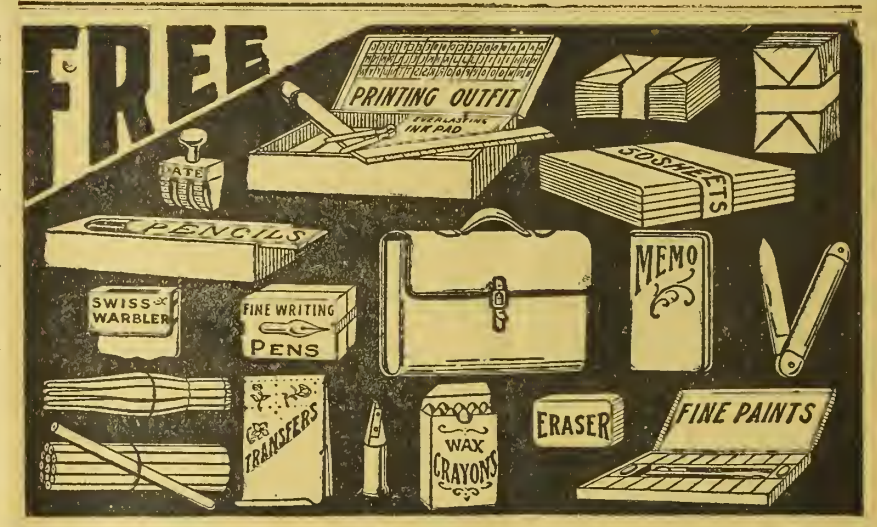
$1000.00 Reward

will be given to the person who shows us an oil lamp equal to this **Aladdin** in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the **Aladdin?** We want **one person in each locality** to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get **ONE FREE.**

AGENTS WANTED

to demonstrate in territory where oil lamps are in use. Experience unnecessary. Many agents average five sales a day and make $300.00 per month. One farmer cleared over $800.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and sample.

MANTLE LAMP CO. 282 Aladdin Bldg., Montreal & Winnepeg



FREE This 150 PIECE Complete Scholar's Outfit FREE

BOYS AND GIRLS, NEVER BEFORE IN CANADA HAS SUCH A GRAND PREMIUM BEEN OFFERED AND SO EASY TO GET.

READ WHAT THIS GRAND SCHOLAR'S OUTFIT CONTAINS.

1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water color paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 complete dater good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it, this scholar's complete outfit is **FREE.** We are determined to sell a million bottles of Rose Perfume this year, and are sparing no expense to reach this mark.

Rose Perfume is a great improvement on the old style of perfume and goes twice as far. Everybody buys it because it is so good, and a present is given away with every bottle.

We give you one of these grand scholar's outfits **IF YOU WILL AGREE TO SELL ONLY 30 BOTTLES OF ROSE PERFUME AT ONLY 10c PER BOTTLE.** Any boy or girl can sell 30 bottles easy. No trouble at all.

We send you the Rose Perfume free and trust you until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits.

Try. If you can't sell the Rose Perfume send it back to us.

Address to-day **THE ROSE PERFUME CO., Dept. S., 50** Toronto, Ont.

A WONDERFUL REMEDY

Orange Lily is daily curing the most obstinate cases of Female Disorders. Falling of the Womb, Leucorrhoea, Painful and Suppressed Menstruation, etc., etc., are all of them relieved from the start by its use, and a few weeks' or months' treatment accomplishes a complete cure. This remedy is a positive, scientific preparation, and is based on the discoveries of Pasteur and Lister. It is an applied treatment; that is, it is not taken internally, but is applied direct to the suffering parts, and it, therefore, acts with all the certainty of the known laws of chemical action. As it comes in direct contact with the diseased tissue, its antiseptic and nerve-food properties cannot help have a beneficent influence. I receive from 10 to 50 letters daily, speaking of the benefits and cures it is performing, and so sure am I that it will do what is claimed for it that I will send, absolutely free, a 35c box to every suffering woman who will write for it. Price, $1 per box, which is sufficient for one months' treatment. Address, MRS. FRANCES E. CURRAH, WINDSOR, ONT.

For Sale by Leading Druggists Everywhere.

MARKETS.

Charlottetown Market Report.

Date—December 4, 1913.

GRAIN—Oats, white, 35c to 36c; Black, 37c to 38c.

FEEDSTUFFS—Bran, $1.25 to 1.35 per 100 lbs.; Shorts, $1.40 to 1.50 per 100 lbs.; Middlings, 1.40 to 1.50; Oil Cake, 2.00; Cottonseed Meal, 1.80 to 2.00; Gluten Meal, 1.85; Corn Meal, 2.00 to 2.10.

LIVE STOCK.—Butcher's Cattle, 4c to 4½c, live weight; Stockers, $18.00 to 35.00; Milch Cows, 28.00 to 60.00; Sheep, 4½c to 5c live weight; Lambs, 5c to 6c lb. live weight.

DRESSED MEATS—Beef (Carcass) 8c to 10c lb; Beef, (Retail) 8c to 16c lb.; Mutton, 9c to 14c lb.; Pork, heavy, 8½c to 10½c lb.; Selects, 11c.

Horses.—Drafters, $125.00 to 250.00; Roadsters, 125.00 to 250.00, Carriage, 125.00 to 250.00.

DAIRY PRODUCTS—Creamery Butter, solids, 26c lb.; prints, 27c to 27½c dairy butter, tubs, 23c to 25c; prints, 24c to 26c; Cheese, 14c to 14½c lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 30c doz.; Fowl, 10c to 12c lb.; Chickens, 10c to 14c lb; Ducks 13c to 14c lb.; Geese, 12½c to 13c lb.; Turkeys, 20c to 22c lb.

FRUIT—Apples, $2.50 to 4.00 bbl.

MISCELLANEOUS—Hay, pressed, $11.50 to 12.50 ton; Straw, 6.50 to 8.00 ton; Wool, 25c lb.; Beef Hides, 12c to 14c lb.; Sheep Skins, 90c to 1.25 each; Lamb Skins, 80c to 1.00 each.

VEGETABLES—Carrots, 30c to 40c bus.; Potatoes, 30c bus.; Turnips, 12c bus.; Beets, 30c to 35c bus.; Parsnips, 1.00 per 100 lbs.; Cabbage, 40c to 50c per 100 lbs.

There is little or no change in market conditions for farm produce since our last report. The continued mild weather has enabled farmers to finish up the fall work and also permit of their shipping considerable surplus of roots which would otherwise have had to be carried over till spring. Large quantities of turnips have been shipped at eleven to twelve cents, and potatoes at 30c. There is considerable rot in the potatoes in most sections and dealers have been rather timid about taking large quantities of them. Eggs are scarce and firm, in fact the receipts are so limited that the prices quoted are only nominal. With the near approach for the last sailing for Newfoundland the price of oats, which had firmed up for a few days is likely to ease off and we think that the inside prices quoted will likely be the best obtainable as soon as the last boat is away. Hay is not offered very freely but in sufficient quantities for present requirements as space available for shipments is very limited. The market for meats of all kinds continues firm and poultry is being readily picked up at the full price quoted. The local pork packers are the only buyers at present and it looks from this that they are paying full value. Select hogs at 11c per lb., including the weight of organs is a good price and farmers are killing as soon as stock is ready for market.

Halifax Market Report.

GRAIN.—Oats, 50c. to 51c. bus. bagged; Peas, $2.20 per bus.; Barley, for feed, $1.75 per 100 lbs.

FEED STUFFS.—Bran $25.00 to $25.50 ton; Shorts, $25.00 to $26.00 ton; Middlings, $26.00 to $27.00 ton; Oil-Cake, $2.00 per 100 lbs.; Linseed Meal, $2.00 per 100 lbs.; Cottonseed Meal, $36.00 to $37.00; Gluten Meal, $29.00 to $30.00 per ton; Corn Meal, $1.70 to $1.75 per bag.

GRASS SEEDS.—Timothy, 6½ to 7c lb.; Com Red Clover, 20c to 24c. lb.; Mam. Red Clover, 20c. to 24c. lb.; Alsike, 18c to 20c. lb.; Alsike, 18c. to 20c. lb.

LIVE STOCK.—Milch Cows, $45.00 to $60.00; Lambs, $4.50 to $5.00.

DRESSED MEATS.—Beef (retail), 16c. to 26c. lb.; Mutton, 14c. to 20c. lb.; Pork, (carcass), 12½c. to 13c. lb.

HORSES.—Drafters, $250.00 to $300.00; Roadsters, $200.00 to $250.00; Carriage, $175.00 to 200.00.

DAIRY PRODUCTS.—Creamery Butter, 32c. to 34c. lb.; Dairy Butter, 28c. to 30c. lb.; Cheese, 16½ to 17½c. lb.

POULTRY AND POULTRY PRODUCTS.— Eggs 35c to 50. doz.; Fowl, 16c. to 18c. lb.; Chickens, 18c. to 22c. lb.; Ducks, 20c. to 22c. lb.; Geese, 20c. to 23c. lb.; Turkeys, 24c. to 26c. lb.

FRUIT.—Apples, $2.50 to $4.00 per bbl.

MISCELLANEOUS.—Hay, $14.00 to $15.00 ton; Straw, $10.00 to $11.00

VEGETABLES—Potatoes 55c to 60c bus.; Turnips, 40c to 50c bus; Beets, 50c to 60c bus.; Cabbage, 35c to 60c. doz.

Practical Recipes.

Calf's Head Pie—Stew a knuckle of veal till fit for eating, with two onions, a few isinglass shavings a bunch of herbs, a blade of mace, and few pepper-corns in three pints of water.

Calves head pie.—Stew a knuckle of veal till fit for eating, with two onions, a bunch of herbs, a blade of mace, and a few pepper corns in three pints of water. Keep the broth for the pie. Take off a bit of the meat for the balls, and let the others be eaten, but simmer the bones in the broth till it is very good. Half boil the head, first fat, then lean, with balls and hard eggs cut in half, and so on untill the dish be full; but be carefulnot to place the pieces close, or the pie will be too solid, and there will be no space for the jelly. The meat must be first pretty well seasoned with pepper and salt, and a little nutmeg. Put a little water and gravy into the dish, and cover it with a tolerable thick crust; bake in a slow oven, and when done, pour into it as much gravy as it can possibly hold, and do not cut it till perfectly cold. In doing this use a very sharp knife, and first cut out a large bit, going down to the bottom of the dishes; when cut thus, thinner slices can be cut. The different colours and the clear jelly have a beautiful marble appearance.

Giblet Pie.—After very nicely cleaning goose or duck giblets, stew them with a small quantity of water, onion, black pepper, and a bunch of sweet herbs, till nearly done. Let them grow cold, and if not enough to fill the dish, lay a beef, veal, or two or three mutton steaks at the bottom. Use the liquor of the stew to baked, pour it into a large teacupful bake with the above; when the pie is of cream. Sliced potatoes may be added.

Beef Olives.—Cut slices ½ in. thick, and 4 in. square, lay on them a forcemeat of crumbs and bread, a little suet or fat, pepper and salt. Roll them and fasten with a small skewer; put them into a stewpan with gravy made of beef bones, or the gravy of the meat, and a spoonful or two of water. Stew till tender.

Prescription for a Stingy Man.

In the Woman's Home Companion appears a story in which is related an account of a prescription given to an exceedingly stingy farmer by a doctor. The farmer took the prescription to the druggist. The druggist told the farmer that he could not fill the prescription and said to the farmer: "If you will read it yourself you will see why." Whereupon the farmer adjusted his glasses and read to his astonishment:

"One hired girl to be taken as soon as you can get her, and kept constantly on hand thereafter.

"A few new dresses that the wives of your hired men wouldn't be ashamed to wear, a new hat and wrap to replace those you bought her last—13 years ago.

"All to be tinctured with at least as much daily consideration as you bestow upon your cattle."

ECZEMA

CAN BE CURED

I Will Prove It to You Free

J. C. Hutzell
DRUGGIST

You who are suffering the tortures of Eczema, Itch, Salt Rheum or other skin diseases—you whose days are miserable, whose nights are made sleepless by the terrible itching, burning pains, let me send you a trial of a soothing, healing treatment which has cured hundreds, which I believe will cure you. I will send it free, postage paid, without any obligation on your part. Just fill the coupon below and mail it to me, or write me, giving your name, age and address. I will send the treatment free of cost to you.

CUT AND MAIL TO DAY

J. C. HUTZELL, Druggist, 704 West Main St., Fort Wayne, Ind., U. S. A.

Please send without cost or obligation to me your Free Proof Treatment.

Name_____Age_____

Post Office_____

Province_____Street and No_____

Look for the Trade Mark

on every bag

Cost of Living Reduced

that is as far as your livestock is concerned, in fact you cannot only actually reduce the cost of feeding, but in addition, **increase** the butter fat in the milk from your cows—increase the growth and weight of your cattle, sheep and pigs—and get better work and efficiency out of your horses.

All this can be accomplished by simply feeding regularly GENUINE

MOLASSINE MEAL

Made in England

Remember there are dozens of molasses meal preparations on the market but only **one MOLASSINE MEAL** which is the original and **genuine.**

Scientifically prepared and protected by patents.

Put up in bags containing 100 lbs. Get it at your dealer or write us direct.

MOLASSINE CO. OF CANADA, LIMITED

TORONTO MONTREAL ST. JOHN, N. B.

Oil in the Home.

A little knowledge of lubrication will amply repay the time and attention it requires. Doors should move without apparent effort, and certainly without noise. Bureau drawers ought never to stick or bind. While other things may prove annoying, the machinery of our homes should be so oiled that its operation is perfect.

Here is the matter in a nut-shell. When two dry surfaces are rubbed together under pressure friction results, and this shows itself in several ways, such as the hard work required to cause the motion, and also as heat or noise and wearing or grinding away of the surfaces.

However smooth the surfaces in contact may appear, they are in reality rough, much like sandpaper, if, seen under the micorscope. It is, therefore, the interlocking of these projections which follows the friction While no material wrars to a perfectly smooth surface, still it may become much improved by some wear. this explains the easier working of a sewing machine or egg-beater after some use.

The only cure for all these evils is lubrication of ntome sort, which in practice does away with them. Noise especially—such as a squeaky door hinge—can always be stopped if the remedy—oil—can be properly applied. It separates the two bearing surfaces so that they do not actually come in contact, and really acts much like many little rollers in easing the mo- "soothing syrup" "wears out," so that it must be renewed from time to time.

One wise housekeeper has constantly at hand a large can, filled with heavy machine-oil. It is made of heavy sheet steel similiar to those used in shops and factories, and is much more durable and satisfactory than the light tin ones usually seen. After once realizing the necessity for it, she has had the pumps for weel and cistren, as well as the clothes-wringer and cream-freezer, thoroughly oiled once each month. Only a drop or two is required for each bearing, but care has to be taken that none of them is overlooked. Any oil remaining on the outside of the bearing is removed with a cloth kept for the purpose, otherwise it will collect dust and stain clothes coming in contact with it. For a long time the ice-cream freezer was the the only thing which she refused to have "oiled," fearing that in some way the oil would find its way into the cream. Finally she consented, after being shown that this was guarded against by the peculiar construction of the freezer, and that the labor of turning it could in that way be materially reduced.

Door hinges and knobs, window fasteners and other similiar contrivances she oils carefully when cleaning house and then wipes thoroughly afterward. Window fasteners, which it was almost impossible to operate, and doors which woke persons in neighboring rooms, if opened or closed at night, are now noiseless and well behaved.

A door lock, in which the key turned with great difficulty, was removed from the door and oiled, after first removing the side-plate. When replaced it worked perfectly. A peculiar discovery was also made regarding the latch moved by the hand knob. This worked with such difficulty that when the door was pushed shut without turning the knob, the door usually rebounded, swinging open again. A heavy slam was required to force this projection in and so allow the door to latch securely. After oiling, however, the slightest push was sufficient to close and latch the door with almost no noise.

KA-LOR-OID
TRADE MARK REGISTERED

(Colored RU-BER-OID, Canadian Patents Nos. 93,027 and 93,160)

KA-LOR-OID, in its beautiful, soft shades of Red and Green, is the **only** prepared roofing made in permanent colors. In KA-LOR-OID Roofing the colors are not painted on, but by our patented process are made an integral part of the exposed surface. They last as long as the roofing itself—and that means longer than any other prepared roofing has lasted, for KA-LOR-OID is made of the same materials, and has the same wonderful durability as RU-BER-OID Roofing in the regular Slate color.

For Samples and Booklets write 110

Standard Paint Co. of Canada, Limited.
Montreal—Winnipeg—Calgary—Vancouver.

ROOFING

You Must Break The "Family Group" When It Comes To Music

EACH one's taste is individual — his own — and different. No one, not even a genius—could suit you all. And yet every one in the family loves music and regrets the silent piano none can master. The

New Scale Williams Player Piano

With the "Meister- Touch—most human of all."

spans the "Great Divide" between you and music. It enables you to play as though yours were the most perfectly trained fingers in the world. The intricacies of MacDowell's harmonics—the crashing chords of Liszt's stupendous Rhapsodies—the brilliant two steps or the dream-like waltzes of Strauss; all roll from under your fingers without effort or fault. You play what you love most—in the way that suits you best. And so does everyone else in the family. The New Scale Williams Player Piano combines the technical ability of the world's greatest musicians with the opportunity for your own individual interpretation. Write for our Player Piano Book and the personally autographed letters of the renowned artists who use the New Scale Williams Piano. Both gladly sent on request. 4D

We will make you a generous allowance in exchange for your present piano.

The Williams Piano Co., Ltd., - - Oshawa, Ont.

DEALERS EVERYWHERE.

While machine oil is the best for general use, almost anything can be used in an emergency. Even water will stop the squeak of an oar-lock or pump-handle, but it requires frequent application. Olive oil or butter, tallow or lard would be much better, as they are good lubricants. They have the disadvantages, however, of being expensive and emitting a bad odor if they become rancid. Vaseline, is perhaps, the best of anything usually found in the house, and may, if desired, be used regularly for general work. For a sewing machine or clock, it is, of course, too solid, but for ice-cream freezers and other places where oil is desired which will not run,, it is very well adapted.

In the absence of light machine-oil, kerosene works well on sewing machines or typewriters. If used freely on cheap time-keepers, such as alarm clocks, which have passed their prime, will restore them to usefulness. This is due to its effect in washing away the dust and dirt which is clogging the mechanism as well as to lubrication of the bearings.

While these oils and greases are well adapted to metal surfaces, they should never be applied to wood. Many things about the house are, however, constructed of this latter material, and its constantly changing size with changes in the weather conditions makes its lubrication an important matter. Soap is probably the best for this purpose and should be rubbed thoroughly on the sides and especially on the edges of drawers: It proves equally effective on doors and windows.

Graphite, while a solid has marked lubricating properties. Mixed with oil it is frequently used on heavy machinery. Its value is due to the fact that the small flakes become packed tightly into the depressions in the bearing surfaces making them very smooth. A lead pencil is in fact a good substitute for oil-can in many cases. It will certainly stop the squeak of the door-hinge if the graphite can be worked into the rubbing surfaces. Raising the door slightly will assist in this work and may be easily done with a lever placed under it and pressed down with the foot.

In this age of steel, we must all become more or lenss engineers to properly care for and operate the machines which are becoming more and more to be a necessity in our daily lives. Lubrication is just as necessary for a bed caster which is to perform its work satisfactorily as for the engines of the ocean liner.—H. L. Whittemore.

What an Inch of Rain Means.

An acre of ground contains 43,560 square feet, consequently a rainfall of an inch over an acre of ground would mean a total of 43,560x144, or 6,272,-640 cubic inches of water, or an equivalent of 3630 cubic feet, weighing 113 tons.

We wish to call your attention to the fact that most infectious diseases such as whooping cough, diphtheria and scarlet fever are contracted when the child has a cold. Chamberlain's Cough Remedy will quickly cure a cold and greatly lessen the danger of contracting these diseases. This remedy is famous for its cure of colds. It contains no opium or other narcotic and may be given to a child with implicit confidence. Sold by all dealers.

Doesn't this Louden Litter Carrier look good to you?

One of these Litter Carriers would be a real help to you in the barn. A LOUDEN Carrier changes drudgery into child's play and enables a boy to do a man's work in half the time and with half the trouble—and it costs but little.

A pound pull lifts 40 lbs.

A BOY can easily hoist half a ton and push the carrier right out of the barn to the manure spreader or litter heap where it can be easily dumped. Runs smoothly, too, and never gets out of order.

LOUDEN Litter Carrier

Makes barn work easy and light—costs little—means a cleaner better barn—time saved—and bigger profits. Now's the time to have it installed.

Every Farmer should have the new LOUDEN Catalogue as a valuable guide and reference book on Farm Equipments. It is FREE for the asking.

LOUDEN MACHINERY CO. - Dept. 28 GUELPH, Ont.

Feed your stock with a Louden Feed Carrier

and lighten your barn work. A LOUDEN Carrier raises or lowers any distance up to 25 feet, and hoists **twice as much** as any other carrier. Stands anywhere; can't fall. Easily installed and strong enough for anything. Box of heavy galvanized steel — no wood.

2

CANADA Portland CEMENT

SOME men ask for so many bags of "cement"—

Others, more careful, say they want "Portland Cement"—

But the man who does the best work insists upon getting "Canada" Portland Cement—

And he looks to see that every bag bears this label

CANADA CEMENT COMPANY LIMITED
PORTLAND
CANADA
CEMENT
MONTREAL

Write the Canada Cement Information Bureau, Montreal, for a free copy of "What the Farmer Can Do With Concrete."

There is a Canada Cement dealer in your neighborhood. If you do not know him, write for his name.

380 Acres, 50 Holsteins
Horses and all Machinery.

Registered Holstein bull and complete line modern up-to-date farm machinery, small tools, cream separator, etc included by aged owner for quick sale; in famous dairy section; cuts 80 tons hay besides large acreage used for crops; pasture for 75 head. wire-fenced, never-failing water; wood and timber estimated worth $6000; 100 Apple Trees; large sugar orchard; only 2 miles to all advantages; splendid 13-room house; 2 large barns, with basement, 10 room tenant house; everything complete, only $6700 easy terms; all details and travelling instructions page 33. "Strout's Farm Catalogue 36"; wonderful assortment of money-making farms throughout N. S. and N. E States; copy free Box No. 373, Sussex, N. B.

Annual Meeting of the Sussex and Studholm Agricultural Society.

The annual meeting of the Sussex and Studholm Agricultural Society was held at the Province al Dairy School at 3.30 o'clock on Monday afternoon, at which there was a good attendance of members. Col. H. Montgomery-Campbell, President, in the chair.

The mibutes of last annual meeting and directors' meetings since held were read by the Secretary, M. A. McLeod, and approved by the society. The Treasurer's statement of receipts and expenditures which was attached to the Auditor's report showed a good credit balance on the year's operations, and was approved of by the meeting. The Secretary also gave a statement of the various activities conducted by the Society during the year. It was resolved that in future the Judge of the standing crops competition be asked to furnish each contestant with a score card of his crop as soon as possible after any particular field had been judged. The object for this being that with a score card in hand the owner of the plot may see at a glance wherein his crop was deficient and thus enable him to rectify defects in future competitions.

Resolved that the Treasurer, be authorized, with Mr. Prescott's consent to reduce the note held by the Joshua Prescott estate, for loan against mortgage on driving park; as much as possible and give a renewal note for balance.

Resolved that a standing crop competition for Kings County be conducted for the year 1914, provided the usual grants are forthcoming.

Resolved that sections in the standing crops competition be open for red clover, alsike, and timothy plots, particulars of contest to be arranged by a committee to be appointed by the new board of directors.

Resolved. That a seed fair be held in Sussex in the Spring of 1914, provided the usual grants are forthcoming and that each and every farmer member be urged to put forth an effort to make an exhibit.

The question of the co-opaerative purchase of fertilizer material by the Society for the benefit of its members was discussed at some length and the general concensus of opinion was that such an action on the part of the Society would result in a very material saving in the reduction of cost. The Secretary read a letter from R. G. Murray, St. John re the proposed arrangement whereby the Government is being memorialized to lend assistance in the purchase of fertilizer for Agricultural Societies all over the Province. A Committee was appointed consisting of W. H. Venning, J. H. Manchrester, H. A. Flewelling, and the President and Secretary to keep in touch with this latter movement and formulate ways and means whereby the purchase ol fertilizer and seeds may be purchased collectively by farmers for use in the spring of 1914. Moved by H. R. McMonagle and seconded by E. O. McIntyre that an exhibition be held in Sussex in the fall of 1914. Moved as amendment made by W. H. Venning, and seconded by A. D. Freeze that the matter of the holding of an exhibition in the fall of 1914 be left for the consideration of the new board of directors; which amendment was carried.

The appointment of delegates to attend the 1914 Farmers' and Dairymen's Association was also on motion left to the new board of directors.

Col. H. Montgomery-Campbell, who has held the office of President for nearly 25 years, signified his wish to be relieved of the duty and did not wish his name again placed in nomination. A great number of the members of the Society urged him to again accept the office, but as he desired to withdraw, in deference to his wishes, they acceeded to his request and J. Frank Roach was elected President by acclamation. J. T. Prescott Vice-President also by acclamation. The Directors were named by a Nominating Committee consisting of A. D. Freeze, J. T. Prescott, Wm. Jamieson, and H. R. McMonagle, who submitted the following list which was approved by the meeting: Col. H. Montgomery-Campbell, James Manchester, Harvey Parlee, Geo. B. Jones, M. L. A., Hon. James A. Murray, A. D. Freeze, A. Branscombe, H. R. McMonagle, S. J. Goodliffe, C. W. McDougall, E. O. McIntyre, J. E. Fenwick, Murray Heustis, William Jamieson.

On retiring from the chair President Campbell made some fitting remarks regarding the success and activities of the Society. All down the years since its orgamization it had always been considered one of the foremost Agricultural Societies in the rovince and these successes had been achieved through the hearty co-operation of the officers and members. He expressed his appreciation of the generous support which had been given him while he occupied the chair; by the various boards of directors. He could proudly say that he had never known of a case where any officer of the Society had made an attempt to work society matters for personal motive or gain. The policy had always been, always do everything for the best interest of the Society and its members at large. While he had had the honor of presiding over several agricultural associations of various kinds from time to time he always considered the presidency of the Sussex and Studholm Society being more honorable than all others. From that capacity he had an opportunity to work for the best interests of his fellow farmers in his home district.

Following these remarks the Society tendered Col. Campbell a unanimous vote of thanks for the deep interest which he had always manifested in the Society.

At the close of the meeting the new Board of Directors met and reappointed M. A. McLeod, Secretary-Treasurer.

A Des Moines man had an attack of muscular rheumatism in his shoulder. A friend advised him to go to Hot Springs. That meant an expense of $150.00 or more. He sought for a quicker and cheaper way to cure it and found it in Chamberlain's Liniment. Three days after the first application of this liniment he was well. For sale by all dealers.

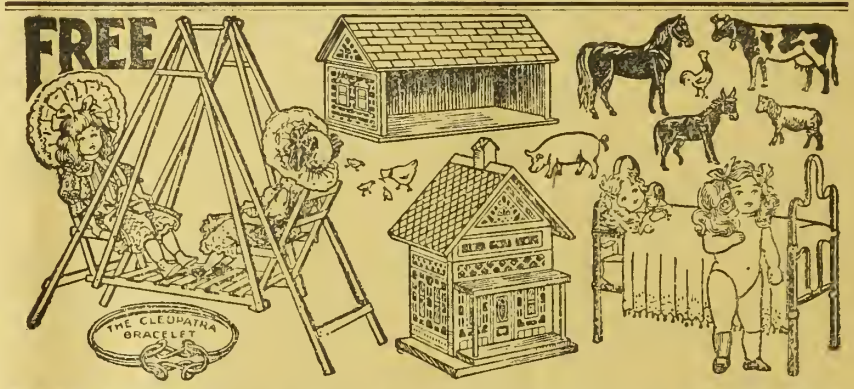
SNOW PLOWS
For Township Roads. For Sidewalks.
Stone and Stump Pullers
Bob Sleighs
A. LEMIRE, Prop., Wotton, Que.

If horses go lame, you don't have to lay them off to cure them. Kendall's Spavin Cure works while they work—and cures them while they earn their keep. For Spavin, Curb, Ringbone, Splint, Sprain, Swollen Joints, Lameness

Kendall's Spavin Cure
"Completely Cured Him"

Moose Jaw. Sask., Oct. 13th
"Two years ago, I bought a colt that was badly spavined, and completely cured him with only two bottles of your Spavin Cure. Worked him steady all the time and sold him last winter for a top price."
Howard Brock.

Also famous as the standard family liniment $1. a bottle—6 for $5. Ask your dealer for free copy of our book "A Treatise On The Horse," or write us. 53
DR. B. J. KENDALL CO.
Enosburg Falls, Vt.



FREE THE GREATEST DOLL OUTFIT IN THE WORLD — 15 PIECES **FREE**

GIRLS—We want to give you the biggest, handsomest outfit of dolls and toys you have ever seen—all free to you without a cent of cost. Just look at the picture of this wonderful doll outfit and then

READ WHAT WE GIVE YOU—First, this dandy, big model, garden swing, made exactly like the fine big swings you see on millionaires' lawns, and just the finest doll toy ever made. It holds two big dolls, so we give you with it two fine Paris beauties, dressed complete from hat to shoes in the latest fashion. Then we give you a lovely little French Bisc baby doll and the cutest gold enamel doll bed you have ever seen, complete with canopy top, matress, spread and all. Next comes the Red Robin doll house, where you can put dolly when it rains or you don't want to play with her. It is a charming doll house and just what you will like. Last but not least, the famous Red Robin farm, with its big barn and fine, embossed horse, cow, sheep, donkey, pig, rooster and even an old hen and her little chicks. Girls, with this lovely outfit, you can give your dolls a real day in the country any time, and besides all these lovely doll presents we give you an **EXTRA PRESENT** of a fine Cleopatra Coraline Bracelet to wear yourself. It will delight you.

If you want all these grand presents, write us today and get by return of mail just **32** of our beautiful gold finished Beauty Pin sets to sell among your friends at only 10 cents each. Everybody buys two or three sets on sight because they are the prettiest and most useful Beauty Pins ever made. Just think! Two fine, fancy engraved, gold finished beauty pins on a handsome card for only 10 cents a pair. It is a pleasure to sell them. Then return our **$3.20** and we will promptly send you **ALL 8 PRESENTS**, the **WHOLE 15 PIECES** and the **BRACELET** as well, just as you see them, without one cent of cost and we guarantee that you will be delighted with them. We arrange to stand payment of all charges. Don't miss this grand opportunity. Write today. Be first. Address:

THE REGAL MANUFACTURING CO. DEPT. S. 273 TORONTO, ONT.

SISTER: READ MY FREE OFFER.

I am a woman.
I know a woman's trials.
I know her need of sympathy and help.

If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understaud women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back,** or **bowels, feeling of weight** and **dragging down sensations, falling or displacement of internal** organs, **bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete ten days' **treatment** entirely **free and postpaid,** to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escaping the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured,** my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatment is for all,—**young or old.** To **Mothers** of **Daughters,** I will explain a simple home treatment which speedily and effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, **write for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask** for the **free treatment to-day,** as you may not see this offer again. Address:

MRS. M. SUMMERS, Box 309, WINDSOR, ONTARIO

Move your Surplus Stock before the cold weather comes by advertising in the columns of The Maritime Farmer.

State Agricultural Conventions.

(Continued from page 152)

The gathering together of this great array of organized industries into one common cause for improvement offers advantages that could not otherwise be available to the average citizen, there is not time even in one week of meetings to afford all the advantages of the full program of the various associations is greatly to be regretted. That the duty of the program committee in its efforts to dove-tail in the exercises of the various associatiobs so as to afford the greatest advantages to all is a hard one, anyone familiar with the work will cheerfully admit.

There is a strong tie of relationship, naturally, between all associations of an agricultural character in any province or district of country. The tiller of the soil may legitmately engage in any of these organizations. The farmer is a horticulturist, a dairyman, a florist, a breeder of live stock a bee keeper, a poultryman, etc., by his right to the soil and its adaptability to be turned to any line of production.

PRACTICE AND PLAN.

"An ounce of prevention is worth a pound of cure," so, avery little bit of practice is worth an infinity of plans. How often we find the time to make new plans of all kinds, when many old ones of some real value, if executed, are still left worthless because never put into practice. The places where most of all the maxim, "Union is strength," holds true, is the army, the place one man plans and thousands execute. The fewer assistants he has in his plans, the better, but the more help he has to carry them out the surer and more complete the result will be. The greatest folly of all is to plan without the assurance that one can carry it out well, for even the plan of only common adaptability, if well carried out, is far better than the best plan indifierently executed. Plan are things we can afford to economize. The thing we must be extravagant of is practice.

The Banner Oat Club is Doing Splendid Work.

A meeting of the Banner Oat Club was held in the office of John Grady, at Summerside, on Thursday, November 27th. The president, Rev. J. J. McDonald, of Kinkora, called the meeting to order and spoke of the work that had been done last year. The secretary, Thos. S. Waugh, then submitted his financial report whi(h was accepted.

The Club then proceeded to make arrangements for the sale of oats for this year. Several propositions were made by members in regard to the oats and a communication was read by the secretary from Joseph Read & Co., offering to purchase the whole of the oats or to handle it on commission. The Club decided to accept this offer of purchase and arrangements are being made for delivery. The Club however undertakes to guarantee the oats of its members and all Club oats leaving the Island through the firm of Joseph Read and Co., will be stencilled with the name of the Club on each bag or package.

It was further agreed upon that seed growers who are eligible for membership and who did not join the Club this year should be asked to contribute five dollars each toward the expenses, as this amhunt was contributed last year by members joining the Club.

The election of officers then took place and resulted in the re-electivn of the president, Rev. J. J. McDonald; Horace Wright, Bedeque, vice. president and Theodore Ross as secretary. The retiring secretary, Mr. Waugh, stated that he was to far from town and the telephone to act as secretary again and would not permit his name to go before the Club. The meeting then adjourned to meet at the call of the president.

The members fet that the Banner Oat Club was doing good work and would urge every farmer on P. E. Island who grows Banner oats and who entered fields in the Standing Fields of Grain Competition last year to apply for membership at once.

Sheep Notes.

Although there is time enough, it is a good plan to arrange for the production of spring food for the ewes and lambs—and, indeed, for the tegs, if there are any to be fed—at the earliest moment. The land to be devoted to each crop, including successions, may be selected, and the work arranged accordingly. I have seen crops growing on sheep farms which were eaten off by another farmer's flock owing to the inability of the tenant to obtain one for himself. Sometimes sheep fed in this way have paid their owner handsomely, his contribution having simply been a guarantee to consume so much cake on the land. Clearly, it is essential on a sheep farm to eat off the crops or a given portion of them in order to ensure a succeeding crop of corn and seeds in succession. As a rule, however, the difficulty is in obtaining a sufficiency of roots, vetches, and other forage crops to carry the flock on, for with plenty of food on the land it becomes possible to reduce that which is bought. In a poor season a good shepherd will go far with short keep assisted with hay, cake and crushed oats, whereas in a good season a careless shepherd will do just the reverse, and use quite as much of these foods, costing his employer more money than he should spend, and at the same time wasting a large portion of the crops on which he folds his charges.—English Exchange.

For A Soft Healthy Skin

Use Baby's Own Soap. It's "Best for Baby — Best for You".

Absolutely pure vegetable oils made fragrant by flower extracts, which help the skin, make Baby's Own Soap the best for toilet and nursery use.

Its fragrant, creamy lather delights all.

ALBERT SOAPS, LIMITED,
Mfrs., - MONTREAL.

5-12

Baby's Own Soap

High Quality Builds Big Telephone Business

THIS business was organized to manufacture telephone equipment for independent local and municpal systems. Right from the start our equipment made records for efficiency. It did not take long for our goods to acquire a reputation for quality and reliability. As a result, our business has grown by leaps and bounds.

It is a well-known fact that we have been securing over 80 per cent. of the new telephone business in Ontario. The buainess, too has been secured with less effort than business secured by competitors. The satisfaction our telephones and equipment have given under all conditions has paved the way for easy business getting.

To judge how fast our business is growing, you'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the local telephone business that we are the legitimate people to deal with. There are those in the telephone business who are interested in depreciating the success of the independent telephone movement and the developmedt of municipal systems. On the other hand, our business lies wholly and directly with the independent telephone systems, and it is to our own best interests to look after these systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of the telephones they are using. In fact, if you'll name over the large independent telephone systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephones and equipment.

You are absolutely safe in equipping your systems with our telephones. We guarantee them as regards material and workmanship. In fact, we guarantee all our equipment and materials. And in addition, we offer to send our telephones for Free Trial, so you can test and compare them with others right on your own lines before risking a dollar.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4 describing our magneto telephones is free on request.

SEND FOR A COPY.

Canadian Independent Telephone Company, Limited.

1820 Duncan St., - - Toronto, Canada.

Also manufacturing agents for the Magnaphone Co., under Mr. George R. Webb's Canadian Patents No. 123363, No. 124537, No. 131145."

The Scientific Farming sf the Woodlot.

"There is no part of the farm which will give bigger returns for so little expenditure of time and labor as the woodlot." This statement in the July number of the Canadian Forestry Journal, is made by Mr. B. R. Morton, B. Sc. F., the silvical expert who is engaged by the Forestry Branch at Ottawa to demonstrate to the woodland owners of eastern Canada just how these bigger returns may be achieved. But if it is not possible to obtain such expert advice, there are yet three ways in which the farmer, by the exercise of ordinary common sence, can vastly improve the composition, production and reproduction of his woodlot.

The first thing necessary is to improve the character of the crop, which can be done by cutting down and using for fire-wood all deceased and deformed trees, as well as such species whose presence in the woodlot is nor desirable. Only too frequently is the method of cutting exactly the reverse The best trees are cut, often for purposes for which an inferior wood are left to seed-in the cut-over areas and to gradually crowd out the better varieties. Before cutting the farmer should consider first the use to which the wood is to be put, and second, the species-composition of the returns for a small acreage and for this purpose, rapid-growers such as popular, ash and elm should be encouraged, which should make an annual growth of from one-half to one cord per acre. Basswood too, will be in increasing demand because of its rapid growth, because it coppices readily and because of its value in small articles for which the wood is small sizes for the manufacture of excelsior, cooperage stock and other particularly adopted. Maple produces readily, and although not a rapid grower, it nevertheless yields a substantial revenue when it becomes large enough to tap. Soft woods like spruce, balsam and pine grow much more rapidly than hardwoods and might be advantageously grown for fuel of pulpwoohf.

When the most suitable species have been selected and the weed-trees removed, the woodlot must then be thinned until the crowns of the best formed remaining trees are seen to barely touch. An acre can only produce a given amount of wood each year and the fewer trees there are to share this yearly increment, and yet fully ultilize the crown space, the more rapid will be the growth of these trees.

The third requisite is the scientific farming of the woodlot, is that the cattle be kept out, especially after heavy cutting, when reproduction is most desired. Cattle are just as injurious to a young cron of tree seedlings as they are to a young crop of grain. They may indeed eat the grass in the woodlot, but they would just as soon, if not sooner eat the young and tender hardwood shoots, and the same can be said of the sheep. Even coniferous seedlings are not immune so that the certainity in reproduction is only assured by fencing-off the cut-over areas.

Dr. Fernow predicts that "There will be a time when the woodlot will sell the farm or will be a necessary part of the farm to make it valuable." In the seasons when his other work slackens the farmer could very easily improve his woodlot in anticipation of this time of increased wood value.

When you have a bilious attack give Chamberlain's Tablets a trial. They are exdellent. For sale by all dealers.

382
Here's a Knife-Sharpener and Towel Dryer combined in one—both are necessary in the kitchen. Not necessary to a range, but they indicate the consideration and thought that has been given to the details of the Pandora. Important features have been given proportionately great care and study.
Have the Pandora's many features explained to you before you buy your range.
The accuracy of the McClary thermometer makes good baking a certainty—also adds a lot of satisfaction to the work.
McClary's STOVES
LOOKS FOR 65 YEARS
1234567890
WARM OVEN! HOT OVEN! VERY HOT OVEN!
LONDON, CANADA
McClary's Pandora Range
Pandora Ranges are sold everywhere by good dealers who back up our guarantee on this splendid range—McClary's
London Toronto Montreal Winnipeg Vancouver
St. John Hamilton Calgary Saskatoon Edmonton

Household Hints.

To prevent prints from fading when being washed, soak black and pink prints in salt and water, and delicate mixed colors in pared potata water. Use alum.

It is the tritest and yet nearly the most necessary of commonplaces that encouragement is sorely wanted in life. There is very little of it; yet, as a rule, it is wholly beneficial, and it is a gift which everyone may impart.

A stretcher for carrying an injured person may be improvised out of a strong sheet or blanket and two light poles. Each side of the sheet is wound up on the pole until there is just room for a person to lie between.

To distinguish good cottons from poor ones remember that a good print or cotton leaves a very fair, straight edge when torn; the thread ends are also even. A good washing print usually has the pattern stamped well through to the wrong side.

You will find that the druggists everywhere speak well of Chamberlain's Cough Remedy. They know from long experience in the sale of it that in cases of coughs and colds it can always be depended upon, and that it is pleasant and safe to take. For sale by all dealers.

Minard's Liniment Co., Limited.

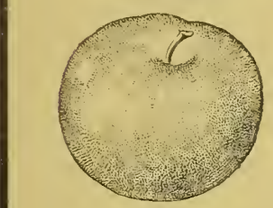
Gentlemen,—Last winter I received great benefit from the use of MINARD'S LINIMENT in a severe attack of LaGrippe, and I have frequently proved it to be very effective in cases of Inflammation.

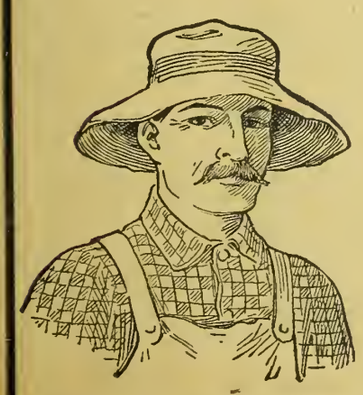
Yours,

W. A. HUTCHINSON.

Progressive Jones Says:

"It Pays Big To Fertilize The Harab Way"





THIS year I have seen scores upon scores of proofs that it pays big to fertilize the Harab way. I've seen worn out soils made to yield bumper crops and make pocket books bulge with profits. I've read oceans of letters from my farmer friends giving evidences of their success with Harab Fertilizers. What better proofs could you want, friends, than the proofs of what the Harab way has done for others.

I think you will agree with me that the Harab way is the sensible method of fertilizing. You see there are 25 different

Harab FERTILIZERS

prepared from tested, absolutely reliable formulae. Among these twenty-five different fertilizers is to be found exactly what is needed for your particular locality and for your crop you wish to raise. Harab experts give each inquiry individual attention and advice as to what fertilizer is required, based on actual tests and reports from your own district.

Harab fertilizers are being used all over Canada and are producing big results. I know the results you will get will be equally as good as the successes some of my farmer friends tell about on this page.

Harab fertilizers are mechanically mixed in exact proportions and are of the highest quality in every way. I've seen them made and I ought to know. They are manufactured from blood, bones, tankage, etc., from big Harris slaughter houses. In addition, they have Potash and just enough quick-acting Nitrates and Superphosphates to produce well-balanced Fertilizers which feed the plant as required and develop it to early maturity in a natural way. Their beneficial effect upon the soil can be felt for years after the application is made.

But, friend, what you want right now is the Harab Fertilizer booklet. It gives complete information about fertilizing the Harab way. The Harris people have promised me to mail a copy promptly to every friend of mine who writes for a copy, and to give personal advice to each inquirer. Just drop a post card to them right away.

Yours for bumper crops
Progressive Jones

Read What My Farmer Friends Say

Nanticoke, Ont., Oct. 18, 1913.
The Harris Abattoir Co., Toronto,
Dear Sirs:
Last spring we tried your Farmer's Special Fertilizer on 8 acres of Oats, and were very well satisfied with the results. It raised the average yield 10 bushels per acre over any former crop that we had raised on that field for the last eight years, and we take great pleasure in commending it for run down land.
(Signed) FRANK FLEMING.

Doubled the Corn Yield

Canard River, Ont., Sept. 8, 1913
The Harris Abattoir Co., Toronto
Dear Sirs:
I have used your fertilizers of all kinds ordered and they have proven satisfactory in every case, especially on the sweet corn, of which the yield was about double that on which there were no fertilizers. I think next season I will use double of what I used last season.
(Signed) DOLPHIS VIGNEUX.

Largest Celery Farm in Canada

Thedford, Ont., Sept. 3, 1913.
The Harris Abattoir Co., Toronto.
Dear Sirs:
Having used fertilizer on celery for the past seventeen years, wish to state that the brand we received from you last year and this spring has given us the best results of any fertilizer we have ever used. We would suggest that any gardener, who has not been fortunate enough to try your goods should do so at first opportunity, and get the best. Wishing you every success and you can feel assured that we will back you for more fertilizer next spring, we remain,
(Signed) THEDFORD CELERY CO.

Cheaper Than Horse-Manure

Walkerton, Ont., Aug. 25, 1913
The Harris Abattoir Co., Toronto.
Dear Sirs;
Your Mr. Grose called here and looked over our Strawberry field, which is beginning to show the results of your furtilizer.
We have been experimenting with an acre of Berries fertilized with 500 lbs, Harab to the acre, cost $8.50. Also an acre alongside of it with 20 loads of Horse Manure ar a cost of $2 00 per load delivered, $40.00. The plants where the Harab was used are larger and more healthy than where the manure was used, convincing us that it is much cheaper, allowing for a crop of Rape or any green crop to supply the humus which is all the fertilizer does not supply; to say nothing of the saving of lahor in hoeing the crop and keeping it clean as we find the acre with manure requires more work on account of the weed seeds which you always get in manure.
(Signed) J. E. McGREGOR.

The only Good Corn Crop

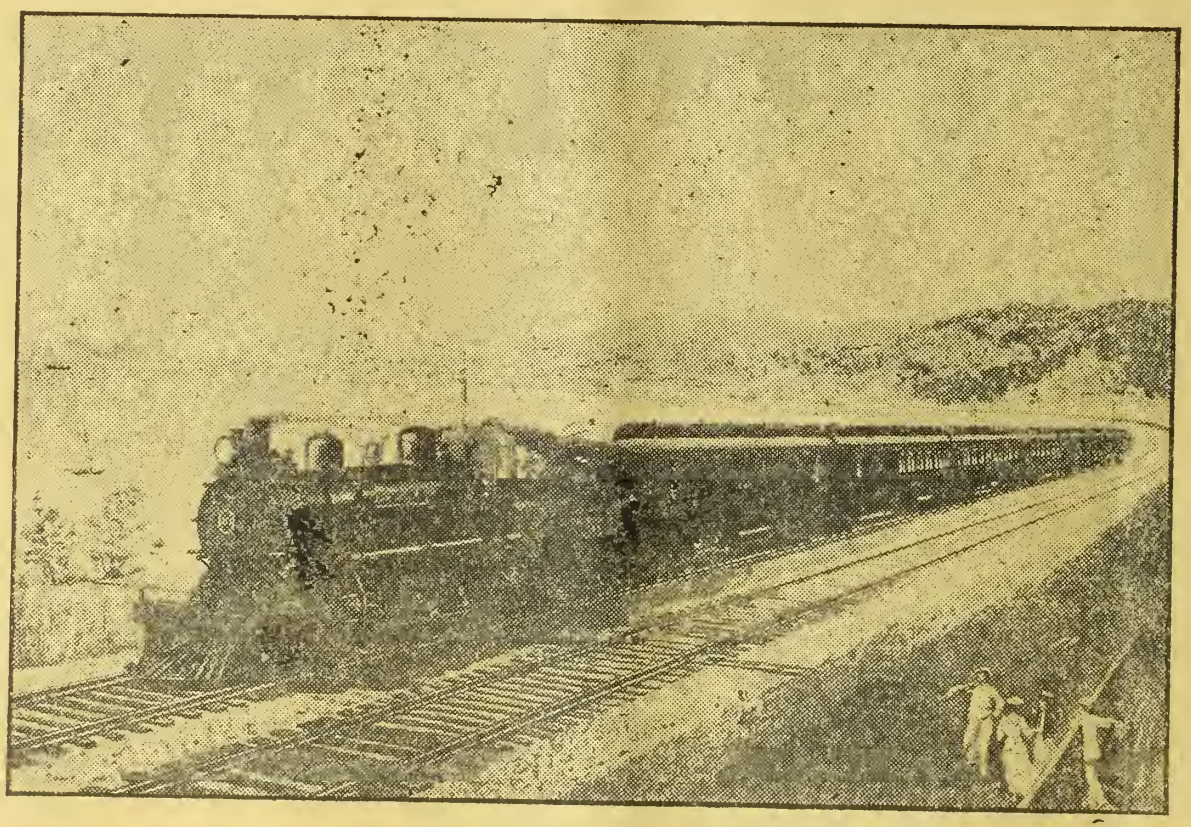
Port Hope, Aug.23, 1913
The Harris Abattoir Co., Toronto
Dear Sirs:
In answer to yours of the 15th inst. I am sending you by express a sample of Oats, grown by us this year. The soil is a gravelly loam, considered one of the poorest fields in the neighborhood.
Last year's crop was silo corn fertilized with your fertilizer at a cost of about $3.00 per acre in the drill. It was the only good corn crop in this part last year. We sowed it this spring with oats. We entered them for the county prize in the field crops. There were 15 entries from all the best farms within 20 miles. They got third place out of seven prizes, being only five points behind number one and three behind number two We fertilized the oats at a cost of $4·50 per acre and am sure we added 30 or 40% to the crops. We are prepared to furnish seed up to 200 bushels at one dollar per bushel, bags free. Hope to be able to see you at the fair.
(Signed) R. L. HOLDSWORTH & SONS.

THE HARRIS ABATTOIR CO., Limited FERTILIZER DEPT. **Strachan Ave.**
TORONTO - CANADA
BENN AND TURNEY, EASTERN AGENTS, - WOODSTOCK, New Brunswick

INTERCOLONIAL RAILWAY

THE ONLY ALL CANADIAN ROUTE

BETWEEN THE
MARITIME PROVINCES
AND THE
METROPOLIS OF CANADA



2 THROUGH PASSENGER TRAINS TO QUEBEC AND MONTREAL 2

THE **OCEAN LIMITED** (*Daily*)	*THE* **MARITIME EXPRESS** (*Except Sunday*)

Both Renowned for Splendid Equipment and Excellence of Sleeping and Dining Car Service

FAST THROUGH FREIGHTS afford the best facilities for the shipment of all Products to the Markets of the Canadian West.

PATRONIZE YOUR OWN LINE

The Greatest Blessing.

Doss not everyone desire the greatest of all blessings—good health. Given their birthright at the start all may continue to enjoy it through life, by carefully observing the laws of hygiene and sanitation. Intelligent people no longer ascribe sickness to "Providence," but rather to the sin of ignorance. The discoveries of science have shown that many of the fatal diseases of mankind are preventable.

Where men congregate more or less in numbers the dangers that menace health are proportionately increased, owing to sanitary neglect or ignorance. In cities and large towns sanitary affairs are controlled by public boards of health, and violations of the laws subject the individual to punishment, but in isolated country districts it is necessary for each householder to look after such matters himself, if he would enjoy good heath. Consider the following:

THE AIR WE BREATHE.

Air, fresh, pure air and plenty of it, is absolutely necessary to good health. Everyone should try at all times to secure and enjoy a maximum of the precious life sustaining element, yet many ignorantly and unnecessarily deprive themselves of as much of it as they can manage to exist without thereby rendering themselves less able to resist insidious attacks of disease.

When even that dread scourge, that fearful "white man's plague," consumption, if taken in time, can be cured by making the patient live in the fresh air all the time, it would seem that the most ignorant and stubborn ought to be convinced that only in fresh air can one seek health and only in fresh can health and bigor be maintained. As air is the material most needed by our bodies, we should always have an abundance at hand, and be sure it is of the very best quality. Many of our hours are spent indoors, and this teaches us the important lesson of airing our homes. It should also be remembered that fresh air is easier to warm than stale air.

THE VALUE OF SUNLIGHT.

Sunlight is one of the most powerful germicides known. It destroys germs and spores, and if we could carry sunlight into every corner of our houses, there would never be any need for disinfectsants. The germs of all diseases are killed by direct sunlight in six to eight hours. Thus the important lesson is taught us that well lighted rooms do not harbor contagion. Good ventilation (fresh air) and sunlight are the most important aids to a good healthf

Ideally, every house should have an entire daily bath of sun-dried air—that is, air that has been sterilized by the sun's rays. Not only should there be a free circulation of sun-near conditions which might render the air impure, such as stagnant wa' ter, decaying vegetation or animal matter, or any noxious refuse. Dampness, darkness and dirt are enemies of good health.

WE ARE LARGELY WATER.

Chemists estimate that at least two-thirds of the human body is water. As the body is continually giving out water through the skin, lungs and kidneys, it must frequently receibe a new supply to keep up the normal proportion. Therefore it is of prime importance that the water we drink cantain nothing harmful to the body. To have water is a necessity to have it harmless is of equal importance.

A pure, generous and convenient supply of water should not be considered a luxury, possibly only a few, but a necessity obtainable by all, even at the cost, if need be, or some other less important furnishing. It is stated by experts that neither looks, taste nor cleanliness can be trusted to distinguish between a safe or an unsafe water. Analysis alone can establisn that.

The danger most to be feared from drinking such water is typhoid fever. When there is any reason to suspect that the drinking nsupply is polluted, it should be boied 20 minutes after the steam bigins to rise. This will kill all germs. Another caution: Water very readily takes up gases or bacteria that may be in the air, and for this reason should not be left long uncovered when it is used for drinking. Such care is especially necessary in the sick room.—William R. Downey, M. D.

Precautions Against Diphtheria.

Diphtheria is a disease of the throat which shows itself first by the sufferer feeling ill, and complaining of aches and pains in various parts of the body, headache, loss of appetite, chilliness. At an early stage the throat feels sore with patches next appear on the tonsils, followed by the growth of white membrane, tongue dried and furred. When diphtheria is prevalent no time should be lost in calling in a medical man if there is he slightest suspicion of sore throat. Delay in so doing may prove fatal. Diphtheria is spread— (1) By contact, for example, kissing, drinking out of the same cup, using the spoon, fork, etc., or handkerchief of anyone suffering from diphtheria. (2) Milk readily conveys the disease. All milk should be boiled; any milk, beef tea, etc., left by a person suffering from the disease must be thrown away. Boil water used for drinking purposes. (3) Keep cats away. Cats readily convey diphtheria, and frequently suffer from the disease themselves. (4) Cleanse privies frequently. The emanations from foul privies may possibly, and most probably do, cause diphtheria. It is therefore most important to empty privies frequently, and not to allow night-soil to accumulate in large quantities. Sanitary pails frequently emptied and kept deodorised by the use of dry earth or fine sifted ashes are the best. Dry earth is the best deodorant. When disposing of the contents of privy or sanitary pail, always bury them about two feet below the surface of the ground in a situation where there is no risk of contaminating the well or other water supply.

Dangerous Hair Washes.

A verdict of "accidental death through burning by petrol" was returned at an inquest at Bath on the body of the wife of a motor-car driver, who was using petrol as a hairwash when it caught fire. The woman was enveloped in flames, and died very shortly afterwards.

Winter Covering for Strawberries.

"There is probably no better covering for the strawberry bed during the winter than a layer of good, clean straw of some kind, though some growers prefer to use a mulch of strawy manure. Whatever material is used, it should be sa frobm frm any used, it should be as free as possible from the seeds of grass and weeds, otherwise they will cause trouble when they come up among the plants in the spring.

"The covering should be applied after the ground becomes frozen late in the fall. and ought to be deep enough to prevent rapid freezing and thawing, say three or four inches. In this climate it is advisable to place boards, brush or poles on the mulch to hold it in place when there are strong winds.

"The main reason for covering strawberry plants is to prevent the alternate freezing and thawing of the soil duringand the oln the many of of the soil during cold nights and and warm days. When plants are not protected they are likely to have their crowns and roots injured and may die. In addition to prevention this the mulch will help retain moisture for a week or ten days. The latter is advantageous, since the killing of the blooms by the late frosts in the spring may be avoided.

"When growth begins in the spring the mulch is removed. Part of it may be worked around the crowns of the plants to form a clean bed for the fruit to rest on, thus keeping it out of the dirt. The remainder is removed to allow cultivation."

Cooking Carrots.

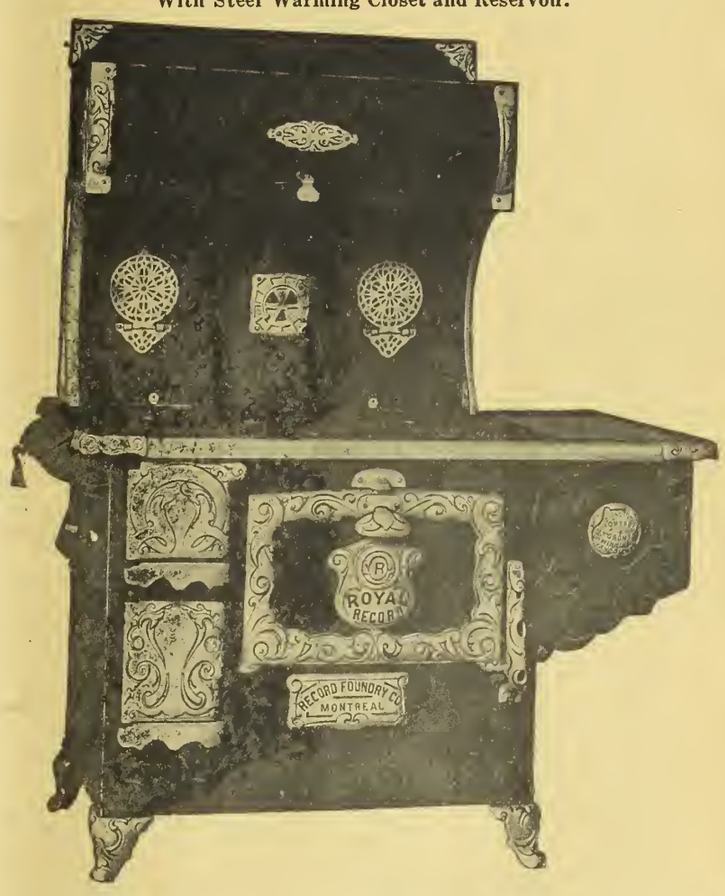
They must be washed and trimmed but are better not scraped before boiling, as thay lose somewhat of their flavour. The thin skin will rub off very easily after cooking by means of a clean cloth. Put into fast boiling, salted water they will take about half an hour to become tender. After draining from the water they may be returned to the saucepan with a bit of butter, and tossed over the fire for a few seconds; this is the French manner of finishing off vegetables, but it is not always appreciated by the English. A French dish of carrots is also the following:—

Boil them as above till tender then strain. Put into a saucepan 2oz. of butter and a teaspoonful of powdered sugar, when melted, put in the carrots, and allow them to practically fry. Add a half pint of broth or stock, with a dust of flour, pepper, and salt; bring to the boiling point, then serve in a vegetable dish. The carrots are better cut in two or three pieces, and young turnips may be mixed with them. This is a savoury dish for luncheon or supper.

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

Royal Record Steel Range

With Steel Warming Closet and Reservoir.



These ranges are made from the best quality blue polished steel, lined with asbestos millboard, and reinforced with the finest quality of fire-resisting cast iron wherever necessary to protect the steel.

The trimmings are finished with the finest quality nickel-plaiting, as shown in the cut. The top is made in sections, removable anchor plate style, 50" long x 28" wide, with pouch feed and broiler door. The fire-box if fitted for coal and wood, with duplex and flat grate combined, having corrugated sectional ventilated linings. The oven, made from first quality heavy steel, asbestos-lined, and properly braced with cast iron to prevent warping. The back flue or smoke box is made of cast iron, full length, to catch soot and prevent rusting.

SATISFACTION GUARANTEED.

Ask your dealer for Royal Record Range, or write the

Record Foundry & Machine Co., Moncton, N.B.

Dr. Morse's Indian Root Pills

exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

A Household Remedy

Optical Legislation.

That the people of the United States are rapidly coming to a realizing sense of the great need of regulating the practice of optometry by law, the same as medicine, dentistry, pharmacy, etc. is evidenced by the fact of the State of Massachusetts which, at the last session of the Legislature, swung into line by passing an optometry bill, being the twenty-seventh State of the American union to enact such a measure.

There is little doubt that the remaining States as a matter of protection, will shortly follow suit for, as a result of the appointment of an examining Board before which all optometrical aspirants must come, and, failing to pass the required test, a horde of spectacle vendors make a speedy exit and infest the highways and byways of the rural districts of the States having no such laws.

Their modus operandi is about as follows: Travelling closely in the wake of an advance agent who, on the circus principle, goes on ahead to announce the coming of the grand show, they introduce themselves as the representatives of some wholesale optical establishment or institution which has no existance in fact, or, from purely philanthropic motives they are engaged in the laudable work of conserving the sight of the nation the price, which is usually a pretty stiff one, is only incidental, and in the megaphone tones announcing this slogan Salus Populi Suprema Lox Est.

They are the Great High Cockalorum of the feast, the Firsts Lords of the Admiralty so to speak, the only stars in the optical firament and besides them there are no others.

The prospect is then invited to produce her or his glasses. Upon acceding to this request: My dear Madam" or "Sir:" as the case may be is informed that these are only flat lenses costing practically nothing in the first place and are no good anyway." Blindness will surely ensue in the wearing of them is persisted in, and the one who urescribed them should be consigned to outer darkness."

Dr. this or Dr. that is a liar, cheat, fraud and a few other things of the same nature, and to prove that the lenses are window glass the lens measure trick is resorted to. This latter is as follows:

The lens measure is placed against a window pane when it at once registers nothing, the indicator pointing to naught. It the subject addressed has beeen wearing cylindrical correction the instrument is now placed on the piano side of said lens or, if on the opposite side, in the position in which the axis occurs when the hand will again point to zero, but if the instrument is placed at right angles to this position the full power of the lens is shown. Of course great care is taken that the instrument is not placed in this position.

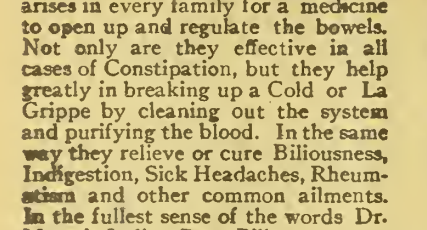
If the lenses produced for criticism are spheres or compounds, the instrument will show power on both sides, but, unless the flat lens is a very strong one, the indicator will not decircle as it will on being placed on a circle as it will on beingplaced on a toric lens of the same power at all.

To illustrate: A young lady recently called at one of my offices for examination. She was suffering from eye strain and was wearing toric lenses. On the positive side of these lenses with a great sweep registered plus 6.00; on the negative side with a similiar flourish the hand pointed to minus 6.00, now algebraically combine minus 6.00 and plus 6.00, and you have the power of the lenses that were given this young lady for the purpose of curing her headache. These were not window glass but they had the same effect on the eye that looking out of the window would.

The tactics above described usually result in an order being given for anywhere from two to four pairs of glasses, while the lenses formerly worn if at all complicated, are carried off by the operator presumably for the purpose of ascertaining the patients correction.

There success is not due to their superior knowledge of optometry, but to their ability to convince people, together with an abundant supply of nerve. They are evidently not beleivers in the Emersonian theory that if a man makes any one thing better than his neighbor, though he live in the forest, the public will make a beaten path to his door." They make the beaten path themselves to every man's door,

Occasionally, however, they meet with opposition on the part of the men who are not slow in asserting their rights to refuse to submit to an examination under pressure, and, becoming disgusted with the methods employed,—there is absolutely nothing professional about them opens wide the door and orders the performer to get sufficiently formidable boot, the peripatetic philosophers deciding that discretion is the better part of valor, stand not upon the order of their going, but get.—H. M. Harris, Specialst in Optics, Halifax, N. S.



$100 TO $200 PROFIT PER MONTH

Selling Farmers What They Need

Every farmer in Canada needs and uses our kind of goods. Over 2,000 men are making big money selling Rawleigh Quality Products, Household Remedies, Extracts, Spices, Soaps, Toilet Articles, Stock Remedies, Poultry Supplies, etc. Every article of the highest quality, well known and reliable.

We want a man at once in every locality to represent the greatest Buying, Manufacturing, Distributing and Selling Organization in North America. Established 19 years. Capital and Resources over Two Million Dollars. References, Dun's, Bradstreet's, or any bank in Winnipeg.

We offer you the opportunity to

Get Into Business For Yourself

With little competition. We are the only concern of our kind who own and operate a factory in Canada. No duty. Freight services prompt.

We want men of good standing in their community, who can furnish satisfactory bondsmen, and team for the conduct of the business. No experience required. We teach you how to handle the goods successfully and stand back of you with the services of our giant organization.

If you can meet our requirements, write for particulars of our matchless offer.

The W. T. Rawleigh Medical Co.
96 Henry Street
Winnipeg, Man.

PEERLESS PERFECTION
It's made right—from high grade material. In the construction of our PEERLESS FENCING we use open hearth steel wire. By this process impurities are removed from the metal, thus eliminating one of the chief causes for the rapid rusting of fence wire. PEERLESS is guaranteed to give you satisfaction. Send for catalog. Agencies nearly everywhere. Agents wanted in open territory.
THE BANWELL-HOXIE WIRE FENCE CO., Ltd., Winnipeg, Man.—Hamilton, Ont.

Description of the Bee Hive.

Many a bee keeper has ordered some hive part from a dealer in supplies and received something that he did not want. A thorough knowledge of bee hive parts as well as their names is valuable.

The hive stand is the platform or foundation upon which the hive rests this may be a brick at each corner, or several boards, or a specially made platform.

The bottom board is the floor of the hive.

The hive body is the case that holds the combs of the hive proper.

The brood frames are the wooden frames in which the brood combs are built.

The follower board of the division board is used beside the brood frames in the hive body to wedge over the brood frames and keep them snugly together.

The super is the case holding the

FREE PRIZE PUZZLE $200.00

In Cash now to be Given Away FREE, In addition to the sum of $2000.00 In Cash that we have previously Given Away.

1st Prize, $50.00 in Cash. - 3rd Prize, $35.00 in Cash
2nd Prize, $40.00 in Cash. - 4th Prize, $25.00 in Cash
5th to 9th Prizes, each $10.00 in Cash.

AND 100 VALUABLE PREMIUMS GIVEN AWAY

Below will be found six sets of mixed or jumbled letters. Can you arrange these six sets of letters in such order that each set will spell the name of a well known vegetable. It is not easy to do, but by patience can be accomplished. Try! By sending a proper arrangement you have an opportunity of winning a cash prize. Many have done this as will be shown by the names and addresses published below. Write these six words plainly and neatly on a slip of paper, as in case of ties, both writing and neatness will be considered factors in this contest.

This may take up a little of your time, but as there is **TWO HUNDRED DOLLARS** in cash and one hundred premiums given away it is worth your time to take a little trouble over this matter.

OPATOT	NIOON	BACEGAB	
NRUTPI	RACTOR	EBTE	

We do not ask You to Spend One Cent of Your Money in order to enter this Contest.

Send your answer at once; we will reply by Return Mail telling you whether your answer is correct or not, and we will send you a complete Prize List, together with the names and addresses of persons who have recently received Two Thousand dollars in Cash Prizes from us, and full particulars of a simple condition that must be fulfilled. (This condition does not involve the spending of any of your money.)

Winners of cash prizes in our late competitions will not be allowed to enter this Contest.

This Competition will be judged by two well known business men of undoubted integrity, namely, the advertising Managers of the Montreal Daily Herald and Montreal Daily La Presse, whose decisions must be accepted as final.

Below will be found a partial list of the names and addresses of a few persons who have won some of our larger prizes in recent contests. Although these persons are entirely unknown to us, they are our references. An enquiry from any one of them will bring the information that our contests are carried out with the utmost fairness and integrity. Your opportunity to win a good round sum is equally as good as that of any one else, **as all previous winners of cash prizes are debarred from entering this contest.**

Names and Addresses of a few Prize-Winners in Recent Contests.

Miss Gracia Dechênes 659 Maisonneuve St Montreal	$50 00	Mr M C. O'Donnell, 38 St Joseph St Toronto Ont	$40 00
Mr J Schuiler, 110 Lelreton St Ottawa, Ont	50 00	Miss Katie Campbell Newport P E I	40 00
Mrs W A C Orr 298 Gunnell St Winnipeg	50 00	Miss Daisey Rahey, 181 University Ave. Toronto	40 00
Miss B Brodeur 6 Gillespie St Sherbrooke	50 00	Mr. Jno. W London, 485 Ross Ave Winnipeg Man	40 00
Mr Louis Quintal Charlemagne Que	50 00	Miss I. B. Benjamin 185 Hughson St. Hamilton	40 00
Mr Alphonse Drouin Dept of Sec of State Ottawa	50 00	Miss H C. Powell P.O Dept. Ottawa Ont	40 00
Mr J A St Pierre Arthabaska Que	50 00	Mrs. Andrew Jonhson Box 105, Roblin, Man	40 00
Mrs. E. McMillan, 335 Medland St West Toronto	50 00	Mr. Norman Robinson Milford Haven, Ont	40 00
Mr. H Lloyd Stanley Bar acks Toronto Ont	50 00	Mr. Thos Humphries c/o Ayers & Sons St John's	40 00
Mr Jos. P Champagne 253 Bolton St Ottawa Ont	50 00	Mr. F A Ferguson, 223 Jarvis Avenue Winnipeg	40 00
Mr G. A. Gauley 426 Nelson St Ottawa Ont	50 00	Miss Quinnie R Stark 3 St Mary's Place, Winnipeg Man.	40 00

Send your reply direct to

BOVEL MANUFACTURING COMPANY
BOVEL BUILDING, (31 LATOUR ST.) MONTREAL, CAN.

Couldn't Do Housework

HEART WAS SO BAD.

Mrs Thomas Melville, Saltcoats, Sask., writes:—"I thought it my duty to write and tell you how much your Milburn's Heart and Nerve Pills did for me. My heart was so bad I could not sleep, eat, nor walk about the house. I could not do my housework at all, what my husband could not do had to go undone. I had two small children depending on me besides three men to cook for, and it worried me to not be able to do anything. My husband had taken some of your pills, some years ago, and insisted on me trying them, so I started, and before I had taken them two weeks I was considerably better, and before I had taken two boxes I was doing my own work again. Anyone suffering from heart or nerve trouble of any kind should just give your pills a trial. If anyone cares to write to me I will gladly give them all the information I know concerning your wonderful medicine."

Milburn's Heart and Nerve Pills are 50c. per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

MRS. ALVIN ZINK, Rose Bay, N. S.

States that she has been cured of

INDIGESTION

and Stomach trouble by the use of

Gates' Invigorating Syrup & Life of Man Bitters

after having been under the care of physicians without receiving benefit.

And although three years have passed has no returning symptoms.

She highly recommends these medicines to her friends and the public.

Sold everywhere at 50c. per bottle, $5.50 per dozen.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

If you are troubled with chronic constipation, the mild and gentle effect of Chamberlain's Tablets makes them especially suited to your case. For sale by all dealers.

one pound section or honey boxes. The section holders are little frames upon which the sections rest in the super.

The separators are thin slats placed between each row of sections in the super to prevent the bees from making one comb fat and another lean.

The honey board is used over the frames in winter and also over the sections in summer being always beneath the cover. All hives are not fitted with honey boards.

The bee escape board is the honey board equipped with a little tin container or trap so that when placed beneath a super of finished honey the bees can pass through it butn ot return. Honey may thus be removed without using a bee smoker.

Brood foundation is beeswax rolled into sheets for use in the brood frames. It should be used in the section honey boxes.

Surplus foundation is beeswax rolled into thin sheets for use in the sections only.

The Real Estate Situation in Nova Scotia.

The latest thing in Real Estate in Nova Scotia is McCallums' Gazette, Number Six, now being published by McCallums Limited, the well known "Real Estate Men" of Truro and Halifax.

This issue for 1914 is now in the hands of the Printers, will be completed by New Year's day and contains descriptions of over a thousand farms for sale in Nova Scotia.

The descriptions are very minute and complete and as a general rule, give the price asked and the Owner's name, so that the intending purchasers can deal direct with the actual owner.

This is an important departure from the general rule of keeping the Owner's name hidden and protects the purchaser in two very important respects.

FIRSTLY: It is an absolute guarantee that he is buying at the lowest price the property can be purchased for.

SECONDLY: When the owner allows a description of his property to be published above his own name and address, it is a pretty good guarantee that the description as advertised is a fair and truthful one, and one that he, the owner, is willing to back up.

In a day when some people's idea of advertising and exaggeration are one and the same thing, a catalogue which sticks strictly to facts, comes rather in the nature of a pleasant surprise.

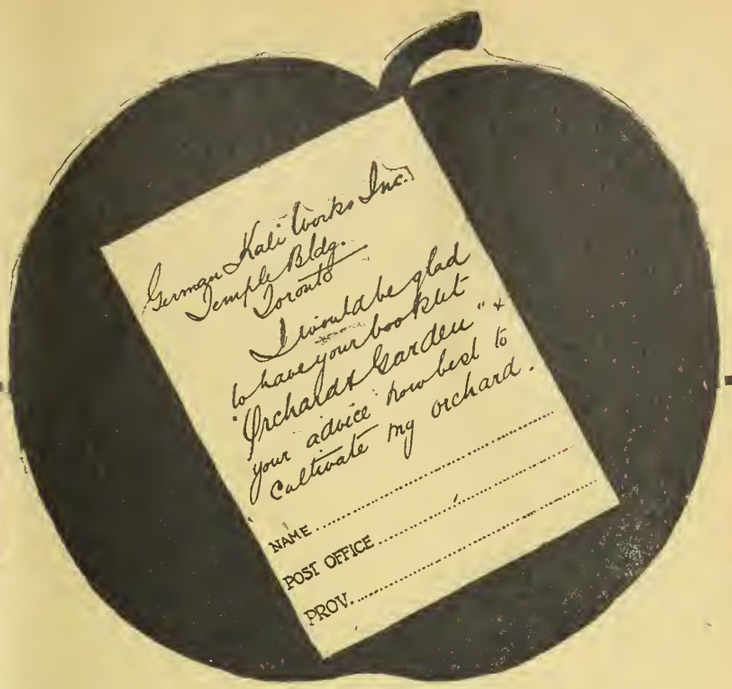
There is a marked difference in the Real Estate situation in Nova Scotia to-day, and the day when McCallums first farm catalogue was published.

Then, almost every farmer owner was anxious to sell, farm values were low, and the general feeling among farm Owners was a pessmistic one.

To-day while many are willing to sell, the general feeling is an optomistic one, and becoming more so, and while prices are still very reasonable they are stiffening from day to day.

The new catalogue is rather an attractive looking Volume of some Two Hundred pages and will be mailed to any enquirer, free on request, and it will well repay any "would be" purchaser, to look it over before buying a farm elsewhere.

A horse owner was once grumbling about how his team always kept thin no matter what tonics he gave them. A stableboy close at hand said: "Mister, did you ever try oats?" There is a suggestion here for some men we know of.



Mr. Orchardman, Use This Coupon---NOW!

A decision now as to the proper methods of cultivating and fertilizing your orchard, will mean dollars and cents to YOU next season.

NOW—after harvest—is the best time to apply fertilizers, ziz.; POTASH and Phosphoric Acid. This because the plant food in these materials, by the Winter cold and Spring thaws, wiil make the plant foods completely available by the time the sap flows in the Spring.

You need have no fear of loss by leaching.

In the world-famed Annapolis Valley the customary practise is to apply 600 lbs. Bone Meal (furnishing the Phosphoric Acid and Nitrogen), and 300 lbs. Muriate of POTASH per acre in the Fall. If you can't get Bone Meal, apply 400 to 600 lbs. per acre of Acid Phosphate or Basic Slag. The Nitrogen is supplied by plowing under clover or leguminous plants, or by applying Nitrate of Soda in the Spring.

If you prefer a factory-mixed fertilizer, be sure and get one containing at least 10 p. c. of POTASH.

The present high price of apples should impress you with the importance of improving the quality and increasing your crop. It is the best quality of fruit that demands the best prices.

If you want to learn more about cultivating and fertilizing orchards, our Scientific Bureau will be glad to advise you fully. This Bureau is composed of the very best Agricultural Experts in Canada. This advice is scientifically and agriculturally correct, and it is good.

The attached coupon makes it convenient for you to send for our "ORCHARD & GARDEN" booklet. If you will let us know your soil condition, our Scientific Bureau will tell you, without charge, how best to cultivate your own particular orchard.

German Kali Works, Inc.

Temple Building, - - Toronto

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

PURE BRED Hampshire Rams for sale. Box 45, Hillsboro, N. B.

FOR SALE—Shorthorn Bulls. WALTER EATON, Upper Canard, Kings Co., N. S.

POULTRY SHOW, Moncton, N. B., Jan. 13th to 16th 1914. Send to Box 485 for prize list etc.

100 FINE WHITE ENVELOPES printed with your return card, 35c postpaid. HOWIE PRINTING CO., Beebe, Que.

FOR SALE—A choice lot of Barred Plymouth Rock Cockerels, one dollar each—Boyd A. Wetmore, Bloomfield Station, N. B.

VALLEY FARM HOLSTEINS FOR SALE.—1 Registered Bull Calf, dropped in March 1913. W. G. CAMPBELL, Salisbury, N. B.

FOR SALE OR EXCHANGE. One pure bred Yorkshire Boar, 3 years old, quiet and sure stock getter. F. T. GAMMELL, Newton Mills, N S.

FOR SALE—Five yearling Guernsey Bulls. Three sired by Imp Canada's Jethro Bass. Best milking stock. T. D. BLAIKIE, Great Village, N. S

FOR SALE.—Purc Bred Oxford Dowm, Shearling Rams and Ram Lambs. Also a few good Ewes cheap.—R G. McLEOD & SON, Lansdown Sta., Pictou Co., N. S.

FOR SALE—Yorkshire boar one year old, in splendid breeding condition and gets good stock. Forty-five dollars at barn. BOYD A. WETMORE Bloomfield Station, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE OR EXCHANGE for pure bred stock or hay, one 6 H. P. Gasoline Engine in good running order. WALTER PAYNE, Lake Edward, N. B.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED for Agricultural Society, Registered Holstein bull about two (2) years old also Berkshire boar fit for service. Write D. A. McKENZINE, Toney River, Nova Scotia.

FOR SALE—White Wyandotte Cock, third at Halifax; also a few good utility hens. Single Comb Brown Leghorn breeding pen. 1st at Halifax. WOLFVILLE POULTRY YARDS, Wolfville N. S.

ONE MAN WANTED in each locality who is willing to work a few hours weekly for $15 showing samples to his friends and neighbors Outfit free. THE NATIONAL SUPPLY CO., Windsor, Ont.

AYRSHIRES FOR SALE.—One very fine bull just three years old one seventeen months old and several cows due to freshen within a month, also some heifers. JOHN F. FROST Hampton N B.

FOR SALE OR EXCHANGE.—Three (3) Aberdeen Angus heifers from 6 months to three years old. 1st prize winners at Toronto, London and Amherst, will sell cheap. For particulars apply to A. M., care of MARITIME FARMER, Sussex, N. B.

FOR SALE.—In order to reduce stock will sell six head, registered Jerseys, ages, 18 months to 4 years; all in calf to best Bulls in Canada. Write for full descriptions and photos. B. V. MILLIDGE, Willow Bank Jersey Farm, St. John.

600,000 FT. BELTING all makes 100 000 rods Wire Fencing, 60,000 lbs Barb Wire at 2c per lb. Also 1000 other bargains at 1-3 to 1-2 less than regular value. Special price lists on request- IMPERIAL WASTE & METAL CO., 713 Queen St Montreal

FOR SALE—1 pure bred Ayshire Bull 3 1-2 yrs old; very quiet. Sired by Gardrum Harry Lauder (Imp.) Also 1 pure bred Holstein Bull Calf, 8 mos old, sired by Rooker Vale. Both were 1st prize winners at Pictou this year. A snap to a quick purchaser. HAROLD FALCONER, Alma Pictou Co., N. S.

SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to
F. S. BLACK, Amherst, N. S.

Milking Shorthorns

I have for sale 5 Registered Bulls ready for service. For fifteen years I have used bulls from the best milking families in Canada.

Write or telephone

Bliss M. Fawcett,
Sackville, N. B.

HAY WANTED.

Duty reduced. Market good.

W. J. PHELPS,
Chamber of Commerce, Boston, Mass.
Reference Beacon Trust Company.

FOR SALE

Yorkshire pigs, four weeks old and upwards. Apply to

E. W. HEURTLEY,
P. O. Sutherland's River, N. S.

RASPBERRY PLANTS
King, Herbert, Cuthbert and Hiram. Low prices for fall.

COLUMBIAN WYANDOTTES
Our entire flock for sale. The finest lot of any Columbians in the Maritime Provinces.
If interested write us.

ORCHARD HILL FARM
Brown's Flats, - N. B.

Barred Plymouth Rocks

We have for sale some splendid pure bred stock, chickens and yearlings, selected birds of last year's breeding. Our Cockerels are lusty fellows, just the kind to start you flock for utility purposes.

CRAIG BROS., Amherst, N. S.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding **The Farmers Most Profitable Cow** should be sent to the Secretary of the Association.

W. A. CLEMONS, St. George, Ont.

URIC ACID NEVER CAUSED RHEUMATISM

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condtion—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure." Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE,
Dept. 557, Brockton, Mass., U S A.

Mammoth Bronze Turkeys

Bell's Ontario Stock

Specially fine young Toms, $5.00 eacb, also a few two year old hens, $4.00 each.

D. S. Noble, Central Clarence, Anap. Co., N. S

Highland View Dairy.

Young Guernsey Bulls, also Buff Orpington and White Wyandotte Cockerels and Pullets.

R. R. BLACK, Amherst, N. S.

Sunnyside Place.

AYRSHIRE CATTLE.

Clydesdale Horses Yorkshire Hogs. For sale a twelve month old bull from nice stock Sire Imported. Write for price.

H. F. AMBROSE, Stewiacke, N. S.

A Dispersion Sale

OF PURE BRED

Ayrshire Jersey and Grade Cattle

We will offer for sale at Public Auction at one o'clock

Thursday, Dec. 18, 1913

our entire herd of Dairy Cattle.

S. Creighton & Son

Silver Falls, St. John, N. B.

HOUDANS

The Favorite French Fowl

A breed combining beauty and usefullness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

Several choice cockerels, the progency of last years Boston and New York Winners for sale.—No pullets.

W. J. M. MacLeod
SUSSEX, N. B.

SOLD.

All our prize winning Columbian Wyandottes have been sold to Wolfville Poultry Yards, Wolfville N. S.

We have still for sale Cock and 3 hens Barred Rocks (Craig Bos Strain) and a number of utility pullets

Grade Heifer calf, Dam, pure bred Jersey, Sire, pure bred Holstein, price $6.00, 2 months old.

ORCHARD HILL FARM,
Brown's Flats, N. B.

FOR SALE.

Pure Bred Ayrshire Bull 3½ years old in good condition and sure stock getter. He is bred from one of the best show cows in Maritime Provinces and is an ideal type of Ayrshire Apply to Secretary of 119 Agricultural Society, Barnaby River, N. B.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Farm for Sale or to Rent for Term of Years.

Within 1 1-2 Miles of the City of Moncton—the terminus of the Grand Trunk Pacific and Head Quarters of the I. C. R

40 acres—12 acres in good state of cultivation; ½ acre new bed choice strawberries; ¾ acre Herbert Raspberries; 350 young apple trees; 10 mature bearing apple trees; good house, modern and sanitary; water system and drainage; barn, poultry houses and gardens; cottage; an unlimited and good market; an excellent opportunity for A1 garden. For further particulars apply to

M. W. COWLING, Moncton, N. B

500,000 ft. IRON PIPE

600,000 ft. Belting, all makes.
100,000 Rods Wire Fencing.
60,000 lbs. Barb Wire at 2c.

Also 1,000 other Bargains at 1-3 to 1-2 less than regular value.

Special price list on request.

IMPERIAL WASTE & METAL CO
21 Queen St., Montreal.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, DECEMBER 23, 1913. Number 6.

Thirteenth Annual Maritime Winter Fair

Ushered in by weather conditions that were not at all conducive to a large attendance, the thirteenth Annual Maritime Winter Fair opened its doors to the public on the 8th inst.

We do not know whether the eventful thirteen had anything to do with the brand of weather or not, however, rains and slush fell and winds blew on the opening and closing days, while on the two intervening days the roads were so bare, rough and hard making travel so uncomfortable that many farmer's families, who were wont to drive long distances other years remained at home.

The attendance was, however, fully up to the number that might be expected under these conditions. Visitors came from every hamlet between Sydney and Yarmouth. Prince Edward Island sent its quota. New Brunswick, too, was well represented.

All who had the privilege of attending were amply rewarded by the high ideals they saw exemplified in the live stock and seed lines as well as by the ideals set forth by the various speakers in the auditorium at the evening sessions.

THE BEEF CAttle.

Were judged by Mr. R. B. Smith, Columbus, Ontario. He worked rapidly and completed the task of judging about 100 head on Tuesday forenoon. The number of entries was a few short of last year but then there were a few specimens shown in 1912 that could have been dispersed with and leave a better average. The average quality of the stock throughout this year was excellent.

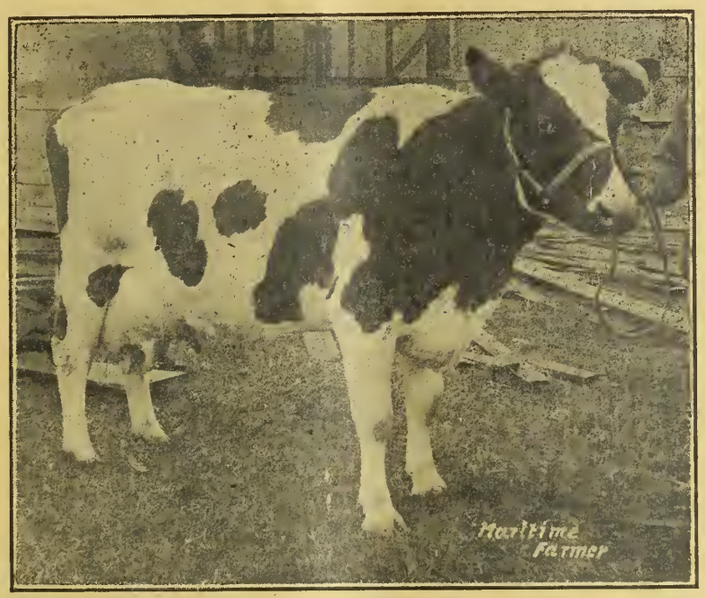
The decision of Judge Gibson in not awarding prizes to thin paunchy peaked and extremely young stuff in 1912 had the desired effect and our prediction that it would tend to fewer unfinished animals offering for prizes in the 1913 fair came true.

Shorthorns were exhibited by Harold Etter, Chas. W. Forest, Edwin Forrest, C. H. Angus, Hazen Etter, Geo. M. Holmes, N. Curry, R. A. Snowball and H. P. Lawrence.

Harold Etter's two-year-old roan steer captured the sweepstakes prize for best Shorthorn steer, any age.

The sweepstakes prize for best Shorthorn female any age went to Harold Etter's White Blossom by College Hero shown in the three-year-old or over section. White Blossom also won the silver cup donated by M. J. O'Brien, Railway contractor, Montreal, for the best Shorthorn animal, any age, cup must be won three times before becoming the property of the exhibitor. Won in 1909 by C. A. Archibald; 1910 by C. A. Archibald' 1911 by Harold Etter, 1912 by R. A. Snowball and this year by Harold Etter. White Blossom also won the International Harvester Co's. two section smoothing harrow for best beef animal, any age and the Blatchford Calf Meal prize.

A SHOW OF QUALITY.



THE HOLSTEIN COW MERCENA ARTALISSA.

Sweepstakes Cow of the 1913 Maritime Winter Fair Dairy Tests. Record—230.2 lbs. Milk; 8.01 lbs. Butter fat or an Equivalent of 9 1-3 lbs. Butter in 72 hrs. Owned by S. Dickie & Son, Central Onslow, N. S.

Photo by J. P. Landry.

THE SHORTHORN HEIFER, WHITE BLOSSOM.

Champion in the Beef Cattle Classes at the 1913 Maritime Winter Fair. Owned by Harold Etter, Westmorland Point, N. B.

Photo by J. P. Landry.

HEREFORDS AND ABERDEEN.

Cattle were shown in the same class. Since the 1912 fair W. W. Blacks fine Hereford herd was dispersed the major portion of which is now in the hands of Mr. A. Bradshaw, Amherst, who had a well-fitted entry at the fair. Edwin Forrest and E. P. Anderson also showed a few Herefords. A well-fitted trio of Doddies were shown by A. O. F. Gill, of Prince Edward Island. Gill's two-year-old Augus heifer captured the sweepstakes prize for the best animal, any age, in this class.

There was a big entry in the grade beef classes and the average fitting was very creditable. The sweepstakes grade, a son of Kenneth (Imp.) was shown in the six months and under one year section by E. P. Anderson, Sackville. This little steer also won the W. W, Black Grand Championship Silver Cup prize in the grade class. This cup must also be won three times before becoming the property of the exhibitor. As Mr. Anderson carried off this trophy in 1911, 1912 and again this year he now has it for keeps! He also won the junior section of the Blackford Calf Meal Co's. prize. The closest competitor for this honor was Thos. J. Etter's sweepstakes female also by Kenneth (imp) shown in the one year class.

DAIRY CATTLE.

The most outstanding feature of the Maritime Winter Fair is the dairy cattle Sections. Last year there were ninety entries. This year the number of cows on test was 82. The dairy tests were conducted by Messrs. Harvy Mitchell and W. A. MacKay. Following are the principal rules governing the test:—

The cows in the test shall be milked dry in the presence of the judges at 1 p. m., December 5th and the test will conclude at 1 p. m. on December 8th the percentage of fat in the milk will be determined by the Babcock [illegible] the percentage of solids not fat, by the use of the authorized formula for the purpose.

The standing of the respective cows will be computed on the following scale; 25 points for each pound of fat; 3 points for each pound of solids, not fat; 1 point for each ten days in milk after the first 30 days. Limits ten points.

No cow four years old or over shall win first prize that does not produce at the rate of 10 pounds of butter per week, or a second or any other prize that does not produce at the rate of 8 pounds of butter per week. No three year old cow shall win a first prize that does not produce at the rate of 9 pounds of butter per week, or a second or any other prize that does not produce at the rate of 7 pounds of butter per week. No heifer two years shall win a first prize that does not produce

(Continued on page 194.)

Results of the 72 Hour Dairy Test at the 1913 Maritime Winter Fair.

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	7.8	3.6	.28	8.5	6.6
	2	8.8	5.4	.47	8.7	7.6
Class 10—Sec. 1.	3	9.8	5.2	.50	8.7	8.5
Shorthorn.	4	10.0	4.9	.49	8.6	8.6
Escape.	5	11.0	7.2	.79	8.8	9.6
September 20, 1913.	6	11.4	5.5	.62	8.7	9.9
149.32.	7	11.5	6.2	.71	8.8	1.01
First.	8	11.0	4.7	.51	8.6	.94
Geo. M. Holmes.	9	11.0	5.6	.61	8.3	.91
		92.3		4.98		6.94
	1	9.6	5.0	.48	9.0	.86
	2	10.2	4.6	.46	9.1	.92
Class 10—Sec. 1.	3	10.0	5.4	.54	8.8	.88
Shorthorn.	4	10.1	4.4	.44	8.5	.85
Sarah 2nd.	5	18.2	3.9	.39	9.1	.92
September 20, 1913.	6	10.0	5.0	.50	8.9	.89
132.52.	7	9.4	4.4	.41	8.7	.81
Second.	8	11.0	4.2	.46	8.9	.97
Hibbert B. Lawrence.	9	11.0	4.6	.50	9.0	.99
		91.5		4.17		8.09
	1	9.2	2.5	.23	8.6	.79
	2	9.8	3.6	.35	8.9	.87
Class 10—Sec. 2.	3	8.8	4.9	.43	8.5	.74
Shorthorn.	4	9.0	5.0	.45	8.5	.76
Miss Springdale 1st.	5	7.5	5.3	.39	8.7	.65
August 5, 1913.	6	6.4	4.4	.28	8.7	.55
95.28.	7	7.2	4.6	.33	8.4	.60
Second.	8	8.0	4.6	.36	8.5	.68
Geo. M. Holmes.	9	7.5	3.8	.28	8.3	.62
		73.4		3.10		6.26
	1	8.1	3.9	.31	8.5	6.8
	2	8.8	3.8	.33	8.7	7.6
Class 10—Sec. 3.	3	8.3	3.8	.31	8.4	6.9
Shorthorn.	4	8.8	3.9	.34	8.6	7.5
Miss Springdale 2nd.	5	8.8	3.8	.33	8.9	7.8
August 1, 1913.	6	8.6	4.3	.36	8.8	7.5
102.96.	7	8.0	4.2	.33	8.8	7.0
First.	8	8.7	4.2	.36	8.9	7.7
Geo. M. Holmes.	9	8.0	3.8	.30	8.7	6.9
		76.1		2.97		6.57
	1	6.7	4.3	.28	9.0	.60
	2	6.4	3.6	.23	8.9	.56
Class 70—Sec. 3.	3	7.2	3.9	.28	9.0	.64
Shorthorn.	4	7.5	3.9	.29	8.6	.64
Miss Springdale 3rd.	5	6.6	3.6	.23	8.9	.58
July 28, 1913.	6	6.8	4.6	.31	8.6	.58
86.53.	7	6.4	4.2	.26	8.5	.54
Second.	8	6.6	4.0	.26	8.5	.56
Geo. M. Holmes.	9	6.6	4.4	.29	8.6	.56
		60.8		2.43		5.26
	1	18.4	3.9	.71	8.7	1.60
	2	18.0	3.9	.70	8.7	1.56
Class 11—Sec. 1.	3	18.0	3.7	.66	8.6	1.54
Ayrshire.	4	19.4	3.8	.73	8.6	1.66
Brownmoss Moss Rose 4th.	5	17.6	4.0	.70	8.3	1.46
November 23, 1913.	6	18.0	4.4	.79	8.6	1.54
198.4.	7	17.2	3.8	.65	8.5	1.46
First.	8	17.8	3.6	.64	8.4	1.49
Prescott Blanchard.	9	18.1	3.9	.70	8.4	8.52
		162.5		6.28		13.83
	1	17.9	4.2	.75	8.8	1.57
	2	16.5	3.6	.59	8.7	1.43
Class 11—Sec. 1.	3	18.4	3.6	.66	8.6	1.58
Ayrshire.	4	18.2	3.8	.69	8.9	1.61
Dalfiddle Randy.	5	18.1	2.4	.61	8.4	1.52
November 10, 1913.	6	18.8	3.9	.73	8.7	1.63
187.6	7	16.2	3.1	.50	8.7	1.40
Second.	8	18.0	3.6	.64	8.4	1.50
A. McRae & Sons.	9	18.0	3.8	.68	8.8	1.58
		160.1		5.85		13.82
	1	14.3	4.2	.60	9.1	1.30
	2	14.8	4.0	.59	8.9	1.31
Class 11—Sec. 1.	3	15.0	4.2	.63	9.0	1.35
Ayrshire.	4	14.6	4.2	.61	8.8	1.28
Clerkland Jenny.	5	15.2	4.4	.66	9.0	1.36
November 23, 1913.	6	14.4	4.3	.61	9.0	1.29
171.4.	7	14.5	3.9	.56	9.0	1.30
Third.	8	15.0	3.7	.55	8.6	1.29
John Retson.	9	15.0	4.3	.64	8.5	1.27
		132.8		5.45		11.75

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	15.3	3.5	.53	8.5	1.30
	2	15.6	3.5	.54	8.1	1.26
Class 11—Sec. 1.	3	16.8	4.0	.67	8.1	1.36
Ayrshire.	4	15.2	3.2	.48	8.2	1.24
Gertie 4th of Bellevue.	5	16.8	3.5	.58	7.7	1.29
August 28, 1913.	6	17.5	3.9	.68	7.9	1.38
162.4.	7	15.6	3.6	.56	7.8	1.21
Fourth.	8	16.0	3.7	.59	7.9	1.26
A. McRae & Sons.	9	15.8	3.8	.60	8.0	1.26
		144.6		5.2		11.56
	1	14.0	3.5	.49	8.8	1.23
	2	15.0	3.3	.49	8.6	1.29
Class 11—Sec. 1.	3	15.6	3.6	.56	8.7	1.35
Ayrshire.	4	14.8	3.3	.49	8.7	1.28
Pinafore 3rd.	5	15.0	3.7	.55	8.6	1.29
September 14, 1913.	6	14.0	3.4	.47	8.7	1.21
149.62.	7	14.0	3.4	.47	7.8	1.09
Fifth.	8	12.0	3.0	.36	8.4	1.00
F. S. Black.	9	15.0	3.9	.58	8.7	1.30
		129.4		4.46		11.04
	1	9.5	3.6	.34	9.0	.85
	2	10.0	4.1	.41	9.1	.91
Class 11—Sec. 1.	3	10.2	4.2	.42	9.1	.92
Ayrshire.	4	10.0	3.8	.38	9.1	.91
White Lady.	5	10.0	4.2	.42	8.7	.88
September 17, 1913.	6	9.5	3.8	.36	9.5	.90
118.92.	7	10.8	4.3	.46	8.8	.95
Sixth.	8	10.8	3.7	.39	8.5	.91
McIntyre Bros.	9	10.2	4.0	.40	9.0	.91
		91.2		3.58		8.14
	1	19.1	4.1	.55	8.9	1.69
	2	19.4	4.4	.85	8.9	1.72
Class 11—Sec. 2.	3	18.0	4.0	.72	9.0	1.62
Ayrshire.	4	19.2	3.9	.74	8.9	1.70
Rosalind.	5	19.1	3.8	.72	8.4	1.60
October 31, 1913.	6	19.0	4.3	.81	8.6	1.63
211.8.	7	19.5	4.1	.79	8.5	1.65
First.	8	19.0	3.8	.72	8.3	1.57
F. S. Black.	9	19.0	4.0	.76	8.4	1.59
		171.3		6.66		14.77
	1	16.7	3.5	.58	8.3	1.38
	2	16.4	4.0	.65	8.5	1.39
Class 11—Sec. 2.	3	15.0	4.4	.66	8.6	1.29
Ayrshire.	4	14.6	4.0	.58	8.4	1.22
Eastcourt Freda.	5	14.4	4.4	.63	8.8	1.26
November 28, 1913.	6	13.2	4.0	.52	8.9	1.17
163.2.	7	14.2	3.7	.52	8.6	1.22
Second.	8	14.0	3.7	.51	8.4	1.17
George Retson.	9	13.8	3.9	.53	8.4	1.15
		132.3		5.18		11.25
	1	15.9	3.8	.60	8.6	1.36
	2	14.2	3.6	.51	8.2	1.16
Class 11—Sec. 2.	3	14.0	2.8	.39	8.2	1.14
Ayrshire.	4	14.6	3.4	.49	8.3	1.21
Rose of Spring Brook Farm.	5	14.2	3.7	.52	8.3	1.17
July 28, 1913.	6	12.4	3.6	.44	8.3	1.02
153.34.	7	14.2	3.9	.55	8.1	1.15
Third.	8	13.0	4.0	.52	8.3	1.07
McIntyre Bros.	9	12.5	3.9	.48	8.0	1.00
		125.0		4.50		10.28
	1	11.0	4.0	.44	8.5	.93
	2	10.6	3.8	.40	8.5	.90
Class 11—Sec. 2.	3	11.6	3.8	.44	8.3	.96
Ayrshire.	4	11.2	3.8	.42	8.4	.94
White Lady 3rd.	5	10.8	3.8	.41	8.3	.89
September 4, 1913.	6	11.0	4.0	.44	8.2	.90
129.68.	7	11.0	3.7	.40	8.3	.91
Fourth.	8	11.5	3.4	.39	8.4	.96
McIntyre Bros.	9	11.6	3.6	.41	8.0	.92
		100.3		3.75		8.31
	1	12.0	3.2	.38	8.3	.99
	2	12.1	3.6	.43	8.5	1.02
Class 11—Sec. 2.	3	12.0	3.6	.43	8.3	.99
Ayrshire.	4	12.6	3.2	.40	8.2	1.03
Emma of Spring Brook Farm.	5	13.0	3.6	.46	8.1	1.05
October 17, 1913.	6	12.6	3.4	.42	8.4	1.05
124.9.	7	11.4	2.8	.31	8.2	.93
Fifth.	8	13.6	3.9	.53	8.1	1.10
A. McRae & Sons.	9	12.3	3.8	.46	8.1	.99
		111.6		3.82		9.15

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solid Not Fat	Lbs. Solids Not Fat
	1	10.1	3.7	.37	9.5	.95
	2	10.2	3.5	.35	9.6	.97
Class 11—Sec. 2.	3	11.4	3.5	.39	9.1	1.03
Ayrshire.	4	11.0	3.4	.37	9.3	1.02
Gertie of Spring Brook Farm.	5	12.2	3.7	.45	9.0	1.09
September 7, 1913.	6	11.0	3.4	.37	8.7	.95
121.3.	7	11.4	3.5	.39	8.9	1.01
Sixth.	8	12.0	3.4	.40	8.4	1.00
McIntyre Bros.	9	12.4	3.5	.43	9.0	1.11
		101.7		3.52		9.13
	1	14.5	4.5	.65	9.2	1.33
	2	14.4	4.1	.59	8.9	1.28
Class 11—Sec. 3.	3	14.8	4.4	.65	9.1	1.34
Ayrshire.	4	13.8	4.2	.57	9.1	1.25
Pinafore 4th.	5	14.0	4.0	.56	9.3	1.30
November 30, 1913.	6	14.4	4.1	.59	9.1	1.31
166.7.	7	13.9	4.0	.55	9.0	1.25
First.	8	14.0	4.3	.60	8.9	1.24
F. S. Black	9	13.4	4.0	.53	9.0	1.20
		127.2		5.29		11.50
	1	10.1	4.6	.46	8.7	.87
	2	10.2	4.2	.42	8.5	.86
Class 11—Sec. 3.	3	10.0	3.8	.38	8.4	.84
Ayrshire.	4	10.5	4.7	.49	8.8	.92
Fairview Queen.	5	10.2	4.7	.47	8.8	.89
July 19, 1913.	6	10.3	4.6	.47	8.6	.88
132.7.	7	10.5	4.5	.47	8.6	.90
Second.	8	10.5	4.2	.44	8.5	.89
A. McRae & Sons.	9	9.4	4.0	.37	8.7	.81
		91.7		3.97		7.86
	1	10.5	4.2	.44	9.4	.98
	2	10.8	4.3	.46	9.5	1.02
Class 11—Sec. 3.	3	10.5	4.1	.43	9.5	.99
Ayrshire.	4	11.3	4.2	.47	9.3	1.05
White Floss.	5	11.2	4.0	.44	9.2	1.03
December 1, 1913.	6	11.6	4.1	.47	9.4	1.09
130.39.	7	12.0	3.7	.44	9.1	1.09
Third.	8	11.5	3.8	.43	9.2	1.05
McIntyre Bros.	9	12.0	4.3	.51	9.0	1.08
		101.4		4.09		9.38
	1	9.0	3.6	.32	8.7	.78
	2	9.0	3.7	.33	8.7	.75
Class 11—Sec. 3.	3	9.5	3.8	.36	8.6	.81
Ayrshire.	4	9.4	3.6	.33	8.6	.80
Emma 2nd.	5	9.5	3.8	.36	8.5	.72
August 5, 1913.	6	9.3	3.9	.36	9.0	.83
108.35.	7	9.5	3.7	.35	8.4	.79
Fourth.	8	9.2	3.5	.32	9.0	.82
McIntyre Bros.	9	10.0	3.8	.38	9.0	.90
		74.4		3.11		7.20
	1	9.2	3.4	.31	8.6	.79
	2	9.0	3.6	.32	8.9	.80
Class 11—Sec. 3.	3	9.5	3.6	.34	8.5	.80
Ayrshire.	4	9.0	3.8	.34	9.0	.81
Nellie of Spring Brook Farm.	5	9.2	3.7	.34	8.5	.78
August 13, 1913.	6	9.0	3.9	.35	8.9	.80
95.9.	7	8.9	3.4	.30	8.6	.76
Fifth.	8	9.0	4.0	.36	8.6	.77
A. McRae & Sons.	9	8.5	3.6	.30	8.6	.73
		81.3		2.96		7.04
	1	8.3	3.5	.29	8.9	.78
	2	8.4	3.9	.32	9.1	.76
Class 11—Sec. 3.	3	8.0	4.3	.34	8.7	.69
Ayrshire.	4	7.6	3.5	.26	9.0	.68
White Jennie.	5	8.0	3.2	.25	9.1	.72
December 1, 1913.	6	7.8	3.2	.24	9.2	.71
80.81.	7	8.7	3.2	.27	9.0	.78
Sixth.	8	8.0	3.0	.24	9.0	.72
McIntyre Bros.	9	8.2	3.0	.24	9.0	.73
		73.0		2.45		6.52
	1	5.4	4.2	.22	9.0	.48
	2	5.5	4.2	.23	9.1	.50
Class 11—Sec. 4.	3	6.0	4.2	.25	8.8	.52
Ayrshire.	4	5.6	4.1	.22	9.0	.50
Emma's Jane.	5	5.8	4.2	.24	8.5	.49
August 7, 1913.	6	5.6	3.8	.21	9.0	.50
72.85.	7	5.8	3.8	.22	8.4	.48
First.	8	5.8	3.9	.22	8.6	.49
McIntyre Bros.	9	5.5	3.9	.21	9.0	.49
		44.5		2.02		4.45

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	1	26.3	3.5	.92	8.7	2.28
	2	25.3	3.2	.80	8.3	2.09
Class 12—Sec. 1.	3	26.5	3.5	.92	8.8	2.33
Holstein.	4	24.6	3.3	.81	9.0	2.21
Mercena Artalissa.	5	26.3	3.7	.97	9.0	2.36
November 16, 1913.	6	25.1	4.3	1.07	8.5	2.13
259.7.	7	25.2	3.2	.80	8.6	2.16
First.	8	25.4	3.2	.81	9.0	2.18
S. Dickie & Son.	9	25.5	3.6	.91	8.3	2.19
		230.2		8.01		19.93
	1	16.4	3.8	.62	8.7	1.42
	2	15.4	3.4	.52	8.7	1.33
Class 12—Sec. 1.	3	15.4	3.0	.46	8.6	1.32
Holstein.	4	16.3	3.2	.52	9.0	1.46
Piet 6th.	5	16.0	3.3	.52	9.1	1.45
December 2, 1913	6	15.7	3.0	.47	9.0	1.41
154.85.	7	16.6	2.9	.48	9.0	1.49
Second.	8	18.2	2.8	.50	8.5	1.54
Logan Bros.	9	18.5	3.0	.55	8.3	1.53
		148.5		4.64		12.95
	1	14.8	3.6	.53	8.7	1.28
	2	13.5	2.7	.36	8.3	1.12
Class 12—Sec. 1.	3	17.4	3.4	.59	8.3	1.44
Holstein.	4	15.3	3.0	.45	8.4	1.28
Ladoga Idalina 8rd.	5	15.3	2.6	.39	8.5	1.30
November 21, 1913.	6	17.5	3.4	.59	8.2	1.43
147.99.	7	16.6	3.5	.58	8.2	1.36
First.	8	14.0	2.9	.40	8.6	1.20
Logan Bros.	9	17.2	3.6	.61	8.3	1.42
		141.4		4.50		11.83
	1	20.2	3.5	.70	8.6	1.73
	2	20.0	3.4	.68	8.3	1.66
Class 12—Sec. 2.	3	20.5	3.3	.67	8.2	1.68
Holstein.	4	20.6	3.0	.61	8.2	1.68
Kate of Abbeykirk.	5	20.4	3.4	.69	8.5	1.73
November 26, 1913.	6	20.4	3.3	.67	8.2	1.67
196.56.	7	21.0	3.2	.67	8.2	1.72
First.	8	21.0	3.2	.67	8.1	1.70
W. S. Harding.	9	21.0	3.2	.67	8.1	1.70
		185.1		6.03		15.27
	1	18.6	3.3	.61	8.9	1.65
	2	18.0	3.2	.57	8.8	1.58
Class 12—Sec. 2.	3	18.7	3.3	.61	8.7	1.62
Holstein.	4	17.5	3.3	.57	9.0	1.57
Johanna Louise.	5	19.5	3.1	.60	9.0	1.75
December 1, 1913.	6	16.8	3.0	.50	8.5	1.42
174.01.	7	19.2	3.1	.59	8.6	1.65
Second.	8	19.2	3.2	.61	9.0	1.72
Logan Bros.	9	19.0	3.1	.58	9.0	1.71
		166.5		5.24		14.67
	1	17.0	3.2	.54	8.2	1.39
	2	15.9	3.0	.47	8.2	1.30
Class 12—Sec. 2.	3	18.8	3.2	.60	8.9	1.67
Holstein.	4	17.7	2.8	.49	8.0	1.41
Hazel Sadie Vale.	5	16.4	2.9	.47	8.2	1.34
November 19, 1913.	6	18.0	3.0	.54	8.0	1.44
164.47.	7	17.5	3.2	.56	8.1	1.41
Third.	8	16.8	3.0	.50	8.1	1.36
Logan Bros.	9	17.8	3.5	.62	8.0	1.42
		155.9		5.09		12.74
	1	20.6	3.2	.65	7.9	1.62
	2	19.3	3.0	.57	8.0	1.54
Class 12—Sec. ?.	3	19.5	3.1	.60	8.0	1.56
Holstein.	4	18.0	2.8	.50	8.2	1.47
Grace Fayne DeKol.	5	19.0	3.0	.57	8.2	1.55
October 9, 1913.	6	18.1	3.3	.59	8.2	1.48
177.42.	7	19.4	3.4	.65	8.4	1.62
First.	8	19.2	3.1	.59	8.1	1.55
S. Dickie & Son.	9	18.6	3.4	.63	8.1	1.50
		171.7		5.35		13.89
	1	14.8	4.0	.59	8.8	1.30
	2	14.8	3.8	.56	8.5	1.25
Class 12—Sec. 3.	3	15.6	4.1	.63	8.4	1.31
Holstein.	4	14.7	3.7	.54	8.5	1.24
Island Lassie.	5	15.3	3.6	.55	9.0	1.37
November 10, 1913.	6	16.2	4.4	.71	8.5	1.37
166.05.	7	14.0	3.6	.50	8.5	1.19
Second.	8	15.2	3.8	.57	8.6	1.30
T. W. Keilor.	9	15.2	4.0	.60	8.4	1.27
		135.8		5.25		11.60

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solid Not Fat	Lbs. Solids Not Fat
Class 12—Sec. 3. Holstein. Cobequid Helen. September 26, 1913. 163.32. Third. S. Dickie & Son.	1	20.0	3.7	.74	8.6	1.72
	2	17.2	3.0	.51	8.5	1.46
	3	19.0	3.5	.66	8.4	1.59
	4	17.0	3.5	.59	8.4	1.42
	5	15.0	3.3	.49	8.5	1.27
	6	14.0	3.8	.53	8.3	1.16
	7	14.2	3.2	.45	7.4	1.05
	8	15.5	3.4	.52	8.3	1.28
	9	15.2	3.0	.45	8.2	1.24
		141.1		4.94		11.99
Class 12—Sec. 3. Holstein. Homestead Lady. November 18, 1913. 139.24. Fourth. Logan Bros.	1	12.4	2.9	.35	8.4	1.04
	2	13.5	2.6	.35	8.3	1.12
	3	14.6	5.2	.75	9.0	1.31
	4	12.8	3.8	.48	8.2	1.04
	5	12.2	3.0	.36	8.4	1.02
	6	13.5	3.8	.51	8.2	1.10
	7	14.7	4.1	.60	8.0	1.17
	8	14.0	3.3	.46	8.2	1.14
	9	14.0	3.3	.46	8.2	1.14
		121.7		4.32		10.08
Class 12—Sec. 3. Holstein. Homestead Jane. May 24, 1913. 115.90. Fifth. Fowler Bros.	1	9.6	3.4	.32	8.1	.77
	2	9.5	3.5	.33	8.2	.77
	3	10.2	3.8	.38	8.2	.83
	4	10.8	3.4	.36	7.9	.85
	5	10.6	3.6	.38	8.0	.84
	6	10.4	3.8	.39	8.3	.86
	7	10.6	3.7	.39	8.2	.86
	8	11.0	3.7	.40	8.3	.91
	9	10.6	3.6	.38	8.2	.86
		93.3		3.33		7.55
Class 12—Sec. 4. Holstein. Sarcastic Lass DeKol. October 20, 1913. 177.78. First. W. S. Harding.	1	18.0	3.6	.64	8.1	1.45
	2	17.8	3.2	.56	8.1	1.44
	3	17.8	3.6	.64	8.0	1.42
	4	17.0	3.3	.56	8.2	1.39
	5	18.8	3.0	.56	8.2	1.54
	6	18.4	3.8	.69	8.3	1.52
	7	18.5	3.3	.61	8.1	1.49
	8	18.5	3.4	.62	8.2	1.51
	9	18.4	3.3	.60	8.2	1.50
		173.2		5.48		13.26
Class 12—Sec. 4. Holstein. Helen Anna 2nd. November 20, 1913. 133.87. Second. S. Dickie & Son.	1	15.2	3.2	.48	8.0	1.21
	2	14.8	3.0	.44	8.1	1.19
	3	15.4	3.4	.52	8.0	1.23
	4	15.0	3.0	.45	7.0	1.05
	5	14.8	3.0	.44	8.2	1.21
	6	14.6	3.1	.45	8.1	1.18
	7	15.0	3.0	.45	7.9	1.18
	8	14.6	3.2	.46	8.2	1.19
	9	14.0	3.2	.44	7.9	1.10
		133.4		4.13		10.54
Class 12—Sec. 4. Holstein. Homestead Queen Anna. November 12, 1913. 98.26. Third. Logan Bros.	1	10.1	3.2	.32	8.3	.83
	2	10.0	3.0	.30	8.4	.84
	3	10.4	3.2	.33	8.3	.86
	4	10.2	3.2	.32	8.3	.84
	5	10.0	3.2	.32	8.3	.83
	6	10.8	3.9	.42	8.4	.90
	7	10.0	3.2	.32	8.3	.83
	8	10.2	2.9	.29	8.6	.87
	9	10.7	3.7	.39	8.2	.87
		92.4		3.01		7.67
Class 13—Sec. 1. Guernsey. Beauty. October 28, 1913. 175.57. First. F. H. Roper.	1	14.0	4.5	.63	9.5	1.33
	2	14.0	4.3	.60	9.1	1.27
	3	12.8	4.3	.55	9.1	1.16
	4	12.5	4.5	.56	9.2	1.15
	5	13.0	4.4	.57	8.3	1.07
	6	13.3	4.7	.62	8.5	1.13
	7	15.0	6.0	.90	8.6	1.29
	8	14.6	4.2	.61	8.4	1.22
	9	14.6	4.6	.67	9.1	1.32
		123.8		5.71		10.94
Class 13—Sec. 1. Guernsey. Pauline. November 20, 1913. 162.01. Second. D. G. MacKay & Son.	1	12.8	4.6	.58	8.4	1.07
	2	13.8	4.5	.62	9.2	1.26
	3	12.6	4.4	.55	8.6	1.08
	4	14.5	4.2	.60	8.8	1.27
	5	14.0	4.0	.56	8.9	1.24
	6	13.4	4.2	.56	8.8	1.17
	7	13.2	4.5	.59	8.8	1.16
	8	12.6	4.8	.60	8.8	1.10
	9	12.6	4.6	.57	8.5	1.07
		119.5		5.23		10.42

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solid Not Fat	Lbs. Solids Not Fat
Class 13—Sec. 1. Guernsey. Ruby. October 4, 1913. 159.24. Third. D. G. MacKay & Son.	1	11.4	5.3	.60	9.2	1.04
	2	10.8	5.3	.57	9.0	.97
	3	11.5	5.3	.60	8.5	.97
	4	11.2	5.3	.59	9.2	1.03
	5	11.0	5.3	.58	9.0	.99
	6	11.4	5.0	.57	8.4	.95
	7	10.5	5.2	.54	8.8	.92
	8	11.5	5.0	.55	8.8	1.00
	9	11.5	5.2	.59	8.7	1.00
		100.3		5.19		8.83
Class 13—Sec. 1. Guernsey. Alice. November 3, 1913. 152.72. Fourth. F. H. Roper.	1	10.0	6.0	.60	8.7	.87
	2	8.7	6.8	.59	8.5	.73
	3	7.4	8.0	.59	8.3	.61
	4	7.9	7.7	.60	8.2	.64
	5	10.0	7.0	.70	8.4	.84
	6	10.5	5.3	.56	8.3	.68
	7	10.8	5.0	.54	8.3	.89
	8	10.8	5.1	.55	8.7	.93
	9	10.6	5.0	.53	9.0	.95
		86.7		5.26		7.14
Class 13—Sec. 1. Guernsey. Heiress. September 4, 1913. 131.50. Fifth. D. G. MacKay & Son.	1	9.4	4.7	.44	8.6	.80
	2	9.2	5.0	.46	8.8	.80
	3	10.1	4.8	.48	8.1	.81
	4	10.2	5.0	.51	9.0	.91
	5	10.2	4.6	.46	8.4	.85
	6	10.2	4.8	.48	8.3	.84
	7	9.6	4.6	.44	8.9	.85
	8	9.4	4.8	.45	9.0	.84
	9	9.0	4.9	.44	8.9	.80
		87.3		4.16		7.50
Class 13—Sec. 1. Guernsey. Mira. October 3, 1913. 123.01. Sixth. F. H. Roper.	1	11.0	4.8	.52	9.1	1.00
	2	10.6	4.6	.48	9.6	1.01
	3	8.6	2.7	.23	9.1	.78
	4	10.0	3.9	.39	8.7	.87
	5	8.4	4.6	.38	8.3	.69
	6	9.8	5.6	.54	8.4	.82
	7	10.0	5.0	.50	8.3	.69
	8	10.4	3.9	.40	8.4	.80
	9	11.2	4.0	.44	8.5	.95
		90.0		3.88		7.6
Class 13—Sec. 2. Guernsey. Daisy. October 24, 1913. 146.21. First. D. G. MacKay & Son.	1	12.3	4.2	.51	8.5	1.0
	2	12.6	4.8	.60	8.8	1.1
	3	12.8	4.2	.53	8.3	1.0
	4	12.6	4.2	.52	8.8	1.1
	5	12.8	4.0	.51	8.5	1.0
	6	12.8	4.4	.56	8.7	1.1
	7	12.4	4.1	.50	8.6	1.0
	8	12.2	3.8	.46	8.5	1.0
	9	11.8	4.0	.47	8.4	.9
		112.3		4.66		9.5
Class 13—Sec. 2. Guernsey. Ritzy. September 13, 1913. 121.99. Second. F. H. Roper.	1	9.4	3.6	.33	9.2	.9
	2	11.4	4.2	.47	8.7	.9
	3	10.5	4.4	.46	8.7	.9
	4	9.3	3.7	.34	9.0	.8
	5	11.6	4.9	.56	8.5	.
	6	9.6	4.9	.47	8.8	.
	7	9.2	4.5	.41	8.9	.8
	8	9.2	4.3	.39	9.0	.
	9	9.4	4.3	.40	9.0	.
		89.6		3.83		7.
Class 13—Sec. 3. Guernsey. Rosie. September 18, 1913. 112.71. First. D. G. MacKay & Son.	1	8.9	4.4	.39	9.0	.
	2	9.0	4.1	.36	9.1	.
	3	9.2	4.3	.39	8.3	.
	4	8.6	4.4	.37	9.0	.
	5	9.4	4.2	.39	8.9	.
	6	9.2	4.4	.40	8.6	
	7	9.0	4.6	.41	8.9	
	8	9.0	4.0	.36	8.6	
	9	8.8	4.5	.39	8.5	
		81.1		3.46		7
Class 13—Sec. 3. Guernsey. Rosie's Maid. July 27, 1913. 90.40. Second. F. H. Roper.	1	7.0	4.6	.32	9.1	
	2	7.4	3.6	.26	8.7	
	3	6.8	3.5	.23	9.0	
	4	6.8	3.8	.25	9.0	
	5	7.0	4.3	.30	8.8	
	6	7.0	4.1	.28	8.9	
	7	6.8	4.5	.30	8.9	
	8	6.8	4.3	.29	8.9	
	9	7.0	4.6	.32	9.0	
		62.6		2.55		5

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solid Not Fat	Lbs. Solids Not Fat
	1	14.3	3.4	.48	8.6	1.22
	2	18.0	4.3	.77	8.7	1.56
Class 14—Sec. 1.	3	16.4	4.4	.72	8.6	1.41
Jersey.	4	16f2	4.0	.64	8.7	1.40
Escila Gill.	5	17.6	3.7	.65	8.6	1.51
November 8, 1913.	6	18.2	4.5	.81	8.5	1.54
201.83.	7	16.0	4.3	.68	8.5	1.36
First.	8	18.0	4.6	.82	8.5	1.53
W. S. Harding.	9	18.6	5.0	.93	$8.5	1.58
		153.3		6.50		413.11
	1	17.0	5.8	.98	8.3	1.41
	2	13.9	5.0	.69	8.4	1.16
Class 14—Sec. 1.	3	12.0	4.2	.50	8.4	1.00
Jersey.	4	14.3	4.7	.67	8.0	1.14
Best.	5	13.1	5.0	.65	9.3	1.21
September 15, 1913.	6	12.4	4.0	.49	8.5	1.05
186.79.	7	14.0	5.0	.68	8.3	1.16
Second.	8	14.4	5.4	.77	8.7	1.25
J. E. Baker & Sons.	9	13.2	4.5	.59	8.0	1.05
		124.3		6.02		10.43
	1	14.9	4.7	.70	8.4	1.25
	2	13.2	4.8	.63	8.6	1.13
Class 14—Sec. 1.	3	12.5	5.0	.62	8.7	1.08
Jersey.	4	13.0	4.4	.57	8.9	1.15
Pride.	5	13.2	4.9	.64	9.2	1.21
November 4, 1913.	6	11.3	5.6	.63	8.4	.94
160.8.	7	10.5	5.0	.52	8.7	.91
Third.	8	10.4	4.6	.47	8.5	.88
J. E. Baker & Sons.	9	10.0	5.3	.53	8.3	.83
		109.0		5.31		9.38
	1	9.4	5.3	.43	8.9	.83
	2	10.2	5.5	.56	8.5	.86
Class 14—Sec. 1.	3	9.6	5.5	.52	8.7	.83
Jersey.	4	9.6	5.4	.51	9.1	.87
Babbit.	5	10.0	5.2	.52	8.5	.85
August 23, 1913.	6	10.3	5.6	.57	9.3	.95
147.03.	7	10.0	5.1	.51	8.8	.88
Fourth.	8	10.0	5.4	.54	8.6	.86
H. S. Pipes & Son.	9	8.8	5.2	.45	9.5	.83
		87.9		4.67		7.76
	1	10.4	5.0	.52	9.3	.96
	2	12.0	4.8	.57	8.9	1.06
Class 14—Sec. 1.	3	11.0	4.8	.52	9.0	.99
Jersey.	4	11.2	4.8	.53	9.3	1.04
Crocus.	5	11.5	4.5	.51	9.0	1.03
September 9, 1913.	6	10.5	4.6	.48	9.5	.99
136.55.	7	11.0	4.8	.52	9.3	1.02
Fifth.	8	10.8	4.8	.51	9.1	.98
H. S. Pipes & Son.	9	9.6	4.8	.46	9.7	.96
		97.4		4.63		9.00
	1	9.2	6.2	.57	8.9	.81
	2	7.6	5.3	.40	8.8	.66
Class 14—Sec. 1.	3	7.4	5.1	.37	8.7	.54
Jersey.	4	9.2	6.6	.60	9.0	.82
Jennie.	5	8.5	6.4	.54	8.8	.74
September 1, 1913.	6	8.4	5.9	.49	9.1	.76
136.38.	7	9.4	6.2	.58	8.8	.82
Sixth.	8	7.2	5.1	.36	8.7	.62
J. R. Semple.	9	9.0	5.8	.52	8.8	.79
		75.9		4.43		6.56
	1	9.2	4.7	.43	8.9	.81
	2	9.6	4.5	.43	9.1	.87
Class 14—Sec. 1.	3	9.3	4.8	.44	9.3	.86
Jersey.	4	9.2	4.8	.44	9.2	.84
Ora.	5	9.5	4.1	.38	8.6	.81
August 8, 1913.	6	10.0	4.6	.46	9.3	.93
124.79.	7	9.4	4.5	.42	9.0	.84
Seventh.	8	9.6	4.4	.42	9.0	.86
H. S. Pipes & Son.	9	9.0	4.6	.41	9.6	.86
		8.48		3.83		7.68
	1	9.2	5.3	.48	9.1	.86
	2	9.6	5.0	.48	9.1	.87
Class 14—Sec. 1.	3	8.6	4.8	.41	9.8	.84
Jersey.	4	9.4	5.0	.47	9.1	.85
Bonnie.	5	9.5	4.7	.44	9.2	.87
October 14, 1913.	6	9.2	4.6	.42	9.3	.85
126.66.	7	9.4	4.6	.43	9.2	.86
Eighth.	8	10.0	5.3	.53	9.1	.91
H. S. Pipes & Son.	9	8.4	4.8	.40	9.7	.81
		73.3		4.06		7.72

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solid Not Fat	Lbs. Solids Not Fat
	1	13.6	4.8	.65	9.4	1.27
	2	14.5	4.9	.71	9.2	1.33
Class 14—Sec. 2.	3	12.8	5.0	.64	9.4	1.20
Jersey.	4	14.0	5.1	.71	9.5	1.33
Choice.	5	14.5	4.7	.68	8.9	1.29
October 12, 1913.	6	12.8	4.8	.61	9.3	1.19
189.86.	7	14.4	5.2	.74	9.1	1.31
First.	8	14.8	5.1	.75	8.7	1.28
H. S. Pipes & Son.	9	12.5	5.3	.66	9.4	1.17
		123.9		6.15		11.37
	1	8.0	5.6	.31	9.6	.76
	2	9.5	5.2	.49	9.3	.88
Class 14—Sec. 2.	3	9.2	5.2	.47	9.2	.84
Jersey.	4	9.6	5.4	.51	9.3	.89
Lucinola.	5	9.6	5.2	.49	8.7	.83
September 19, 1913.	6	8.5	5.0	.42	9.2	.78
130.48.	7	9.0	5.2	.47	8.9	.80
Second.	8	9.6	5.8	.55	9.0	.86
H. S. Pipes & Son.	9	8.1	5.7	.46	9.6	.77
		81.1		4.17		7.41
	1	9.0	6.6	.59	9.1	.82
	2	8.8	5.0	.44	9.4	.82
Class 14—Sec. 2.	3	7.5	4.3	.32	9.3	.69
Jersey.	4	10.4	4.6	.47	8.6	.89
Gypsey.	5	8.8	3.9	.34	8.8	.77
Augdst 3, 1913.	6	7.2	3.8	.27	9.2	.66
123.55.	7	11.0	4.2	.46	8.8	.96
Third.	8	8.6	4.4	.37	8.3	.71
H. S. Pipes & Son.	9	6.8	4.6	.31	9.2	.62
		77.5		3.57		6.94
	1	10.4	5.1	.53	9.4	.97
	2	10.3	5.2	.53	9.3	.95
Class 14—Sec. 3.	3	10.4	4.8	.49	8.8	.91
Jersey.	4	10.2	5.2	.53	9.3	.94
Lady.	5	10.0	5.0	.50	8.6	.86
November 27, 1913.	6	10.2	4.9	.49	8.8	.89
149.01.	7	10.0	5.0	.50	9.2	.92
First.	8	10.0	5.2	.52	8.6	.86
J. R. Semple.	9	9.3	5.3	.49	9.4	.87
		90.8		4.58		8.17
	1	8.8	5.3	.46	9.2	.80
	2	8.6	5.2	.44	9.1	.78
Class 14—Sec. 3.	3	9.0	6.2	.55	9.0	.81
Jersey.	4	9.2	5.0	.46	8.9	.81
Baker's Queen 4th.	5	9.4	4.8	.45	9.5	.89
October 26, 1913.	6	9.2	5.4	.49	8.9	.81
128.27.	7	9.2	4.6	.42	9.0	.82
Second.	8	9.4	5.0	.47	8.8	.82
J. E. Baker & Sons.	9	9.0	5.3	.47	8.9	.80
		81.8		4.21		7.34
	1	8.4	6.1	.51	9.2	.77
	2	8.3	5.7	.47	9.4	.78
Class 14—Sec. 3.	3	7.8	5.2	.40	9.5	.74
Jersey.	4	8.2	5.4	.44	8.9	.72
Naughty.	5	8.5	5.2	.44	9.2	.78
August 17, 1913.	6	8.3	5.0	.41	9.6	.79
127.6.	7	8.5	5.4	.45	9.2	.78
Third.	8	8.5	5.3	.45	9.3	.79
H. S. Pipes & Son.	9	7.5	5.2	.39	9.6	.72
		74.0		3.96		6.87
	1	10.4	5.0	.52	9.0	.93
	2	10.0	4.6	.46	8.9	.89
Class 14—Sec. 3.	3	10.5	3.7	.38	8.4	.88
Jersey.	4	10.0	4.4	.44	9.1	.91
Princess.	5	10.2	4.0	.40	8.4	.85
November 20, 1913.	6	10.6	4.4	.46	8.6	.91
113.85.	7	9.6	4.3	.41	8.9	.85
Fourth.	8	10.6	4.6	.48	8.5	.90
J. R. Semple.	9	9.4	4.8	.45	8.9	.83
		91.3		4.00		7.95
	1	8.5	4.7	.39	9.0	.76
	2	9.0	4.4	.39	9.2	.82
Class 14—Sec. 3.	3	8.2	4.5	.36	9.7	.79
Jersey.	4	9.0	4.6	.41	9.0	.81
Perfection.	5	9.5	4.3	.40	8.5	.80
August 25, 1913.	6	8.6	4.3	.36	9.1	.78
113.5.	7	9.3	4.5	.41	9.0	.83
Fifth.	8	9.0	4.3	.38	9.3	.83
H. S. Pipes & Son.	9	8.0	4.6	.36	9.4	.75
		79.1		3.40		7.17

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.

Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solid Not Fat	Lbs. Solids Not Fat
1	7.0	5.3	.37	9.0	.63
2	6.8	5.1	.34	9.1	.61
3	6.6	4.9	.32	9.5	.62
4	7.2	5.0	.36	9.1	.65
5	7.0	4.8	.33	9.2	.64
6	6.0	4.5	.27	9.4	.56
7	8.0	5.2	.41	9.4	.72
8	7.2	4.6	.33	8.9	.64
9	7.3	5.4	.39	9.4	.68
	63.1		3.12		5.75

Class 14—Sec. 3.
Jersey.
Olive.
August 15, 1912.
103.25.
Sixth.
H. S. Pipes & Son.

1	10.2	4.8	.48	8.6	.87
2	10.8	4.3	.46	8.9	.96
3	9.6	4.5	.43	9.2	.88
4	10.4	4.8	.49	8.9	.92
5	9.2	4.3	.39	8.9	.81
6	9.5	4.6	.43	9.4	.89
7	11.2	5.4	.60	8.5	.95
8	10.2	4.1	.41	8.9	.90
9	9.2	4.8	.44	9.5	.87
	90.3		4.33		8.05

Class 14—Sec. 4.
Jersey.
Ideal.
September 26, 1913.
136.40.
First.
H. S. Pipes & Son.

1	21.6	3.4	.73	8.3	1.79
2	23.0	3.8	.87	8.2	1.88
3	23.7	4.2	.99	8.3	1.96
4	23.0	4.1	.94	8.5	1.95
5	21.6	3.5	.75	8.2	1.77
6	22.6	4.0	.90	8.4	1.89
7	23.2	3.9	.90	8.2	1.90
8	22.0	3.6	.79	8.4	1.84
9	21.8	4.4	.95	8.2	1.78
	222.5		7.82		16.06

Class 15—Sec. 1.
Grade Holstein.
Jennie.
November 6, 1913.
243.68.
First.
S. Dickie & Son.

1	14.5	5.3	.76	9.0	1.30
2	14.3	5.6	.80	8.9	1.27
3	15.0	6.0	.90	8.8	1.32
4	13.0	5.0	.65	9.1	1.18
5	14.2	4.8	.68	8.4	1.19
6	13.0	4.7	.61	9.2	1.19
7	14.0	4.8	.67	8.7	1.21
8	14.2	5.2	.73	8.4	1.19
9	13.5	5.4	.74	8.7	1.17
	125.7		6.54		11.02

Class 15—Sec. 1.
Grade.
Judy.
November 7, 1913.
197.1.
Second.
J. R. Semple.

1	17.5	2.4	.42	7.6	1.33
2	19.5	5.5	1.05	7.7	1.50
3	18.8	5.0	.94	7.7	1.44
4	16.6	2.6	.43	7.7	1.27
5	18.2	3.4	.61	7.7	1.40
6	17.8	2.7	.48	7.8	1.38
7	18.5	2.9	.53	7.9	1.46
8	19.0	4.0	.76	7.8	1.48
9	18.3	3.2	.58	7.3	1.33
	166.2		5.80		12.59

Class 15—Sec. 1.
Grade.
Sue.
October 18, 1913.
183.77.
Third.
Fowler Bros.

1	22.6	2.4	.54	7.9	1.78
2	21.0	2.5	.52	8.9	1.86
3	22.0	2.9	.63	7.8	1.71
4	21.2	2.6	.55	8.0	1.69
5	21.1	2.7	.56	8.0	1.68
6	19.3	2.7	.52	8.0	1.54
7	22.0	2.6	.57	7.3	1.60
8	21.0	3.0	.63	7.6	1.59
9	20.0	3.0	.60	8.0	1.60
	190.2		5.12		15.05

Class 15—Sec. 1.
Grade.
Fanny K.
October 18, 1913.
174.15.
Fourth.
T. W. Keilor.

1	25.8	2.4	.61	7.6	1.96
2	22.7	2.5	.56	7.5	1.70
3	22.0	2.6	.57	7.5	1.65
4	22.6	2.5	.56	7.5	1.69
5	21.5	2.0	.43	7.6	1.63
6	20.5	2.0	.41	7.3	1.49
7	23.6	2.1	.49	7.3	1.72
8	22.2	2.3	.51	7.3	1.62
9	23.0	2.6	.59	7.4	1.72
	213.9		4.73		15.18

Class 15—Sec. 1.
Grade.
Jewel.
November 17, 1913.
163.79.
Fifth.
T. W. Keilor.

1	10.2	5.4	.55	8.7	.88
2	10.3	5.5	.56	9.0	.92
3	10.5	5.0	.52	8.9	.93
4	10.4	4.3	.44	8.8	.91
5	10.4	4.9	.50	9.2	.95
6	11.5	5.2	.59	8.8	1.01
7	11.4	5.0	.57	8.6	.98
8	10.6	4.5	.47	9.0	.95
9	14.0	5.5	.77	9.0	1.26
	99.3		4.97		8.79

Class 15—Sec. 1.
Grade.
Reddy.
October 14, 1913.
152.62.
First.
W. E. Harding.

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Book for Men, Free

8,000 Words, 30 Illustrations

TO MY READERS:

Of the little illustrated advice book described below, which I gladly send free to all men who fill in the coupon. I beg to say that it represents the very BEST information of a private nature which I am able to offer you as a result of over 30 years' observation and study of my subject, during which time I have personally interviewed many thousands of men, young and elderly, single and married, rich and poor alike, who came to me in confidence with their confessions of debility, lost nerve force and failing strength.

It is, reader, this vast and unusual opportunity which has enabled me to compile this very popular and valuable little free book (over a million of which have been sent everywhere to men who wrote me for them), and in a manner to reflect the exact living, breathing experiences and needs of real men who sought information as to the newer ways of self treatment without the use of drugs.

Remember, this book of over 8000 words and 30 illustrations will come to you by return mail in reply to your request, and in a perfectly plain, sealed envelope, for it is no one's business but your own what the envelope contains. There is absolutely no obligation on your part to buy anything or pay anything, and merely the receipt of this book which does not mean in any way that you are to use one of my VITALIZERS (see description below) and, in fact, only a portion of the book has any reference to the VITALIZER at all. Primarily it is a compendium of useful information for private reference, which you and all other men may easily profit by through life.

Therefore, please use the coupon, or if nearby, I should be very glad to have you call.

SANDEN, AUTHOR.

MANLY MEN MOVE THE WHOLE WORLD

It is a fact, reader, which you and I must recognize and admit, that the whole world admires and is fascinated by strong, vigorous, husky, manly manhood, and we must also admit that it is this same manhood and this alone which is back of the real leaders and producers in every walk of life. No matter where we go, we find it to be the manly, vigorous, vital fellow who forges to the front, who fascinates men and women of his community, who does the really great things. An unmanly man merely means nature's laws gone wrong, for it is he who halts and hesitates, who takes the back seat, who does not fit into the picture in a way that a manly, vital nature should. And yet, reader, it is my firm believe that any man, no matter what his past, no matter what dissipations or follies may have left their mark upon his physical and mental being, I say to you that such a man, unless there be some unusual reason, may hope for a complete return of his strength, vigor and self confidence, if he but go about his self restoration in a natural commonsense way.

I make a little appliance which we will call a VITALIZER, because I think that is the best word to describe its strange power. I don't want you to think of getting one of these VITALIZERS just now, but I would like you to investigate my claims as to what I believe can be accomplished by almost any weakened man who uses this VITALIZER faithfully for a few weeks. I speak, of course, of bim who is willing to give up dissipation and lead a decent, conservative life, not only while using the VITALIZER, but for the future. The other kind of man, the dissipated, can hope for nothing from any treatment, no matter what it may be, hence such a man is eliminated from my consideration.

This little VITALIZER is made to wear upon the body all night. It weighs only several ounces and is no more unhandy than any ordinary belt, yet it generates a great FORCE that I call VIGOR, which flows inio your blood organs and nerves while you sleep. Men say it often takes any pain or weakness out of the back in one application, and that 60 to 90 days' use has been sufficient to restore manly strength and to put men in the "never felt better in my life" class. Special attachments carry the FORCE of the VITALIZER to any part of the body, for the use of women as well as men in cases of rheumatism, kidney, liver, stomach, bladder, disorders, ete.

Over two hundred thousand of these VITALIZERS have been used or are now being used by men all over the world.

You had better learn more of this VITALIZER. It is fully described in my free book. If you live near me, why not call and test the VITALIZER yourself.

WHAT THE FREE BOOK TELLS

The free illustrated advice booklet mentioned above is meant to be a single declaration of certain important truths that every man in the world should know. The day has gone by when men are kept in ignorance of the real problems pertaining to these private subjects, and this illustrated advice booklet, which I send to men sealed, by mail, gives certain important facts relating to sex, just as these facts are. The booklet also fully describes my VITALIZER and you are told how you may get one for your own use if you decide that you want one. Please use coupon below, or call. Hours 9 to 6.

DR. M. F. SANDEN,
140 Yonge St., Toronto, Ont.

Dear Sirs,—Please forward me your book, as advertised, free, sealed.

NAME .....

ADDRESS .....

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.

Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
1	11.0	4.6	.50	9.2	1.01
2	11.2	4.4	.49	8.6	.96
3	11.6	4.2	.48	8.5	.98
4	12.0	4.6	.55	9.0	1.08
5	11.0	5.1	.56	8.8	.96
6	11.2	5.1	.57	9.3	1.04
7	10.5	4.2	.44	8.8	.92
8	10.2	4.0	.40	8.5	.86
9	11.8	4.5	.53	8.7	1.02
	100.5		4.52		8.83

Class 15—Sec. 1.
Grade.
Brindle.
November 1, 1913.
139.49.
Seventh.
J. R. Semple.

1	14;9	3.2	.47	7.9	1.17
2	15.0	3.3	.49	8.0	1.20
3	14.9	3;7	.55	8.0	1.19
4	14.4	3.0	.43	8.0	1.15
5	14.4	2.8	.40	7.9	1.13
6	15.4	3.4	.52	7.9	1.21
7	14.6	3.2	.46	7.8	1.13
8	14.0	3.1	.43	7.9	1.10
9	15.7	3.4	.53	7.8	1.22
	133.3		4.28		10.50

Class 15—Sec. 2.
Grade.
Lily.
October 20, 1913.
139.50.
First.
Fowler Bros.

1	17.9	3.4	.60	8.9	1.59
2	16.2	3.8	.61	8.0	1.29
3	16.4	3.8	.62	8.1	1.32
4	16.0	3.4	.54	7.9	1.26
5	16.0	3.9	.62	8.1	1.29
6	16.4	3.9	.63	7.8	1.27
7	16.0	3.3	.52	7.9	1.26
8	16.3	3.8	.61	8.0	1.30
9	16.8	3.7	.62	7.5	1.26
	148.0		5.37		11.84

Class 15—Sec. 3.
Grade.
Patty.
October 21, 1913.
170.77.
First.
Fowler Bros.

1	16.0	4.1	.65	8.6	1.37
2	15.0	3.8	.69	8.2	1.23
3	14.6	4.2	.61	8.7	1.27
4	14.8	3.7	.54	8.7	1.28
5	15.0	3.6	.54	8.9	1.33
6	15.0	3.8	.57	8.7	1.30
7	15.0	3.6	.54	8.5	1.27
8	15.2	3.5	.53	8.5	1.29
9	14.5	3.5	.50	8.7	1.26
	135.1		5.17		11.60

Class 15—Sec. 3.
Grade.
Daisy.
November 20, 1913.
164.05.
Second.
E. P. Anderson.

1	11.6	4.4	.51	8.5	.98
2	11.8	4.4	.51	8.7	1.02
3	11.4	3.6	.41	8.4	.95
4	11.0	3.3	.36	8.7	.95
5	13.2	3.9	.51	8.6	1.13
6	12.0	3.9	.46	8.5	1.02
7	10.8	3.0	.32	8.5	.91
8	13.2	4.2	.55	8.3	1.09
9	11.0	3.6	.39	8.3	.91
	106.0		4.02		8.96

Class 15—Sec. 3.
Grade Guernsey.
Edna.
October 31, 1913. ...
127.3.
Third.
A. McRae & Sons.

1	13.0	3.7	.48	8.7	1.13
2	13'0	4.5	.58	8.6	1.11
3	11.5	4.3	.49	8.4	.96
4	11.3	4.2	.47	9.0	1.01
5	11.5	3.7	.42	9.0	1.03
6	11.4	4.1	.46	8.6	.98
7	11.2	4.0	.44	9.0	1.00
8	10.8	3.8	.41	9.0	.97
9	10.4	4.1	.42	9.0	.93
	104.1		4.17		9.12

Class 15—Sec. 3.
Grade.
Nigger.
October 28, 1912.
131.61.
Fourth.
T. W. Keilor.

1	11.6	3.8	.44	8.2	.95
2	11.6	4.0	.46	8.3	.96
3	10.2	3.8	.38	8.2	.83
4	10.4	2.8	.29	8.3	.86
5	11.0	3.9	.42	8.3	.91
6	10.0	3.7	.37	8.3	.83
7	12.0	4.0	.48	8.1	.97
8	11.8	3.8	.44	8.3	.97
9	11.9	4.2	.49	8.1	.96
	100.5		3.77		8.24

Class 15—Sec. 4.
Grade.
Cherry.
September 29, 1913.
122.37.
122.97.
First.

1	8.8	4.8	.42	8.6	.75
2	8.5	4.8	.40	8.5	.72
3	8.5	4.4	.37	8.1	.68
4	8.4	4.2	.35	8.5	.71
5	8.5	4.2	.36	8.3	.76
6	8.6	4.6	.39	8.5	.73
7	8.2	4.6	.37	8.6	.70
8	8.2	4.3	.35	8.3	.68
9	8.2	4.4	.36	8.4	.70
	75.9		3.37		5.37

Class 15—Sec. 4.
Grade.
Bunny.
September 1, 1913.
106.36.
Second.
J. R. Semple.

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.

Milking	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
1	11.8	3.5	.41	8.3	.97
2	8.8	3.4	.29	8.1	.71
3	10.2	3.8	.38	7.9	.80
4	9.4	2.8	.26	8.3	.78
5	9.5	2.7	.25	8.5	.80
6	10.6	3.2	.33	8.4	.89
7	10.8	3.7	.39	8.0	.86
8	9.4	3.4	.31	8.5	.79
9	11.1	4.0	.44	8.1	.89
	91.6		3.06		7.49

Class 15—Sec. 4.
Grade.
Sadie.
October 25, 1913.
99.97.
Third.
Fowler Bros.

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Sixty Thousand trappers send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada. Write to-day

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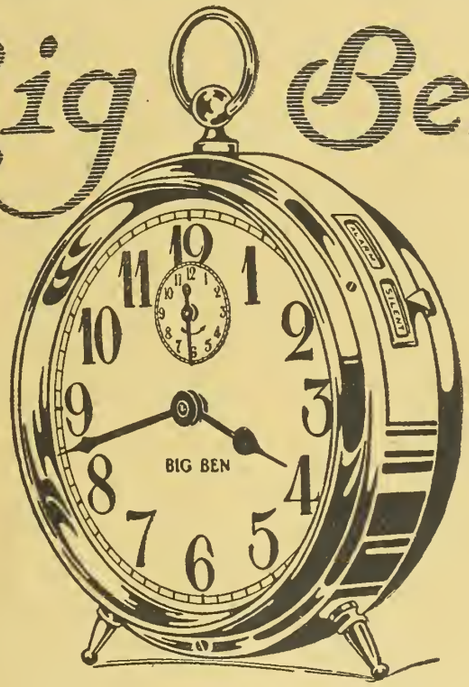
Big Ben



Hitch Your Sleeping Schedule to Big Ben

Big Ben will wake you early enough for profitable before-breakfast action. His gentle get-up *call* starts the day with a *flying start* on thousands of farms.

For your accommodation he rings TWO WAYS. He'll get you up by degrees or in a hurry. Set him either way you wish—to give one long five-minute ring, or ten short rings at one-half-minute intervals, until you're wide awake.

He stands 7 inches tall; is triple-nickel plated over a tested implement steel coat, the handsomest and truest thoroughbred in the clock world. He has big, bold numerals and hands that show the time plainly at a glance, large keys that anyone can wind easily, and such a pleasant tone that you are glad to get up when he calls.

Big Ben makes early rising easy. He's the leader of the early morning brigade. His cheerful "good morning" ring calls millions of live wires to action. Thousands of successful farms are run on a Big Ben schedule. He starts you off right in the morning and keeps you right all day. From "Sun up" to "Lights out" he regulates your day. He'll work for 36 hours at a stretch and overtime, if necessary. The only pay he asks is one drop of oil a year.

He is sturdy and strong—built to last a lifetime. Yet under his dust-proof steel coat is the most delicate "works." That's why his on-the-dot accuracy has won him fame.

Big Ben's wonderful sales are due to his having "made good." His biggest hit has been with folks with the "make good" habit. He stands for success—that's why you'll like him for a friend.

When 3 million families find Big Ben a good clock to buy and 20,000 dealers *prove* he's a good clock to sell, it's evidence that he is worth $3.00 of *your* money. Suppose you trade $3.00 for him today.

A community of clockmakers stands back of him. Their imprint, *Made in La Salle, Illinois, by Westclox*, is the best alarm-clock insurance you can buy.

Prize Winners at the 1913 Maritime Winter Fair

BEEF CATTLE.

CLASS 1 SHORTHORNS.

Steer, 2 years old and under 3 years—1, Harold Etter, Westmorland Point; 2, Edwin Forrest, Amherst Point; 3, Chas. W. Forrest, Amherst Point.

Steer, 18 months and under 2 years—1, Edwin Forrest; 2, C. H. Angus, Carrington, N. S.; 3, Harold Etter.

Steer, 1 yr. and under 18 mos.—1, Charles W. Forrest; 2, Harold Etter.

Steer, 6 mos. and under 1 yr.—1, Hazen Etter, Westmorland Point; 2, C. H. Angus; 3, Edwin Forrest; 4, Geo. M. Holmes, Amherst; 5, Chas. W. Forrest.

Cow or Heifer, 3 yrs. or over.—1, Harold Etter; 2 and 5, N. Curry, Tidnish; 3 and 4, R. A. Snowball, Chatham.

Heifer 2 yrs. and under 3 yrs.—1, Chas. W. Forrest; 2 and 3, R. A. Snowball; 4, Geo. M. Holmes.

Heifer 18 mos. and under 2 yrs.—1, R. A. Snowball; 2, Harold Etter.

Heifer 1 yr. and under 18 mos.—1, Harold Etter; 2, Chas. W. Forrest; 3 and 4, R. A. Snowball.

Heifer 6 mos. and under 1 yr.—1, Harold Etter; 2, H. P. Lawrence Nappan Station; 3, N. Curry; 4 and 5, R. A. Snowball; 6, Chas. W. Forrest; 7, Geo. M. Holmes.

CLASS 2

Donated by M. J. O'Brien, Railway Contractor, Montreal, Silver Cup for best Shorthorn animal, any age. To be won three times, not necessarily consecutively, before becoming the property of the exhibitor. No animal can win more than one cup. Won in 1909 by C. A. Archibald. Won in 1910 by C. A. Archibald. Won in 1911 by Harold Etter. Won in 1912 by R. A. Snowball. Won in 1913 by Harold Etter.

CLASS 3

HEREFORDS, ABERDEEN-ANGUS, GALLOWS AND DEVONS.

Steer, 18 mos. and under 2 yrs.—1, A. Bradshaw, Amherst.

Steer 1yr. and under 18 mos.—1, A. Bradshaw.

Steer 6 mos. and under 1 yr.—1, 2 and 3, A. Bradshaw, Amherst.

Cow or Heifer 3 yrs. or over—1, 2 and 3, A. Bradshaw.

Heifer 2 yrs. and under 3 yrs.—1, A. O. F. Gill, Little York; 2, Edwin Forrest; 3 and 4, A. Bradshaw.

Heifer 18 mos. and under 2 yrs.—1, A. O. F. Gill; 2, A. Bradshaw.

Heifer 1 yr. and under 18 mos.—1, Chas. W. Forrest; 2, 3 and 4, A. Bradshaw; 5, Edward P. Anderson, Sackville, N. B.

Heifer 6 mos. and under 1 yr.—1 and 2, Edward P. Anderson; 3, A. Bradshaw; 4, A. O. F. Gill.

CLASS 4

GRADES OF ANY BREED.

Steer 3 yrs. old and upwards.—1, Edwin Forrest; 2, Hazen Etter; 3, Chas. W. Forrest.

Steer, 2 yrs. old and under3 yrs.—1, A. Bradshaw; 2, Edwin Forrest.

Steer 18 mos. and under 2 yrs.—1, Harold Etter; 2, Hazen Etter; 3, Charles W. Forrest; 4, C. W. Pugsley, River Herbert.

Steer 1 yr. and under 18 mos.—1, Harold Etter, 2, Hazen Etter; 3, Edward P. Anderson.

Steer 6mos and under 1 yr—1, Edward P. Anderson; 2, Thomas J. Etter, Westmorland Point; 3, Hazen Etter; 4, A. Bradshaw.

Cow 3 yrs. old and upwards—1, Edwin Forrest; 2, Hazen Etter; 3, Courtney Ludby, West Amherst; 4, Harold Etter; 5, Thomas J. Etter; 6, A. Bradshaw.

Heifer 2 yrs. and under 3 yrs.—1, Edward P. Anderson; 2, Edwin Forrest; 3, Jos. Anthony, Amherst; 4, Chas. Etter.

Heifer 18 mos. and under 2 yrs.—1, A. Bradshaw; 2, Edward P. Anderson; 3, Hazen Etter; 4 and 5, Edwin Foorest; 6, Charles Etter.

Heifer 1 yr. and under 18 mos.—1, Chas. W. Forrest; 2, Edward P. Anderson; 3, Hazen Etter; 4, Thomas J. Etter; 5, Edwin Forrest.

Heifer 6 mos. and under 1 yr.—1, Thomas J. Etter; 2, Edward P. Anderson; 3, A. Bradshaw; 4, Charles W; Forrest; 5 and 6, Edwin Forrest.

CLASS 5

DRESSED BEEF CARCASSES.

Dressed beef carcasses from animals shown in foregoing classes—1 and 2, A. Bradshaw; 3, Harold Etter; 4, C. H. Angus; 5, Edwin Forrest.

CLASS 6

Silver Cup donated by W. W. Black for the best animal, any age, in class 4, to be won three times, not necessarily consecutively, before becoming the property of the exhibitor. No animal shall win more than one cup. Won in 1911 by Edward P. Anderson. Won in 1912 by Fowler Bros. Won in 1913 by E. P. Anderson.

CLASS 7

The Amherst Foundry offers goods valued at $12.00 for the second best animal any age in class 4.—Thos. Etter.

CLASS 8

Donated by International Harvester Co. For best animal any breed or grade. Two-section lever smoothing harrow.—Harold Etter.

CLASS 9

Sec. 1. Donated by Blachford Calf Meal Factory, Waukegan, Ill., represented by A. A. Archibald & Co., Truro, N. S. For the best calf under 1 year, any breed or grade, fed on Blatchford Calf Meal, value $5.00.—E. P. Anderson.

Sec. 2. Donated by the Blatchford Calf Meal Factory, for the best beef animal, any breed or grade, over 1 year old fed on Blatchford Sugar and Flaxseed; 100 lbs Blatchford Sugar and Flaxseed, value $5.00.—Harold Etter.

SHEEP.

CLASS 26

LEICESTERS.

Ewe 2 yrs. old or over—1, 3 and 4, Albert Boswall; 2, Samuel C. Lane, Pownal; 5, John Retson, Truro.

Ewe 1 yr. and under 2 yrs.—1, 3 and 4, Albert Boswall; 2, Samuel C. Lane.

Ewe Lamb—1, 2 and 4, Albert Boswall; 3, John Retson.

Yearling Wether—1 and 4, Albert Boswall; 2 and 3, Samuel C. Lane.

Wether Lamb—1, 2 and 3, Samuel C. Lane.

CLASS 27

LINCOLNS

Ewe 2 yrs. or over—1, 2 and 4, Albert Boswall; 3, C. W. Pugsley.

Ewe 1 yr.and under 2yrs.—1, Albert Boswall; 2 and 3, C. W. Pugsley.

Ewe Lamb—1, 2 and 4, Albert Boswall; 3, C. W. Pugsley.

Yearling Wether—1, C. W. Pugsley; 2, Albert Boswall.

Wether Lamb—1 and 2, C. W. Pugsley; 3, Albert Boswall.

CLASS 28

COTSWOLDS

Ewe 2 yrs. or over—1 and 4, Geo. Retson, Brookside; 2, John Tweedy, Ernscliffe; 3, C. W. Pugsley.

Ewe 1yr. and under 2 yrs.—1 and 2, John Tweedy; 3, Geo. Retson; 4, H. B. Parlee, Sussex.

Ewe Lamb—1, John Tweedy, 2 and 4, H. B. Parlee; 3, Geo. Retson.

Yearling Wether—1, Albert Boswall.

Wether Lamb—1, Geo. Retson; 2, John Tweedie.

CLASS 29

CHEVIOTS.

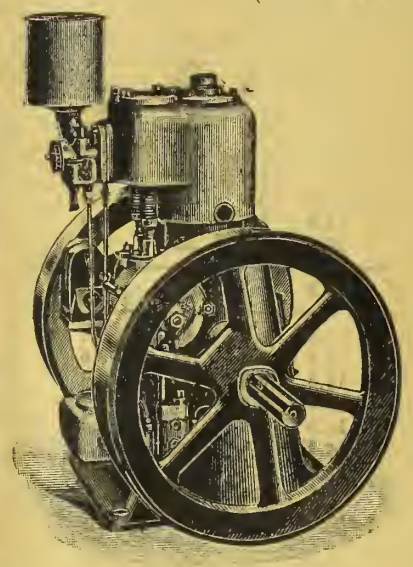
Ewe 2 yrs or over—1, 2, 3 and 4, Charles Symes, Minudie.

Ewe 1 yr. and under 2 yrs.—1, 2, 3 and 4, Charles Symes.

DON'T take our word only, but examine the Lister Engine at work alongside any other, compare its quality, efficiency, economy—In a word, let the engine speak for itself and you will become another delighted user of

THE LISTER
GASOLINE ENGINE

(British Made Throughout)



The most reliable, best quality and value.

Starts instantly — every time, with Bosch Magneto ignition—no batteries to run down and give trouble.

Self-oiling, no oil cups to fill—no oil to waste.

Self-regulating at all loads. No attention needed when at work.

Fitted with phosphor-bronze bearings throughout, the best money can buy.

No babbit metal to wear and run out.

In a word, the best quality engine ever seen in Canada

We have sold over 50,000 Melotte Cream Separators in Canada during 15 years. Ask any Canadian user how he likes the Melotte.

Well—**we guarantee** the Lister as good an engine as the Melotte is a cream separator. We can't say more.

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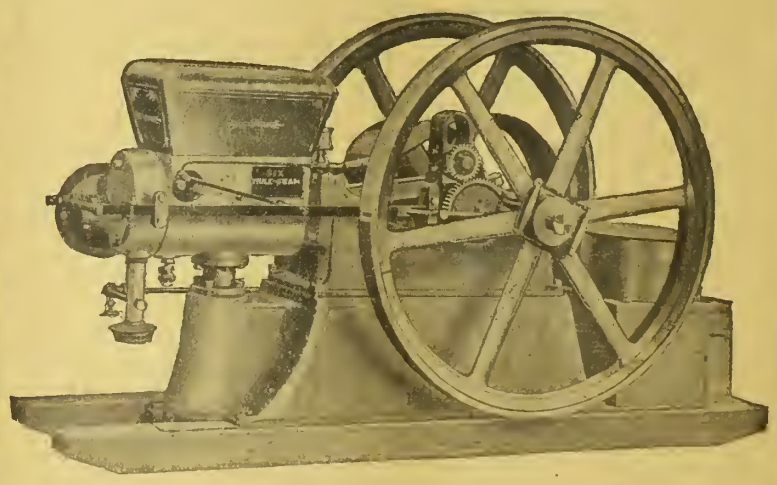
THE "ESCO" GASOLINE ENGINE

develops more power than any other make of Engine of equal rating because it has a larger cylinder and longer stroke. It runs very smoothly, and can always be relied on for a full



days work. It is easy on fuel, simple to handle, long lived and low priced.

Guaranteed for full five years.

BAILEY-UNDERWOOD CO., LTD.
New Glasgow, N. S.

It Pays to Advertise in the Maritime Farmer.

Ewe Lamb—1, Cephas Nunn; 2 and 3, Charles Symes.

Yearling Wether—1, 2 and 3, Charles Symes.

Wether Lamb—1 and 2, Charles Symes.

CLASS 30
HORNED DORSETS.

Ewe 2 yrs. or over—1, 2, 3 and 4, Geo. L. Boswall.

Ewe 1 yr. and under—1, 2, 3 and 4 Geo. L. Boswall.

Ewe Lamb—1, 2, 3 and 4, Geo. L. Boswall.

Yearling Wetber—1 and 2, Geo. L. Boswall.

Wetber Lamb—1 and 3, Geo. L. Boswall; 2, John Tweedy.

CLASS 31
SOUTHDOWNS.

Ewe 2 yrs. and over—1, J. E. Baker & Sons, Barronsfield; 2 and 3, Cephas Nunn; 4, Oliver C. Saunders, Winsloe.

Ewe 1 yr. and under 2 yrs.—1 and 3, J. E. Baker & Sons; 5, Cephas Nunn; 4, Oliver C. Saunders.

Ewe Lamb—1, 2 and 4, J. E. Baker & Sons; 3, Cephas Nunn.

Yearling Wetber—1, J. E. Baker & Sons, 2, Jas. I. Stewart, Amherst Point; 3 and 4, Oliver C. Saunders.

Wether Lamb—1, Cephas Nunn; 2 and 3, Oliver C. Saunders.

CLASS 32
SHROPSHIRES.

Ewe yrs. and over—1 and 4, Geo. L. Boswall; 2 and 3, James I. Stewart.

Ewe 1 yr. and under 2 yrs.—1 and 2, Geo. L. Boswall; 3, Logan Bros., Amherst Point; 4, James I. Stewart.

Ewe Lamb—1 and 2, James I. Stewart; 3, Geo. L. Boswall; 4, Logan Bros.

Yearling Wether—1, Geo. L. Boswall 2, Cephas Nunn.

Wetber Lamb—1, 2 and 3, James I. Stewart.

CLASS 33
OXFORDS

Ewe 2 yrs. old and over—1 and 3, J. B. Baker & Sons, 2 and 4 Bdrder Goodwin, Baie Verte.

Ewe 1 yr. and under 2 yrs.—1 and 4, J. E. Baker & Sons; 2 and 3, Burder Goodwin.

Ewe Lamb—1 and 2, J. E. Baker & Sons; 3 and 4, Burder Goodwin.

Yearling Wetber—1, J. E. Baker & Sons.

CLASS 34
HAMPSHIRES

Ewe 2 yrs. or over—1, 2, 3 and 4, Cepbas Nunn.

Ewe 1 yr. old and under 2 yrs.—1, Cephas Nunn; 2 and 3, Geo. L. Boswall.

Ewe Lamb—1, 2, 3 and 4, Cephas Nunn.

Yearling Wether—1, Cephas Nunn.

CLASS 35
SUFFOLKS.

Ewe 2 yrs. old and over—1, 2, and 3, 4, Albert Boswall.

Ewe 1 yr. and under 2—1, 2 and 3, Albert Boswall.

Ewe Lamb—1, 2, 3 and 4, Albert Boswall.

Yearling Wether—1, Albert Boswall.

CLASS 36
GRADE OR CROSSES.

Ewe 2 yrs. old and over—1, C. W. Pugsley; 2 and 3, James I Stewart; 4, Burder Goodwin; 5, Samuel C. Laoe; 6, Cephas Nunn.

Ewe 1 yr. and under 2—1, Samuel C. Lane; 2, James I. Stewart; 3, Geo. L. Boswall; 4, Cephas Nunn; 5, Oliver C. Saunders; 6, A. H. Boswall.

Ewe Lamb—1, 2 and 4, James I. Stewart: 3. J. E. Baker & Sons; 5, Burder Goodwin.

Yearling Wetber—1, Albert Boswall; 2, Cephas Nunn: 3. James I. Stewart; 4 and 5, Samuel C. Lane.

Wether Lamb—1 and 2, James I. Stewart; 3, Cephas Nunn; 4 and 5, Oliver C. Saunders.

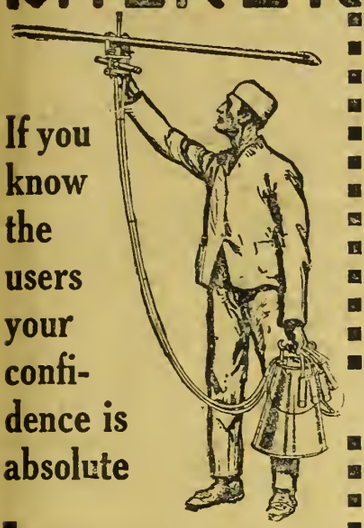
DRESSED SHEEP CARCASSES.

Sec. 1. 331, Jas. I. Stewart; 334, Oliver Saunders: 36, Geo. L. Boswall.

Sec. 2. 331, Jas. I. Stewart; 334, Oliver Saunders.

(Continued on page 196)

SHARPLES MILKER



If you know the users your confidence is absolute

America's shrewdest dairymen use over 6000 Sharples Milkers.

A good example is Hershey, the great chocolate man. He put a Sharples Milker in one of his many dairy barns and tried it out. Then in another barn and another and another, and he now milks twenty-one herds with the Sharples Milker.

Another user is Stephen Francisco, father of certified milk, and the livest wire on sanitary methods in the United States.

A small locality in Southern New York uses over 70 Sharples Milkers—the Province of Ontario milks 2500 cows with the Sharples and many thousands of machines are used throughout the continent.

An average operator milks thirty cows per hour, some milk forty, but we say thirty to be conservative.

It saves money, relieves the help problem nightmare, and insures more and cleaner milk by making healthier, better cows.

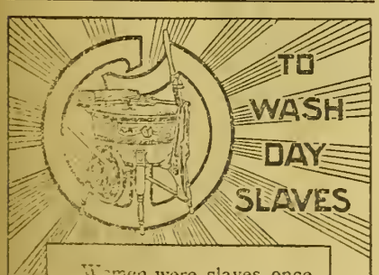
The Milker book is good. Send for it.

The Sharples Separator Co.

West Chester, Pa., U.S.A.

Winnipeg, Canada. Toronto, Canada.

Agencies Everywhere.

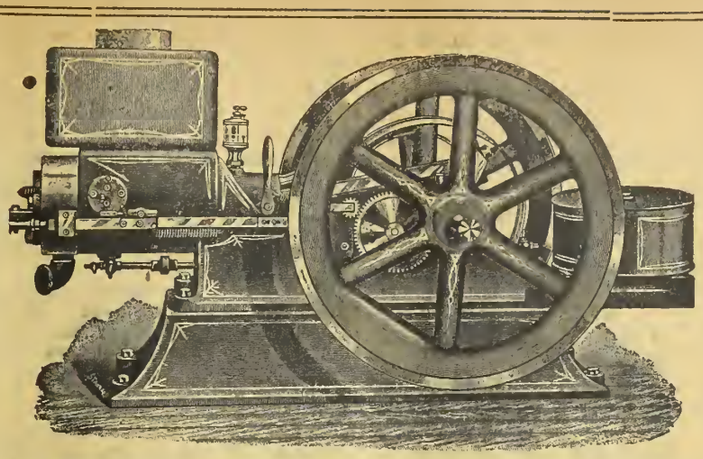


Women were slaves once. Some of them have never gotten over it, particularly on wash day.

If YOU are still bound and shackled by wash day slavery, investigate the "Playtime" Washer. Do not confuse it with the old-fashioned Washers that you have heard of. As a power machine it is specially adapted for the country where gas, gasoline, steam engine or windmill power is available.

See the "Playtime" at your dealer's or send to us for full information.

CUMMER-DOWSWELL, Ltd.
236 Hamilton, Ontario



FARMERS THIS is YOUR ENGINE.

Every farmer who gets one helps to sell more when he has used it.

The Sussex Motor Co.'s Gasoline Engine

Is easily started in any weather, steady speed, clear exhaust, runs on gasoline or kerosene.

Learn all about it from our free catalog.

THE SUSSEX MOTOR CO., Ltd.,
SUSSEX, N. B.

Gasoline Engines, Stationary and Marine, Wood Cutters, Grain Grinders, Gasoline Ice Cutters, Cream Separators, etc.

Pratts

PRATTS
Poultry Regulator

will keep your fowls in vigorous health. It is a perfect digestive tonic suited to the constitution of poultry. This great preparation is *not* a food, but a mild, natural regulator of the organs of digestion and egg production, preventing disease and ensuring fertility.

"Your Money Back If It Fails."

At your dealer's, 25-lb. pail, $2.50; 100 lb. bag, $9.00; also in packages at 25c., 50c. and $1.00.

Pratts

POULTRY REMEDIES

Pratts Poultry Regulator, 25c. to $9.00.
Pratts Baby Chick Food, 25c to $5.75.
Pratts Liquid Lice Killer, 35c. qt., $1.00 gal.
Pratts Powdered Lice Killer, 25c-50c.
Pratts Roup Cure, 25c.-50c.
Pratts White Diarrhoea Remedy, 25c-50c.
Pratts Poultry Disinfectant, $1.50 gal.
Pratts Cholera Remedy, 25c-50c.
Pratts Head Lice Ointment. 25c.
Pratts Gape Remedy, 25c-50c.
Pratts Bronchitis Remedy, 25c-50c.
Pratts Condition Tablets, 25c-50c.
Pratts Sore Head Remedy, 25c-50c.
Pratts Scaly Leg Remedy, 25c-50c.

PRATTS
Roup Cure

is a scientific compound in powder form. It is soluble, and when dissolved in water, not only prevents colds, canker, catarrh and diphtheria, but is a POSITIVE CURE for ROUP. It is quickly taken up by the blood, and cleanses the system, allaying the inflammation and reducing the fever.

"Your Money Back If It Fails."

At your dealer's, 25c. and 50c.

Coupon "A 14"

Fill in and mail this coupon, with 10c. to cover postage, wrapping, etc., and we will mail you a copy of "The Poultryman's Handbook," 160 pages, profusely illustrated.

PRATT FOOD CO., Of Canada, Limited. TORONTO.

Name .....

Address .....

I enclose 10c. in stamps. P-8.

Thirteenth Annual Maritime Winter Fair

(Continued from page 185.)

at the rate of 8 pounds of butter per week, or a second or any other prize that does not produce at the rate of 6 pounds of butter per week. No heifer one year old shall win first prize that does not produce at the rate of 7 lbs. of butter per week, or second or any other prize that does not produce at the rate of 5lbs. of butter per week.

On other pages of this issue will be found a full record of each cows performance. The reader can readily ascertain by a little study of the figures given, which individuals of the respective breeds and respective ages did the best. It will also be interesting to note the variations in quantity and quality of milk of the various milkings.

The T. Eaton Co. special prize, a sulky rake, valued $23.25, for the best grade herd of milk cows went to Fowler Bros. grade Holstein herd.

The Holstein Freisian Association's sweepstakes prize of $25.00 given on the provision that the highest scoring cow, four years or over in the Dairy test is a pure bred Holstein and their Grand Championship prize of $50.00 providing that the highest scoring cow in the dairy stable is a pure bred Holstein went to S. Dickie & Sons Mercena Artalissa, shown in the four-year-old class and winning the honor of being the king pin cow of the test with a score of 259.7.

Mercena Artalassia also became the winner of the $100.00 Silver cup donated by Henry Birks & Sons, Ltd., Silversmiths and Diamond merchants, Montreal for the highest scoring cow in the Dairy Test of any breed or grade. Cup must be won three times in order to become the property of the exhibitor. Won in 1908 by W. W. Black, 1909 by Logan Bros., 1910 by T. W. Keillor, 1911 by S. Dickie & Sons, 1912 by A. McRae & Sons, 1912 S. Dickie & Sons.

The Holstein-Freisian Association-s Silver cup for the championship cow in the grade class, provided she is sired by a Holstein-Freisian bull, was captured by S. Dickie & Son's Jennie, shown in the four-year-old grade class on a score of 243.68 points. This cow also won the Amherst Trading Co's. special prize, a No. 35 Weeder and Cultivator, value $15.00 for the second highest scoring cow, any breed or grade, in the test.

The highest scoring three-year-old was F. S. Black's Roslind with a score of 211.8. 15.24 points ahead of the closest competitor, and winning the $50.00 prize offered by the Canadian Ayrshire Association providing the highest scoring three-yeah-old cow in the test is a pure bred Ayrshire. Mr. Black won the same honor last year with his Neta on a score of 206.18. He also won the same honor about nine years ago. During the intervening years it had not been taken; the three-year-old honors having gone to another breed.

The highest scoring two-year-old was S. Dickie & Son's Holstein, Grace Fayne DeKol with a score of 177.42 (7.42 ahead of the closest competitor) and winning the $25.00 prize offered by the Holstein-Freisian Association providing the highest scoring two-year-old in the test is a pure bred Holstein. The highest scoring one-year-old was W. S. Harding's Sarcastic Lass DeKol with a score of 177.78 (41.38 points ahead of her closest competitor) and winning the Holstein-Freisian Association $25.00 prize for highest scoring one-year-old in the test is a pure bred Holstein.

SHEEP.

The sheep classes were a uniform, well-fitted lot. There was not a sheep in the building of which any of the owners had any reason to feel ashamed.

The full list of awards will be found on other pages of this issue. Col. McEwen, of Byron, Ont., placed the awards.

In the dressed carcass section there were 17 entries. Jas. I. Stewart's Southdowns led the way in both sections. Oliver Saunders' Southdowns followed in second place and in section one Geo. Boswall carried off the third award.

The International Engineering Co's prizes for best four lambs, all of one breed went to Jas. I. Stewart and Geo. L. Boswall.

The Bank of Montreal Special prize for the best Oxford, Hampshire or Suffolk ewe—1, J. E. Baker & Sons. The best Cotswold or Cheviot ewe—1, Geo. Retson.

Canadian Bank of Commerce prizes for best shealing wethers—1, Jas. I. Stewart; 2, Albert Boswall, Sr.

Best four wether lambs—The New Brunswick Wire Fence Co's 40 rods fence, 1st prize—Jas. I. Stewart.

$10.00 donated by Amherst Hotel, 2nd prize—Oliver Saunders.

$6.00 donated by the Maritime Facmer, 3rd prize—Geo. L. Boswall.

The Royal Bank of Canada Special prizes for best pen—1 ewe lamb, 1 yearling ewe and ewe 2-years old—1, Geo. L. Boswall; 2, Jas. I. Stewart.

WOOL PRIZES.

Long wool la b (Hogg) fleece—1, Albert Boswall Sr.; 2, John Tweedy.

Long wool lamb (Hogg) fleece—1, Albert Boswall; 2, Geo. Retson.

Medium wool lamb (Hogg) fleece—1, Logan Bros.; 2, Oliver Saunders.

Medium wool sheep (wether) fleece—1, Cephas Nunn; 2, J. E. Baker & Sons.

Championship long wool fleece—1 and 2, Albert Boswall, Sr.

Championship sheep medium wool fleece—1,Logan Bros.; 2, Cephas Nunn.

SWINE.

were judged by Wm. Jones, Zenda, Ont. There was a big ently of well-fitted stock and competition was keen in every section.

The Dominion Swine Breeders' Association prizes for:

Best sow, 9 months and under 15 months.

Best sow, 6 months and under 9 months.

Best sow under 6 months, in each of the three Maritime Provinces were won respectively as follows:—

In Nova Scotia—1, Fowler Bros.; 2 and 3, Jas. I. Stewart.

In New Brunswick—1 and 2, T. J. Etter.

In Prince Edward Island—1 and 2, J. W. Callbeck; 3, A. A. McBeath.

The Grand Championship Silver Cup donated by the Atlas Stock Food Co., Amherst, for the best animal, any breed or grade, judged from bacon standpoint—won in 1910-11 by W. J. Gibson; won in 1912 by J. W. Callbeck and in 1913 by Peter Brodie with a six months and under nine months Berkshire.

The Percy E. Evans Silver Cup for best pen of three—sow over 1 year, sow over 6 months and sow under 6 month)—won in 1911 by A. A. McBeath; won in 1912 by Stewart Bros. and in 1913 by J.W. Callbeck with an even lot of typical Yorkshires.

There were 36 pairs of dressed swine carcasses. The red ribbon went to a pair of Peter Brodiefs Berkshires the cup winner already referred to and a barrow under 6 months.

POULTRY

There was a big entry in the poultry classes—2500 strong of which fully 500 were roosters possessing the strongest lungs and most musical voices one ever heard. A few of the matronly hens also lent their voices to the glee whenever they wanted to advertise new laid eggs. There is no room at Amherst for a poor class of birds in any section and we are glad to say that throughout the whole show there were few if any birds that would bring discredit to the fair.

The champion exhibitors of the respective breeds were there and there were few walk-overs. It was a case of quality winning throughout.

The dressed poultry department did not have quite so many entries as last year but the quality was away dp. Dreams of past Thanksgiving and future Xmas dinners floated through the minds of the visitors to the fair, as theyp aused in their rounds of inspection at the sight of the well-fitted tastily dressed birds.

BANK OF NOVA SCOTIA ESTABLISHED 1832

A Savings Account As An Investment

A savings account in the Bank of Nova Scotia is an ideal investment for three reasons. *First,* it has the most important requisite—Safety. *Second,* it is always readily available in cash. *Third,* the interest is certain, and, if you do not wish to use it, is compounded for you twice a year.

Capital and Surplus, $17,000,000.
Total Assets over $78,000,000.
Independent Outside Audit since 1906. 11

The Bank of Nova Scotia

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

Royal Record Steel Range

With Steel Warming Closet and Reservoir.

These ranges are made from the best quality blue polished steel, lined with asbestos millboard, and reinforced with the finest quality of fire-resisting cast iron wherever necessary to protect the steel.

The trimmings are finished with the finest quality nickel-plaiting, as shown in the cut. The top is made in sections, removable anchor plate style, 50" long x 28" wide, with pouch feed and broiler door. The fire-box if fitted for coal and wood, with duplex and flat grate combined, having corrugated sectional ventilated linings. The oven, made from first quality heavy steel, asbestos-lined, and properly braced with cast iron to prevent warping. The back flue or smoke box is made of cast iron, full length, to catch soot and prevent rusting.

SATISFACTION GUARANTEED.

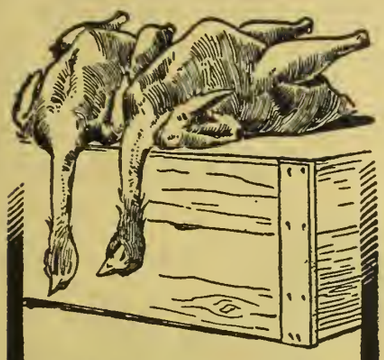
Ask your dealer for Royal Record Range, or write the

Record Foundry & Machine Co., Moncton, N.B.

Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

Dr. Morse's Indian Root Pills 48



Meat-Fed Fowls Command High Prices—

Because they reach maturity earlier. This not only saves the cost of long feeding, but produces a fowl with the weight of an older bird, having firm, tender flesh and the flavor of a broiler.

In our line of the famous

Harab Poultry Foods

there are Chick Scrap, Beef Scrap, Beef Meal, Poultry Bone, Bone Meal and Blood Flour—six meat foods that practical poultrymen are now using largely. They are highly concentrated foods. A little goes a long way, therefore economical to use. A leading poultry journal states, "It requires seven pounds of skimmed milk to equal one pound of lean beef for flesh-forming qualities." That gives you some idea of the value of a meat food. A better idea will be given you when you feed Harab Meat Foods to your fowls.

Just try a sack or two. If your dealer will not supply Harab Poultry Foods, send us your order direct. Write for the latest Harab Poultry Booklet. 103

The Harris Abattoir Co.
Limited
Poultry Food Dept., Strachan Ave.
TORONTO, CANADA

HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous **Free Trial Treatment** of my well-known, reliable **Chronicure**, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. **Chronicure** succeeds where all else fails. **Chronicure cleanses the blood and removes the cause.** Also for a weakened, run-down condition of the system, you will find **Chronicure** a most satisfactory general tonic that makes you feel that life is worth living. Please tell your friends of this liberal offer, and **send today** for large free package, to **MRS. M. SUMMERS, Box B. 309—Windsor, Ont.**

The awards were placed by J. Fred Watson, Nashua, N. H.; F. C. Elford, Ottawa and W. H. Reid, Kingston, Ontario. J. P. Landry, of the N. S. A. C. had charge of the department and was constantly on the move to see that matters were moving along the right grooves. The full list of awards will be found on other pages of this issue and he who reads may readily see who is who in the

One of the interesting features in connection with the poultry department of the fair was an educational display was a showcase containing Branch of the Dominion Department of Agriculture. At one side of the display was a showcase containing small heaps of new copper coins representing the relative values of some of Canada's principal crops. The values of these crops were indicated as follows:

The egg crop—$23,503,000.
The barley crop—$14,606,000.
The corn crop—$14,510,800.
The fruit crop—$12,934,000.

Mr. J. H. Hare, Ottawa, was in charge of the exhibit. Associated with him was Mr. J. R. Fee, Government Egg Candling Expert, who gave egg candling demonstrations, showing the various grades of eggs found on the market:

New Laid—No. 1, No. 2. checks, leaks.

Cold Storage—lined eggs, watery eggs, black rots, red rots, green rots, musty, etc.

The egg candling booth was well patronized and the visitors who viewed the demonstration were better able to appreciate brother Hare's demonstrations on the proper and improper method of marketing eggs, given at the other side of the disvlay. This egg circle movement about which we will have something to say in a future issue seems to be the only practical solution whereby the producer will receive top notch prices and the consumer the acme of satisfaction.

APIARIAN PRODUCTS

There was a larger display of the products of the apiary than has been shown at Amherst for some time. E. L. Colpitts, Petitcodiac, placed the awards which will be found listed elsewhece in this issue.

SEED DEPARTMENT

Larger and better is still the way in which those in charge of the seed departemnt of the Winter Fair described its advance. It was hard for those who paid this branch of the show a visit to realize that seven short years ago the exhibits occupied only about one seventh of the space utilized this year, while only those who have been attending year after year and studying the exhibits carefully know that the present samples of grain competing, but outside the money would have easily been in the prize money a very few years ago.

The Canadian Seed Growers' Classes were well fillled although a few of the well known members were absent or their exhibite were lost in transit. R. D. MacKay, of Balmoral Mills, N. S. with his matchless stra'n of Red Fife won the red as usual. Another group exhibit deserving special notice was that of John A. MacDonald, Maryvale, Antigonish Co., who not only took first for white oats but also won the Cup donated by S, J. Moore, Esq., for the best selected and arranged group exhibit of white oats. Other old members exhibiting groups and all good stuff were, Donald Innis, J. H. MacKay, T. G. Wiggington, Richard Creed, Thomas Waugh, W. H .MacGregor, W. E. Palmer, E. E. Arsenault, Charles Hastings, H. R. Brown and McFarlane Bros. The latter also won the Steel Briggs Cup. Creed, Palmer, Brown, Peter Brodie, H. B. Parlee and D. C. MacNeil showed registered potatoes. Manning Chute, of Berwick, appeared with two splendid samples of Nova Scotian grown seed corn.

The beginners' class perhaps caused more comment than any other. Old members present agreed that they must look to their laurels if they are to hold their own against the selections of the sheafs with the nice even heads and bright healthy looking straw.Prominent among those were Jas. Dunn, Robert Kaulback, John W. Murray, Alex MacPherson and others with almost equally good

The children's competitions also drew out fourteen sheaves of great grain. Foremost among them were Frank Dunn, Lower Soutd River, Lawson Wood, of Hazelbrook, Margaret and Edith McFarlane, Helen Waugh and Hazel and Effe McMacstuff.

In the general competitions the exhibitors were by far too numerous to mention but a few of the best deserve notice. E. W. Bulman, E. J. Vessey, J. E. Harrison, John R. Harrison, Henry Gordon, H. P. Parlee and many others all presented samples of seed that ensures satisfaction to any one looking for a high class article.

The prize winners from the the different field crops competitions showed a full entry from Nova Scotia, while New Brunswick did not come out so strongly. The value of hand selections appeared here as it always does in field crops competitions. First in wheat going to registered grain wnile second, third and fourth went to grain produced from seed of the R. D. Mackay Red Fife strain.

A pleasing feature of the show is the increased demand for seed grain from visitors and those in charge are expectingly looking forward to the time when they will be in a position to take orders for large quantities of home grown seed.

E. D. Eddy, Ottawa and S. J. Moore, Truro, placed the awards.

The Fruit Exhibit at Amherst.

There was a good showing of apples,—wellgrown, well colored and clean, fine specimens each of ten varieties per exhibit. W. S. Blair, Supt. of the Kentville Experimental Fruit Farm placed the awards.

Following are the prize winners from each county and the varieties composing their respective exhibits. Each county's contestants placed in order of merit.

PROVINCE OF PRINCE EDWARD ISLAND.

County of Kings—Stewart Bros., Alliston, Sutton Beauty, Golden Russet, Gravenstein, Wolfe River, Mann, Pewaukee, Alexander, Ontario, Ben Davis and Stark.

County of Queens—A. E. Dewar, Charlottetown, Ribston, Wagener Gravenstein, Kings, Spy, Cox Orange Baxter, Baldwin, Alexander and Blenheim.

Geo. Dewar, Charlottetown, Cox Orange, Spy, Baxter, Mann, Wagener, Baldwin, Gravenstein, Blenheim, McIntosh Red and King.

PROVINCE OF NOVA SCOTIA

County of Annapolis—John I. Phinney, Spa Springs—Baldwin Greening, Ribston, Nonpareil, Bishop Pippin, Ontario, Spy, Ben Davis, Fallawater and King.

County of Antigonish—John Brown, West Locaber, Wealthy, Hurlburt, Pewaukee, Gravenstein, Milwaukee, Cranberry Pippin, King, Northern, Spy.

Taylor Bros., Antigonish—Canada Baldwin, Gravenstein, Wagener, Bishop Pippin, Wolfe River, King, Spy, Snow, Blenheim, Stark,

County of Colchester (3 Exhibits)—J. R. Semple, Brule—Magog, Greening, Ontario, Alexander, Winter Bough, King, Golden Russet, Ribston, Gravenstein.

Robt. Anderson, New Annan— Bethel, Winter Bough, Ribston, Bishop Pippin, Pewauukee, King, Wagener, Wolfe River, Blenheim, Alexander.

County of Pictou—John R. Fraser, Rogers Hill—Bishop Pippin, Gravenstein, McIntosh Red, King, Wealthy, Baldwin, Blenheim, Wolfe River.

K. C. Fraser, Rogers Hill—Wealthy, Blenheim, Golden Russet, Baldwin, Spy, McIntosh Red, Bishop Pippin, King, Ribston.

PROVINCE OF NEW BRUNSWICK

County of Albert—W. A. Colpitts, Mapleton—Bishop Pippin, Miliwaukee, Max Coddling, Winter Bough, Arabka, Pewaukee, Russet, Dudley, Alexander, Blenheim.

County of Kings—A. R. Gorham, Greys Mills—Ben Davis, Gravenstein, Bishop Pippin, Pomme Grise, Jenetting, Ribston, Gideon, King, Spy, Wolfe River.

County of Sunbury—1. W. Stephenson, Maugerville—Ontario, Baxter, McIntosh Red, Wolfe River, Gano, Stark, Pewaukee, Dudley Winter Princess Louise, Scott Winter.

(Continued on page 198)

The Safe Cough Syrup For Your Little Ones

That it positively does not contain anything harmful, even to children, is one of the strongest points in favor of the use of

NA-DRU-CO Syrup of Linseed, Licorice and Chlorodyne

in every home in Canada. Your Physician or Druggist can readily make sure it is safe, as we are prepared to send to either, on request, a complete list of the ingredients in this or any other Na-Dru-Co preparation.

Na-Dru-Co Syrup of Linseed, Licorice and Chlorodyne is the best all-around remedy for coughs and colds sold in Canada to-day. Your Druggist can supply you with 25c. or 50c. bottles.

NATIONAL DRUG AND CHEMICAL CO. OF CANADA, LIMITED. 319

Prize Winners at the 1913 Maritime Winter Fair

(Continued from page 193)

SWINE.

CLASS 45

Y ORKSHIRE

Barrow 6 mos. and under 9 mos.—1, Charles W. Forrest; 2, J. W. Calbeck, Summerside; 3, W. H. Pope Cook, York; 4, A. A. McBeath, Marshfield.

Barrow under 6 mos.—1, A. A. McBeath; 2, Charles W. Forrest; 3, Stewart Bros., Alliston' 4, J. W. Callbeck; 5, W. H, Pope Cook.

Sow 9 mos. and under 15 mos.—1 and 3, J. W. Callbeck; 2, Stewart Bros.; 4, A. A. McBeath; 5, Geo. L. Boswall.

Sow 6 mos. and under 9 mos.—1, 2 and 5, J. W. Callbeck; 4, W. H. Pope Cook; 3. Geo. L. Boswal.

Sow under 6 mos.—1, A. A. McBeath; 2 and 5, Stewart Bros.; 3, J. W. Callbeck; 4, Geo. L. Boswall.

CLASS 46

TAMWORTHS.

Barrow 6 mos. and under 9 mos.—1 and 2, Fowler Bros., Amherst Point; 3, 4 and 5, W. J. Gibson, Marshfield.

Barrow under 6 mos.—1, Fowler Bros.; 2, 3 and 4, W. J. Gibson; 5, A. McRae & Sons, Charlottetown.

Sow 9 mos. and under 15 mos.—1, Fowler Bros.

Sow 6 mos. and under 9 mos.—1 and 2, W. J. Gibson; 3, 4 and 5, Fowler Bros.

Sow under 6 mos.—1 and 2, A. McRae & Sons; 3 and 4, Fowler Bros.

CLASS 47

BERKSHIRES.

Barrow 6 mos and under 9 mos.—1 and 5, Fowler Bros; 2, Stewart Bros.; 3, Peter Brodie, Little York; 4, Jas. I. Stewart.

Barrow under 6 mos.—1, Peter Brodie; 2 and 3, W. W. Embree, Amherst; 4, Stewart Bros.; 5, Fowler Bros.

Sow 9 mos. and under 15 mos.—1 and 2, Peter Brodie; 3, Fowler Bros.

Sow 6 mos. and under 9 mos.—1, Jas. I. Stewart; 2 and 4, J. R. Semple, Brule; 3, Peter Brodie; 5, S. C. Lane.

Sow under 6 mos.—1, Stewart Bros; 2 and 4, Jas. I. Stewart; 3, Peter Brodie; 5, Thomas J. Etter.

CLASS 48

ANY OTHER PURE BREED.

Barrow 6 mos. and under 9 mos.—1 and 4, W. H. Pope Cook; 2 and 3, A. H. Boswall.

Barrow under 6 mos.—1 and 4, W. H. Pope Cook; 2 and 3, A. H. Boswall.

Sow 9 mos. and under 15.—1, A. H. Boswall; 2, W. H. Pope Cook; 3, 4 and 5, Thos J. Etter.

Sow 6mos. and under 9 mos.—1, 3 and 4, A. H. Boswall; 2 and 5, W. H. Pope Cook.

Sow under 6 mos.—1 and 2, A. H. Boswall; 3 and 4, W. H. Pope Cook.

CLASS 49

GRADES OF ANY BREED.

Barrow 6 mos. and under 9 mos.—1, Edwin Forrest: 2, Seymour Thompson. East Amherst; 3, Peter Brodie; 4, A. O. F. Gill.

Barrow under 6 mos.—1, Edwin Forrest: 2 and 4, Peter Brodie; 3, A. O. F. Gill; 5, J. W. Callbeck.

Sow 9 mos. and under 15 mos.—1, J. W. Callbeck; 2, Chas. Etter; 3, A. A. McBeath.

Sow 6 mos. and under 9 mos.—1, A. A. McBeath; 2, Stewart Bros.; 3, Seymour Thompson; 4, J. W. Callbeck; 5, Courtney Lusby.

Sow under 6 mos.—1, A. O. F. Gill; 2, A. A. McBeath; 3, Stewart Bros.; 4 and 5, J. W. Callbeck.

CLASS 50

DRESSED CARCASSES.

Pair of carcasses must have been shown in foregoing classes.—1 and 10, Peter Brodie; 2, A. McRae & Sons; 3, W. H. Pope Cook; 4, 5 and 11, W. J. Gibson; 6 and 7, J. W. Callbeck; 8, A. H. Boswall; 9, W. W. Embree.

POULTRY.

Note:—c cock; h hen; r cockerel; p. pullet.

Anconas—Hartland Poultry yards—1c, 1h, 1r, 1p.

Andalusians— Thos. Latham—2c 1h; Thos. A. Campbell—1c, 2h; F. B. Chapman—1, 2 and 3r, 1, 2 and 3p.

Brahmas, Light—Hartland P. yards—1c; Chas. H. Smyth—2c, 3p; Thos. Latham—1 and 3h, 2r, 2p; Henry Leithhead— 2h, 1r, 1p.

Brahmas, Dark—Harry Day—1c, 2h; Hartland P. yards—2c, 1r, 2p; Henry Leithead—1h, 2r, 1p.

Black Spanish—Thos. Latham—1c, 2h; Hartland P. yards—1h; L. A. Hazard 1p.

Buff Cochin—Hartland P. yards—1c; W. A. Balsor— 1, 2 and 3 h, r and p.

Cochins, A. O. V.—Hartland P. yards—1c, 1h, 1r, 2p; Edward Day—2c, 2h, 2r, 1p.

Dorkins—Harry Day—1c, 1h, 1r, 1p; Hartland P. yards—2c, 2r; Clarence Casey—2h, 2p.

Game, Black Red—Hartland P. yds.—1c, 1h; Horatio N. Richardson—2c; Gerald Walsh—2h.

Game, Browk Breasted Red...Arthur Dobson—1r, 1p.

Game, Indian, Cornish and White—C. J. Cock—1c, 1h, 1 and 2r, 1p; Hartland P. yards—2c, 2h; Jas. Fearon—3c; Thos. Latham—2p.

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Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Thier use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds

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Demand

DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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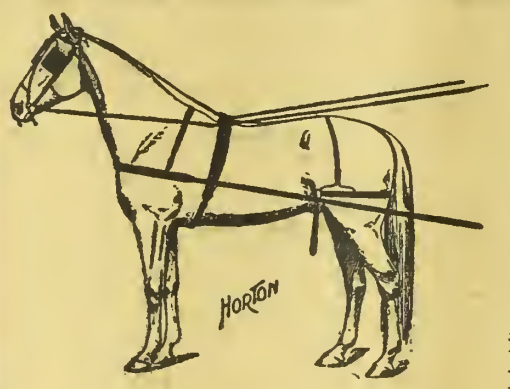

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ANTISEPTIC AND GERMICIDE

[NON-POISONOUS]

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IT HAS NO EQUAL

For —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils **the** Corns and Bunions, CAUSTIC BALSAM has **Human** no equal as a Liniment. **Body**

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.

Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.

The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

STATISTICS prove that the majority of accidents could have been prevented by a little forethought.

There is no longer any excuse for a horse floundering or falling on icy streets, sustaining sprains and bruises, perhaps becoming permanently or even fatally injured.

Red Tip Calks

present a safe, easy way of sharpening that assures absolute safety to horse and driver. They are easily and quickly adjusted and once in will stay in, wearing sharper with use.

Do not confuse RED TIP calks with imitations. Look for and insist upon the RED TIP and you will get the best. Booklet tells why. Send for it. "O"

The Neverslip Mfg. Co.,

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Canadian Office & Factory—559 Pius IX Ave., Montreal.

Game Pyle—Horatio N. Richardson—1c, 1h.

Game, A. O. V.—Samuel Ball—1c, 1r, 1p; Fred Doncaster—1h; Geo. S. West—2c, 5r, 5p; Roy Casey—3c; Herbert Patterson—2h; Gerald Walsh 3n; Arthur Dobson—2r, 2p; Philip Beed—3r, 3p; Ernest J. Belliveau—4p; Geo. England—4r, 6p; Jas. Purches—6r.

Black Hamburgs—Hartland P. yds.—1c,h,r and p.

Hamburgs, G. P. or S. P.—A. H. Boswall—1 and 2c, 2h, 1, 2, 3, 4, 5r, 1, 2, 3, 5 and 6p; Hartland P. yds.—1h, 4p.

Hamburgs, G. S. or S. S.—John Tweedy—1c, 1h; Hartland P. yds.—2c, 2h.

Houdans—Edward Day—1c, 1 and 2h, 1 and 2p; Earl Roach—1 and 2r; 3p; Hartland P. yds.—2c, 2h.

Leghorns, White S. C.—Odber James—1c, 3h, 1 and 2r, 1 and 2p; Wm. Beazley—2c, 4h, 3 and 5p, Hartland P. yds.—3c, 2h, 4r, 6p; Maritime Poultry Supply Co.—4c, 5h; Chas. Johnson—5c, 6h, 4p; C. R. Thompson—6c, 1h, 3r; Henry Leithead—5r; Gordon Carter—6r.

Leghorns, White, R; C.—Thos. Latham—1c, 2r, 2p; Hartland P. yds.—2c, 1h, 1r, 1p; E. H. Hall—2h.

Leghorns, Brown, S. C.—Gordon—Carter—1c, 1h; Maritime Poultry Supply Co.—2c; John A. Scott—3c, 6h, 1r, 1p; W. H. Henry—2h; Thos. Latham—2, 3 and 4r; E. H. Hall—2, 3 and 5p; C. E. Logan—5r; Henry Scott—6r; Wolfville Poultry yds.—6p; Hartland P. yds.—4p.

Leghorns, Brown, R. C.—John A. Scott—1c, 2h; E. J. McGrath—2c, 1r, 3p; Hartland P. yds.—1h, 2r, 1p; Philip Beed—3r; Gordon Carter—2p.

Leghorns, Buff, S. C.—John Ives—1, 2r; Thos. Latham—2c, 6 and 2h; Maritime Poultry Supply Co—3h, 1r, 3p; Hartland P. yds.—1p; Wm. Beazley—3r, 2p.

Leghorns, A. O. V.—Hartland P. yds. 1c, h, r and p.

Minorcas, Black, S. C.—R. B. Stewart—1 and 2c, 1 and 3h, 1r, 2 and 3p; Maritime Poultry Supply Co.—3c; Hahtland P. yards—2r, 1p; Arthur E. Stone—2h, 3r.

Minorcas, Black, R. C.—Hartland P. yds.—1c, 2h, 2p; John D. Fraser—2c, 1h, 1 and 1r, 1p.

Langshans—Hartland P. yds.—1c, 2h, 2r, 1p; Chas. H. Smith—2c, 1h, 1r, 2p.

Orpingtons, Buff, S. C.—C. P. Thorne—1 and 2c, 3h, 5r, 1and 3p; Watson Lutz—3c; Hartland P. yds.—1h, 5p; E. S. Brown—2h, 1r, 2p; Colby Canning—2r; R. R. Black—6r, 4p; L. A. Haszard—3r; Cooke McCallum—4r, 6p.

Orpingtons, White, A. V.—F. W. Pickles—1c, 2h; Hartland P. yds.—2c, 3r, 1p; Watson Lutz—3h, 2p; Geo. Dox—1r; Seldon Hunter—2r; Carl E. Ripley—3p.

Orpingtons, Black, A. V.—Girvan B. Baker—1c; J. E. Urquhart—2c, 1h, 1r 1p; Hartland P. yds.—2h, 2r; John R. Harrison—2p.

Barred Plymouth Rocks—Craig Bros.—1, 4 and 5c, 3 and 5h, 2, 3 and 6r, 1 and 6p; Watson Lutz—2c, 2 and 4h, 1 and 5r, 3 and 5p; Hartland P. yd.—3c; L. H. D. Foster—6c, 1 and 6h, 4r, 2p; Wm. Fanning—4p.

White Plymouth Rocks—Albert Boswall—1c, 2h, 3r, 3p; Hartland P. yds.—2c; Geo. Callbeck—1h, 2 and 6r, 5p; Watson Lutz—1r, 1 and 4p; Jack Barrington—5r; J. E. Urquhart—4r, 2p; John Ives—6p.

Buff Plymouth Rocks—L. H. D. Foster—1c, 2h; H. D. Thompson—2c, 1h, 2r, 1p; L. A. Haszard—1r, 2p.

S. C. Rhode Island Reds—C. J. Cock—1c, 3r, 1 and 6p; F. W. Pickles—2c, 1h; Thos. S. Kyle—3c, 2r, 2p; John Ives—2h; W. H. Henry—3h, 1 and 6r, 2p; L. A. Haszard—4r; E. J. McGarth—5r, 6p; Gordon Carter 5p.

R. C. Rhode Island Reds—W. H. Henry—1c, 3h, 1 and 2r, 2p; C. J. Cock—2c; John Higson—3c, 1h; Maritime Poultry Supply Co.—2h, 3p; Hartland P. yds.—3r, 1p.

Golden Wyandottes—Hahrtland P. yds.—1c, 1h, 1r, 1p; E. S. Brown—2p.

Silver Wyandottes—Hartland P. yds.—1c, 3r, 4p; John Retson—2c; Evans Kyle—3r, 5p; S. E. McKie—1 and 3h, 2r, 1 and 3p; John D. Fraser—2h, 1r 2 and 6p.

Buff Wyandottes—C. R. MacKay—1c, 1h; Hartland Poultry Yards—2c; Wm. Beazley, 2 h, 1r, 2p; W. H. Weiss, 2r, 1p.

White Wyandottes—A. C. Read, 1r, 3 and 6h, 2 and 6r, 2and 3p; F. W. Pickles, 2c, 1 and 6p; Evangeline Poultry yards, 4c, 1 and 4h; J. S. Thompson—5c, 5h; John D. Fraser, 6c Wolfville Poultry Yards, 2h, 5r, 4p; John Ives, 3r; F. G. Palfrey, 4r.

Columbian Wyandottes— Wolfville Poultry Yards, 1c, 1h, 1r, 2p; C. R. MacKay, 2c; Cooke McCallum, 1p; Hartland P. Yards, 2h, 2r.

Any Other Variety—Maritime P. S. Co., 1c, 3h, 3r, 3p; Harry Day, 2c.; Gordon Carter, 2h; Earl Roach, 2r; Earl Chapman, 1r, 1p; Hartland P. Yards, 1c, 1h, 2p

(Continued on page 204.)

INTERNATIONAL STOCK FOOD

Means Sturdy, Healthy Cows As Well As Good Milkers

Your cows will gain from one to three quarts of milk every day, if you add a tablespoonful of International Stock Food to the regular feed of each cow. 3 Feeds cost only 1c. But this isn't all. International Stock Food is a cattle tonic—the greatest tonic in the world for horses, cows, sheep and pigs.

It keeps cows in good health and good flesh—keeps digestion sound—invigorates the system—and helps a lot in bringing cows safely through calving. Feed International Stock Food if you want more milk this winter, healthier cows this winter, and better calves next spring. Sold by dealers everywhere, on a money-back guarantee if you are not satisfied. If you will write and tell us how many head of stock you own, we will forward to you free our $3,000. Stock Book. 104

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NO wasting time over a lantern. Wherever you want a powerful light—indoors—outdoors—in any weather—you can get it instantly if you have a

"NINE LIVES"
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Just press the button and get a bright, powerful gleam of light in a jiffey. Handy on hundreds of occasions. No trouble. No danger. Weighs only 14 ozs. Always ready. "Nine Lives" is four times as strong as any other and costs but a trifle to recharge. You cannot be without it. Can't explode and the baby can handle it. Safe in a powder keg.

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A lame horse is a dead loss.

t costs as much to keep a lame horse, as t does a horse in harness — and the cri le brings nothing in. You can't afford to pport idle stock. That's why you can't aff l to be without

Kendall's Spavin Cure

takes away the pain and stiffness from Sprains and Bruises—draws the reness out of Strained Muscles and Tendons—CURES Spavins, Soft unches and Swellings. Used for two generations by two nations.

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"I have use Kendall's Spavin Cure for a Bone Spavin of 4 years standing, which has entirely cured the lameness and greatly reduced the swelling. Another bottle of the Spavin Cure, I am sure, will complete the cure." HOWARD BROCK.

$1.00 a bottle or 6 for $5. Sold by dealers everywhere. Write for free copy of our famous book—"Treatise On The Horse." You will find a need for it every day.

DR. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A. 95

Thirteenth Maritime Winter Fair.

... (Continued from page 195).

County of St. John—W. R. McFate, Golden Grove—Baxter, Alexander, Wolfe River, Fameuse, Wealthy, Tallman Sweet, Bethel, Duchess, Ben Davis, Stark.

R. R. Patchell, St. John—Duchess, Baxter, Alexander, Ben Davis, Stark Tallman Sweet, Fameuse, Wolfe River Longfield, Wealthy.

County of Victoria—D. Innes, Tobique River—Duchess, Alexander, Milwaukee, Wolfe River, Wealthy,, Gideon, New Brunswicker, Fameuse, Seedling.

J. W. Burns, Carlingford—Wealthy, Jonathan, Wine Sap, Winter Arabka, Boy's Choice, Talman Sweet, Duchess Gideon, Alexander, Scotts Winter.

The Kings County, Nova Scotia exhibit was chosen sweepstakes collection, a creditable display.

JUDGING COMPETITION.

Dairy—1, J. C. Woodworth; 2, Harold Freeze; 3, A. L. Crosby; 8, H. A. Butler; 5, Jas. Bremner; 6, A. C. Burgess.

Beef—1, A. Illingworth; 2, E. S. Notting; 3, Jas. Bremner; 4, H. Laird; 5, J. H. Grimmer; 6, N. McLean.

Sheep.—8, A. Burgess; 2, J. H. Grimmer; 3, Thos. Douglas; 4, Jas. Bremner; 5, H. A. Butler; 6, Walter Shaw.

The Professor M. Cumming Cup for the person making the highest score in the above three sections was won by A. C. Burgess, of the N. S. A. C. with a total score of 450, seven points ahead of his closest competitor.

The M. S. B. A. Cup for the person not a regular student of an agricultural college, making the highest score in the above three secions was won by Major McRae, Charlottetown, with a score of 324.

THE STOCK BREEDERS' BANQUET.

was held in the dining hall of the fair building on the opening night. The ladies of the Amherst Hospital Aid catered to this annual event in their usual capable style.

Col. H. Montgomery-Campbell, President of the Maritime Stock Breeders' Association was at the head of the table and seated around the board were the most prominent business men of Amherst, the foremost agriculturists of Maritime Canada, the judges who had come to place the awards in the various sections of the fair and last but not least, the stock breeders were glad to welcome in their midst the Honorable Martin Burrell, Minister of Agriculture for Canada.

THE OFFICIAL OPENING

took place on Monday)vening, in the Auditorium. Col. H. Montgomery-Campbell occupied the chair. His Worship, Mayor Fage, of Amherst, extended the welcome of his town to the visitors and it was clinched for the County of Cumberland by Warden Purdy. C. L. Martin, of the Amherst Board of Trade also skoke words of welcome.

The reply to the addresses of welcome was made in behalf of the stock breeders by Hon. M. McKinnon, Commissioner of Agriculture for Prince Edward Island. The speakers following were:—Hon. M. Burrell, Hon. Josiah Wood. Hon. E. H. Armstrong, E. N. Rhodes, M. P. and Hon. D. V. Landry, Commissioner of Agriculture for New Brunswick.

The Tuesday evening meeting was presided over by Hon. M. McKinnon, when the speakers were:—W. S. Blair on "How Fruit Growing May be Made more Profitable;" E. D. Eddy on "The Importance of Seed Selection in the Development of Canadian Agriculture." Alex Hume, Menie, Ont., on "Dairy Cattle," and Hon. Mr. Burrell, who made the address of the evening. Mr. Burrill gave a resume of the work that is being done by the various branches of the department of agriculture, over which he has control. He showed a thorough grasp of the existing conditions in the various branches—a grasp which only comes by making a complete study of and an active interest in the work one an active interest in the work done and men conducting the respective branches. He set forth a plea for more co-operation in buying and selling' more education for the farmer and a more intensive system of farming.

In the absence of Mr. W. W. Black, who was, we are very sorry to say, very ill at his residence, President Montgomery-Campbell occupied the chair at

THE TUESDAY EVENING MEETING

and an appreciative audience listened to interesting addresses by:—Prof. J. M. Trueman, Agriculturist, N. S. A. C. on "The Dairy Cow and Her Food." J. J. Brown, Manager Poultry Dept., Guinn Langhole & Co., Montreal, on "Commercial Poultry Products," and E. C. Elford, Dominion Poultry Husbandman on "Poultry Business to Date."

THE CLOSING EVENING

was occupied with the distribution of special prizes and the cheers were long and loud as the various recipients stepped forward to receive the valuable, coveted trophies.

735 Bushels Potatoes Per Acre.

24th. Oct., 1913.

Editor of Maritime Farmer:—

Having some interest in the "home-mixing" of fertilizers I conducted some tests on Oat, Hay, Vetches and Cabbages during the last season and am greatly satisfied with the results. My best results were, however, obtained on Potatoes, and of these I feel proud.

I planted potatoes on three plots, fertilized as follows:

Plot 1. at the rate of 40 tons Barnyard manure per acre.

Plot 2. at rate of 40 tons Barnyard manure and 400 lbs. Basic Slag per acre.

Plot 3. at rate of 40 tons of Barn yard manure, 400 lbs. Basic Slag and 160 lbs. Sulphate of Potash per acre.

At harvest Plots 1 and 2 did not show anything out of the ordinary, just an ordinary, good yield. On digging Plot 3 I found the yield was remarkable. I dug the tubers at various parts of the plot with the same results. I called over some neighbors, who were amazed at so many tubers from such small sections of the plot. After completing the digging operations on the plot my neighbors and myself figured that the plot yielded tubers at the rate of 735 bushels per acre. Drillls were 2½ feet apart and there were very few small potatoes.

Robert D. Wilson,
Little Bras d'Or,
C. B., N. S.

FLORICULTURE.

O. L. R., of St. John, writes:—I have a sword fern that is shedding its fronds also Maiden Hair and Scotch Ferns the fronds of which turn brown and die. O. L. R. also asks—Cultural directions for ferns and acacias also cure for small white worms in the soil of house plants and requests answers in the Maritime Farmer.

There may be several reasons for your Sword Fern shedding its fronds such as:—If the drainage is stopped and it has too much moisture—If kept to dry, or if crowded with roots needing repotting or if kept in too low a temperature. One of these is probably the cause. Turn out the ball of soil, and examine it. The Scotch and Maiden Hair ferns probably have not been kept moist enough. The Maiden Hair espccially suffers in dry, hot unless the foliage is sprayed frequently.

Full directions for growing all ferns is difficult to give as the genera embraces tropical forms, requiring heat and moisture and colder forms which would perish under the treatment needed for the former; but for the varieties which are usually kept in houses the needs are:—Perfect drainage, a rich soil, (rotted sod from light soil is best) keep on the moist side in watering not letting the top side of the pot dry, partial or complete shade from the sun, a moist air of frequent spraying if in a dry place and a temperature of 50 up to 75 degrees in the day time will suit the most common species.

Acacias need good drainage, good light soil, well watered when growing plenty of sunlight, a temperature of not less than 50 degrees at night, a good spraying occasinally does them good. Repot as soon as the pot is crowded with roots or feed well to keep them improving. If kept cool in winter and on the dry side when watering they will go through the winter without much care but will lose some of the foliage.

The small white worms are probably young earth worms and can be expelled by pouring in a good dose of lime water followed in an hour or so after by a watering of clean water. To make lime water for tnis purpose slack half a pound of quick lime in a gallon of water; drain off and use the water that remains after the lime settles. This will keep a good long time if stopped up from the air in filled bottles.

Keep an eye to your bulbs now. Don't let them get to high in the cellar.

A correspondent writes to know what is the best fertilizer to use for chrysanthemum, never recommend artificial manures for amateurs although undoubtedly there are many of value if one understands using them; but I would prefer in all cases to use a strong solution of cow manure; do not water more frequent lv than twice a week and do not use after blooms are developed.

MR. FARMER:

Your Crops *Need* The Best *Fertilizer* There Is

They can have it if *You* ask for it.
It is manufactured at

WINDSOR, Nova Scotia

in the largest---best equipped---and most up-to-date Fertilizer Factory in Canada.

When you buy your fertilizer ask "Is this *Fertilizer* made in *Windsor*, Nova Scotia?" If the man say "Yes", you are getting the best.---If he says "No", you are not.

Write to us and we will give you the name of the nearest "Made in Windsor, Nova Scotia" Fertilizer Agent.

Box 432, - - - Windsor N. S.

HOUDANS

The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

One Cockerel the progency of last years Boston and New York Winners, one Hen and one Pullet for sale.

$5.00 takes the trio.

W. J. M. MacLeod

SUSSEX, N. B.

Highland View Dairy.

Young Guernsey Bulls, also Buff Orpington and White Wyandotte Cockerels and Pullets.

R. R. BLACK, Amherst, N. S.

If you are troubled with chronic constipation, the mild and gentle effect of Chamberlain's Tablets makes them especially suited to your case. For sale by all dealers.

A Christmas Wish.

May all the joy of Christmas
Be yours at Christmas time,
May all the bells of Christmas
For you at Christmas chime;
May all the peace of Christmas,
May all the Christmas cheer,
May all the love of Christmas
Be yours through all the year.

Instructors at the Short Course

Those who attend the next Short Course in Agriculture at Truro Jan. 6 to 16 will have an opportunity to meet and listen to some of the best known agricultural experts in Canada. In addition to the members of the College Staff, whose names are so well known to the people of the Maritime Provinces, the following are some of the experts who will assist in the Course:

Dr. F. M. Torrance, Veterinary Director General of Canada, whose adminstration concerns particularly the health of animals, will be at the College on Jan. 14 and 15. He is the man best qualified in all Canada to give advice in regard to tuberculosis and other diseases in stock and also to advise Municipal authorities in reference to the control of milk and meat supplies, etc.

F. T. Shutt, Dominion Agricultural Chemist, from the Central Experimental Farm Ottawa will lecture on the chemistry of the soil, manures and fertilizers. No man in Canada knows more about fertilizers or can give more information in regard to the analysis of soils, fertilizers, etc.

T. G. Raynor, B. S. A., will be the lecturer and demonstrator on Seeds and Crops. He is one of the oldest graduates of Guelph, has for years been engaged in farming and is now one of the Dominion Government Inspectors of Seed. Those who read replies in the Agricultural papers of Canada to questions asked upon various phases of field agriculture must be familiar with the initials T. G. R. If you meet him at Truro, you will appreciate his answers and contributions to the press very much more.

P. J. Carey, will be the demonstrator in fruit packing. He is the best practical expert at least in Eastern Canada. He knows how fruit should be packed and he can do the work and will teach interested students how to do it. Carey is also a practical farmer and can give much valuable advice in the growing of fruit, vegetables, etc.

F. C. Elford, Dominion Poultry Husbandman will assist in the Poultry instruction. Mr. Elford was formerly professor of Poultry Husbandry at MacDonald College and after employment for some time with one of the largest commercial firms in the United States, has now assumed the most important position in connection with poultry raising in Canada. He is well known to many Maritime Province poultry enthusiasts who will appreciate the opportunity of receiving technical instruction from him.

Good roads wil have an able exponent in W. A. MacLean, Highway Engineer from Ontario, who is generally admitted to be without a peer in his knowledge of highway construction and of methods of administering road politics. It would be a great thing for Nova Scotia if every citizen of the Province could receive instruction from him. He will bring with him models and will illustrate his evening talks with lantern views.

Besides these men a number of the leading local authorities from the Maritime Provinces, including Saxby Blair, Superintendent of the Experimental Farm, Kentville; R. Robertson, formerly of Nappan but now of Charlottetown, P. E. I.; W. W. Baird, recently appointed Superintendent of the Experimental Farm, Nappan; C. W. McDougall, Dairy Superintendent for New Brunswick, and others will be present and assist in the instruction work.

In connection with the Ladies Short Course which is to be held at the same time, Mrs. Laura Rose Stevens will be one of the lectureses and demonstrators. No one has done more than she has to improve dairying in Nova Scotia and she is known from coast to coast as one of the best lady experts in dairying domestic science, etc. in Canada. She edits the Home Column in several of Canada's leading Agricultural papers and is the author of a text book on Farm Dairying. Several others will assist in this course whose names we are not yet in a position to publish but the whole course will be at least as attractive as the Men's Short Course and should attract ladies from all over the Maritime Provinces.

This Short Course at Truro is provided free of any cost and the only expense the students will be under will be their railway fare at excursion rates and their board while in Truro. Write Principal Cumming for circulars giving detailed information.

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. adies, this department is yours. Use it to the best adv antage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

But there was such an influence in Mr. Wickfield's old house, that when I knocked at it, with my new school books under my arm, I began to feel my uneasiness softening away. As I went up to my airy old room, the grave shadow of the staircase seemed to fall upon my douhts and fears, and to make the past more indistinct. I sat there, sturdily conning my books, until dinner-time (we were out of school for good at three); and went down, hopeful of becoming a passable sort of boy yet.

Agnes was in the drawing-room, waiting for her father, who was detained by some one in the office. She met me with a pleasant smile, and asked me how I liked the school. I told her I should like it very much, I hoped; but I was a little strange as to it first.

"You have never heen to school," I said, "have you?"

"Oh yes! Every day."

"Ah, but you mean here, at your own home?"

"Papa couldn't spare me to go anywhere else," she answered, smiling and shaking her head. "His housekeeper must be in his house, you know."

"He is very fond of you, I am sure," I said.

She nodded "Yes," and went to the door to listen for his coming up, thgt she might meet him on the stairs. But, as he was not there, she came back again.

"Mamma has been dead ever since I was born," she said in her quiet way. "I only know her picture, down stairs. I saw you looking at it yesterday. Did you think whose it was.?"

I told her yes because it was so like her self.

"PaPa says so, to," said Agnes, pleased. "Hark! that's papa now?"

Her bright calm face lighted up with pleasure as she went to meet him, and as they came in, hand in hand. He greeted me cordially; and told me I should certainly be happy under Dr. Strong, who was one of the gentlest of men.

"There may be some, perhaps—I don't know that there are—who abuse his kindness," said Mr. Wickfield. "Never be one of those, Trotwood, in anything. He is the least suspicious of mankind and whether that's merit, or whether it's a blemish, it deserves consideration in all dealings with the Doctor, great or small."

He spoke, I thought, as if he were weary, or dissatisfied with something; but I did not pursue the question in my mind, for dinner was just then announced, and we went down and took the same seats as before.

We had scarcely done so, when Uriah Heep put in his head and his lank hand at the door ,and said:

"Here's Mr. Malden hegs the favor of a word , sir."

"I am but this moment quit of Mr. Malden," said his Master.

"Yes, sir," returned Uriah; "but Mr. Malden has come back, and he begs the favor of a word."

As he held the door open with his hand, Uriah looked at me, and looked at Agnes, and looked at the dishes, and looked at the plates, and looked at every object in the room I thought,—yet seemed to look at nothing; he made such an appearance all the while of keeping his red eyes dutily on his master.

"I beg your pardon. It's only to say, on reflection," observed a voice behind Uriah, as Uriah's head was pushed away, and the speaker's substituted—"pray excuse this intrusion—that as it seems I have no choice in the matter, the sooner I go abroad the better. My cousin Annie did say, when we talked of it, that she liked to have her friends within reach rather than to have them banished, and the old Doctor—"

"Doctor Strong, was that?" Mr. Wickfield interposed, gravely.

"Doctor Strong of course," returned the other; "I call him the old Doctor; it's all the same you know."

"I don't know," returned Mr. Wickfield.

"Well, Doctor Strong," said the other. "Doctor Strong was of the same mind, I believed. But as it appears from the course you take with me that he has changed his mind, why there's no more to be said, except that the sooner I am off, the better. When a plunge is to be made in the water, it's of no use lingering on the bank."

"There shall be as little lingering as possibe, in your case, Mr. Malden, you may depend upon it," said Mr. Wickfield.

"Thank'ee," said the other. "Much obliged. I don't want to look a gift horse in the mouth , which is not a gracious thing to do; otherwise, I dare say, my cousin Annie could arrange it in her own way. I suppose Annie would only have to say to the old Doctor—"

"Meaning that Mrs. Strong would only have to say to her husband—do I follow you?" said Mr. Wickfield.

"Quite so," returned the other, —"would only have to say that she wanted such and such a thing to be so and so; and it would be so and so, as a matter of course."

"And why as a matter of course, Mr. Malden?" asked Mr. Wickfield, sedately eating his dinner.

"Why, because Annie's a charming young girl, and the old Doctor—Doctor Strong, I mean—is not quite a charming young boy," said Mr. Jack Malden, laughing. "No offence to anybody, Mr. Wickfield. I only mean that some compensation is fair and reasonable in that sort of marriage."

"Compensation to the lady, sir?" asked Mr. Wickfield gravely.

"To the lady sir," Mr. Jack Maldon answered, laughing. But appearing to remark that Mr. Wickfield went on with his dinner in the same sedate, immovable manner, and that there was no hope of making him relax a muscle of his face, he added:

"However, I have said that I came back to say, and, with another apology for this intsusion, I may take myself off. Of course I shall observe your directions, as considering the matter as one to be arranged between you and me solely, and not to be referred to, up at the Doctor's."

"Have you dined?" asked Mr. Wickfield, with a motion of his hand towards the table.

"Thank'ee. I am going to dine," said Mr. Maldon, "with my cousin Annie. Good-bye!"

Mr. Wickfield, without rising, looked at him thoughtfully as he went out. He was rather a shallow sort of young gentlemen, I thought, with a handsome face, a rapid utterance, and a confident bold air. And this was the first I ever saw of Mr. Jack Maldon, whom I had not expected to see so soon, when I heard the Doctor speak of him that morning.

When we had dined, we went upstairs again, where everything went on exactly as on the previous day. Agnes set the glasses and decanters in the same corner, and Mr. Wickfield sat down to drink, and drank a good deal. Agnes played the piano to him, sat by him, and worked and talked, and played such games as dominoes with me. In good time she made tea; and afterwards, when I brought down my books, looked into them, and showed me what she knew of them (which was no slight matter though she said it was), and what was the best way to learn and understand shem. I see her with her modest, orderly, placid manner, and I hear her beautiful calm voice, as I write these words. The influence for all good, which she came to exercise over me at a later time, hegins already to decend upon my breast. I love little Em'ly, and I dont love Agnes—no, not at all in that way—but I feel that there are goodness, peace, and truth, wherever Agnes is, and that the soft light of the colored window in the church, seen long ago, falls on her always, and on me when I am near her, and on everything around.

The time having come for her withdrawal for the night, and she having left us, I gave Mr. Wickfield my hand, preparatory to going away myself. But he checked me and said:" Should you like to stay with us, Trotwood, or to go elsewhere?"

"To stay," I answered, quickly.

" You are sure?"

" If you please. If I may!"

"Why, it's but a dull life that we lead here, boy, I am afraid," he said.

"Not more dull for me than Agnes, sir. Not dull at all!"

" Than Agnes," he repeated, walking slowly to the great chimney-piece, and leaning against it. "Than Agnes!"

He had drank wine that evening (or I fancied it), untill his eyes were bloodshot. Not that I could see him now, for they were cast down, and shaded by his hand; but I had noticed them a little while before.

"Now I wonder," he muttered, "whether my Agnes tires of me. When should I ever tire of her! But that's different, that's quite different."

He was musing, not speaking to me; so I remained quiet.

"A dull old house," he said, "and a monotonous life; but I must have her near me. I must keep her near me. If the thought that I might die and leave my darling, or that my darling may die and leave me, comes like a spectre, to distress my happiest hours, and is only to be drowned in—"

He did not supply the word; but pacing slowly to the place where he had sat, and mechanically going through the action of pouring wine from the empty decanter, set it down and paced back again.

"If it is miserable to bear when she is here," he said, "what would it be, and she away? No, no, no. I cannot try that."

He leaned against the chimney-piece, brooding so long that I could not decide whether to run the risk of disturbing him hy going, or to remain quietly where I was, until he should come out of his reverie. At length he aroused himself, and looked about the room until his eyes encountered mine.

"Stay with us, Trotwood, eh?" he said in his usual manner, and as if he were answering something I had just said. "I am glad of it. You are company to us both. It is wholesome to have you here. Wholesome for me, wholesome for Agnes, wholesome perhaps for all of us."

"I am sure it is for me, sir," I said. "I am so glad to be here."

"That's a fine fellow!" said Mr. Wickfield. "As long as you are glad to be here, you shall stay here." He shook hands with me upon it, and clapped me ontheback, and told me that when I had anything to do at night after Agnes had left us, or when I wished ta read for my own pleasure, I was free to come down to his room, if he werethere, and if I desired it for company's sake, and to sit with him. I thanked him for his consideration; and. as he went down soon afterwards, and I was not tired, went down too, with a book in my hand, to avail myself, for half-an-hour, of his permission.

But, seeing a light in the litte round office, and immediately feeling myself attracted towards Uriah Heep,

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and Happy New Year.

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If you are troubled with weak, tired feelings, headache, backache, bearing down sensations, bladder weakness, constipation, catarrhal conditions, pain in the sides regularly or irregularly, bloating or unnatural enlargements, sense of falling or misplacement of internal organs, nervousness, desire to cry, palpitation, hot flashes, dark rings under the eyes, or a loss of interest in life, I invite you to write and ask for my simple method of home treatment, with ten days' trial entirely free and postpaid, also references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by this method. Write to-day. Address: Mrs. M. Summers, Box. . 309 Windsor, Ont.

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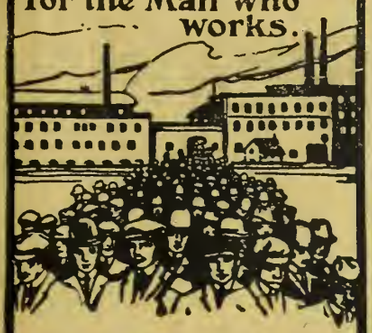

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who had a sort of fascination for me, I went in there instead. I found Uriah reading a great fat book, with such demonstrative attention, that his lank fore-finger followed up every line as he read, and made clammy tracks along the page (or so I fully believed) like a snail.

"You are working late to-night, Uriah," I said.

"Yes, Master Copperfield," said Uriah.

As I was getting on the stool opposite, to talk to him more conveniently, I observed that he had not such a thing as a smile upon him, and that he could only widen his mouth and make two hard creases down his cheeks, one on each side, to stand for one.

"I am not doing office-work, Master Copperfield," said Uriah.

"What work, then?" I asked.

"I am improving my legal knowledge, Master Copperfield," said Uriah. "I am getting through Tidd's Practice. Oh, what a writer Mr. Tidd is, Master Copperfield!"

My stool was such a tower of observation, that as I watched him reading on again after this rapturous exclamation, and following up the lines with his forefinger, I observed that his nostrils, which were thin and pointed, with sharp dints in them, had a singular and most uncomfortable way of expanding and contracting themselves; that they seemed to twinkle instead of his eyes, which hardly ever twinkled at all.

"I suppose you are quite a great lawyer?" I said, after looking at him for some time.

"Me, Master Copperfield?" said Uriah. "Oh, no! I'm a very humble person."

It was no fancy of mine about his hands. I observed; for he frequently ground the palms against each other as if to squeeze them dry and warm besides often wiping them, in a stealthy way, on his pocket-handkerchief.

"I am well aware that I am the umblest person going," said Uriah Heep, modestly; "let the other be where it may. My mother is likewise a very umble person We live in a umble abode, Master Copperfield, but have much to be thankful for. My father's former calling was umble. he was a Sexton."

"What is he now?" I asked.

"He is a partaker of glory at present, Master Copperfield," said Uriah Heep. "But we have much to be thankful for. How much have I to be thankful for in living with Mr. Wickfield!-'

I asked Uriah if he had been with Mr. Wickfield long?

"I have been with him goin on four year, Master Copperfield," said Uriah; shutting up his bokk, after carefully marking the place where where he had left off.

"Since year after my father's death. How much have I to be thankful for, in that? How much have I to be thankful for, in Mr. Wickfield's kind intention to give me my articles, which would otherwise not lay within the umble means of mother and self!"

"Then, when your articled time is over, you'll be a regular lawyer, I suppose?" said I.

"With the blessing of Providence, Master Copperfield," returned Uriah.

"Perhaps you'll be a partner in Mr. Wickfield's business, one of these days," I said, to make myself agreeable; "and it will be Wickfield and Heep, or Heep and Wickfield."

"Oh no, Master Copperfield," returned Uriah, shaking his head, "I am much to humble for that!"

He certainly look uncommonly like the carved face on the beam outside my window, as he sat, in his humility, eyeing me sideways, with his

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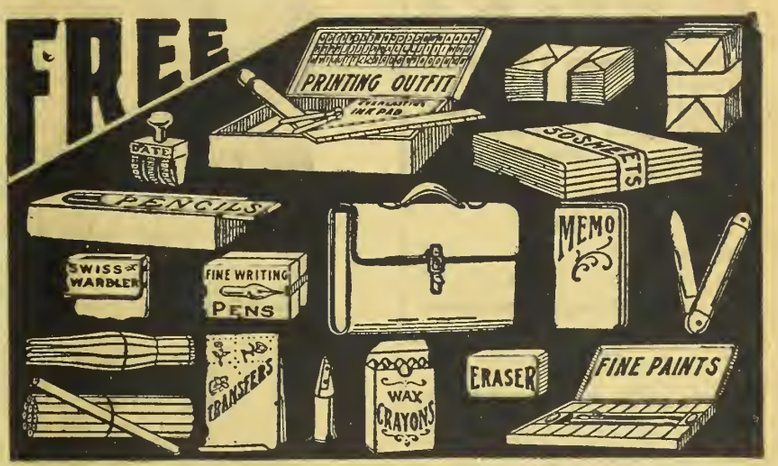

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mouth widened, and the creases in his cheeks.

"Mr. Wickfield is a most excellent man, Master Copperfield," said Uriah. "If you have known him long, youknow it, I am sure, much better than I can inform you."

I replied that I was certain he was; but that I had not known him lomg myself, though he was a friend of my aunt's."

"Oh, indeed, Master Copperfield"' said Uriah. "Your aunt is a sweet lady, Master Copperfield!"

He had a way of writhing when he wanted to express enthusiasm, which was very ugly; and which diverted my attention from the compliment he paid my relation, to the snaky twistings of his throat and body.

"A sweet lady, Master Copperfield!" said Uriah Heep. "She has a great admiration for Miss Agnes, Master Copperfield, I believe?"

I said, "Yes," boldly; not that I knew anything about it, Heaven forgive me!

"I hope you have, too, Master Copperfield," said Uriah. "But I am sure you must have."

"Everybody must have," I returned.

"Oh, thank you, Master Copperfield," said Uriah Heep, "for that remark! It is so true! Umble as I you, Master Copperfield!"

(Continued in next issue)

Santa Claus Cakes

To 2 pints gooe molasses add 1½ pints shortening, 1 lb. brown sugar, 2 tablespoons cinnamon and 1 each of allspice and cloves, 1 teaspoon soda dissolved in 1 tablespoon vinegar, 1 teaspoon each of salt and black pepper. Warm the molasses, add shortening and spices, and then enough flour to roll. Let dough stand a few days in a cool place, then roll out, and cut in fancy shapes, and bake in a moderately hot oven. Bake several weeks before Christmas, gs age improves them.—L. W. Baldwin, Deleware.

sprinkle with salt. Repeat this until all the almonds are fried, being careful not to let the fat get to hot, or the nuts will burn. Use the same precautaons as for frying doughnuts. When cold, put away in a glass fruit jar, sealed, and store in cool, dry place, to keep them nice and crisp. Prceed about the same for salted peanuts, only buy those which have not been roasted.

Dates to be Remembered

St. John Exhibition, September 5th to 12th, 1914.

Nova Scotia Provincial Exhibition Halifax, N. S., Sept. 9th to 17th, 1914.

Poultry Show, Moncton, N. B., January 13, 14, 15 and 16, 1914.

Annual Meeting Nova Scotia Fruit Growers, Kentville, January 20th, 21st and 22nd, 1914.

And peace and good will on the earth.

I know they will hark as you tell it,
Their eyes will grow tender and bright,
And each little face will be earnest
As you give them their kiss of good night.
And so, as they drift off to dreamland,
Their thoughts will not all be of play,
And I think they will not quite forget it—
The real meaning of Christmas day.
For in after years they'll remember
The truths that they learned long ago,
As told by a mother at Christmas;
And the memory will help them, I know.—G. B.

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Love Cakes.

To every lb. powdered sugar add 6 well beaten eggs and as much flour as needed to make a stiff paste. Flavor with lemon. Roll out about ½ inch thick, and cut into cakes with a biscuit cutter. Strew the bottom of baking tin as evenly as possible with sugar and flour, then lay the cakes on this and bake in a quick oven about 10 to 12 minutes. When cold ice cakes with plaain white frosting and set them in a warm place to dry. Finish by putting a bit of jelly, or a raisin or nut in the center of each cake. If desired the edges can be finished with ornamental frosting.—Mabel Page, New Hamp shire.

Salted Almonds and Peanuts.

Shell 1 lb. almonds and remove brown skin by soaking in boiling water about 3 or 4 minutes, then dry the nuts on a twoel and drop, a few at a time, in a small saucepan containing hot olive oil, or half lard and half butter, and fry until delicately browned, stirring all the while. Remove carefully with a skimmer, drain on soft paper, and

Tell the Old Story.

O, Mothers, as Christmas approaches
How you plan for the children's delight!
But take time to gather them 'round you
At eve, in the dim firelight,
And hush for a season their chatter
Of Santa and presents and play
To tell them in words true and simple
The real meaning of Christmas day.
Oh! tell them the blessed old story
Of that first Christmas eve long ago;
Of the shepherds at watch in the meadow,
And the star and its soft, wond'rous glow;
Of the wise men who followed its guiding,
Till they came where the Baby King lay
In Bethlehem's manger so lowly,
His bed but an armful of hay.
And teach them the song of the angels
That they sang at the dear Christ Child's birth,
Of glory to God in the highest,

Fruit and Nut Sweets.

Mix and run through a food chopper 1 lb. each of figs and dates, stones removed, and 1 lb. English Walnuts, shelled and blanched. Mix with this pulp 1 lb. confectioner's sugar (not the plain powdered sugar), roll ¼ inch thick, using sugar to dredge, cut in small squares or fanciful shapes, roll in confectioner's sugar, and pack in a box with oiled paper between each layer.

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SURE GROWERS
GOVERNMENT TESTED
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WM. RENNIE CO., LIMITED,
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Extensive Teaching in Domestic Science in New York City and Suburbs.

The problem of meeting the demand for instruction in Domestic Science by the city and country women has been solved by the introduction of Extension Teaching. Experts are engaged to meet numbers of women in convenient centres and where it is possible to arrange a series of lectures from a week to six weeks very satisfactory courses in cooking are given. The following is a report of such a course of lectures in Domestic Science under the anspices of the Brooklyn Institute of Arts and Sciences, New York York City.

APPLES AS A:FOOD.

First of this season's demonstration Lectures by Miss Barrows.

Miss Anna Barrows of Teachers' College, Columbia University, gave the first of this year's series of demonstration lectures on "The Preparation of Foods" at the Brooklyn Institute of Arts and Sciences, New City; before a large and interested audience. "Uses of Fresh Fruit" was the subject of the lecture and the apple was used to illustrate the many uses to which fruit may be put in the household.

A spicy odor of apples prevaded the lecture hall and the demonstration table was beautified with favorite varieties among which were Spitsbergs, Newton Pippins and Greenings. The history of the apple was mentioned and the popularity of some varieties over others attributed to the fact that many people bought by appearance, rather than quality. This was especially true in the case of the table apple.

The apple sauce prepared at the beginning of the lecture was now rubbed through a strainer the seeds remaining in the strainer having given an agreeable flavor to the pulp. This is an especially good method to prepare the Fall apple. The parings and seeds cooked in a little water furnish an agreeable flavor to fruits lacking an acid—when cooked in this liquid.

Apple pulp prepared in this way may be used:

1. Sweetened and served with roast pork.
2. Stiffened with gelatine, after being flavored with sugar to suit the taste with the addition of lemon juice if desired, then adding the cream for apple sponge.
3. Stiffened with cornstarch or tapioca for soup. A garnish of whipped cream is quite desirable in a fruit soup.

From this pulp Fruit Tapioca was prepared. A buttered mold was lined with tapioca and the centre filled with a mixture of tapioca and apple pulp allowing ½ cup cooked tapioca to one cup of apple pulp. This was strained and turned out of the mold for serving. Any kind of fresh, stewed or presesved fruit might be used for this. The one-half cup of tapioca was cooked in one pint of boiling water until transparent. A little salt and sugar was added and spice if desired.

Apple dumplings or the old-fashioned Dough-boy was made from a quick-bread dough. A baking powder biscuit mixture was prepared using one pint sifted flour and 3 teaspoons baking-powder, ½ teaspoon salt sifted together into which was cut 1 tablespoon of shortening. Milk or water was handled to make a stiff dough easily handled which was divided into six portions and rolled or patted into round shapes. Into three of these fold an apple cored and pared and bake or steam 45 minutes or until the apples are soft. These were placed to steam with the fruit tapioca pudding.

In paring apples it is more convenient to core before paring especially in the case of the early Fall apple which is so raided by insects. Stuff the core with chopped raisins and nuts adding a trifle of sugar and snice. The stiffing depends somewhat on the sauce served with the dumplings. These apples were folded into the remaining rounds of dough and baked in a hot oven, about the temperature for biscuit. Eery often basted with a mixture of melted butter and sugar. A short-cake mixture might be used in place of the biscuit dough, rolled out spread with apple pulp and seasoned and spiced to suit the taste or with jam, marmalade or any fruit and rolled up as for a jelly roll, cut and baked as pin-wheel biscuit.

A large Spitsberg apple was hollowed out and an equal amount of celery with a quarter of a red or green pepper added and all chopped fine. A French dressing of 1 teaspoon of peanut butter and 3 tablespoons of lemon juice flavored slightly with salt and paprika was stirred into the above mixture, the salt and lemon juice preventing the apple from turning brown. This was replaced into the hollowed apple which was garnished with whipped cream and shredded almonds and served on a crisp white and green lettuce leaf. The flavor of some apples ar inferior to others and require this dressing up.

Sliced apples on dry cake piled up with whipped cream adds maisture to the cake and gives flavor to the apple. Pared and quartered or sliced and saute'ed with sausages adds to the food value and provides an appetizing combination with meats. They might be fried in fat as potatoes.

Apples lend themselves admirably to such combinations and are quite desirable in shortening the process of cookery.

In all the above recipes different kinds of fruit may be substituted for the apple and in many cases new recipes made from old.

A Delicious Grape Juice Fruuit Cake

To one-third cup butter add ½ cup sorghum, one-third cup brown sugar, ½ cup grape juice (or ½ cup grape jelly beaten and dissolved with the same amount of boiling water), 1 egg, well beaten, a small cup raisins, ½ cup English walnut meats, ground or chopped, 1 heaping teaspoon candied orange rind, 2 tablespoons shaved citron. With 2 cups flour sift 1 teaspoon cinnamon, ½ teaspoon ginger, one-third teaspoon ground nutmeg, 1 teaspoon soda and a pinch of salt. Add to the mixture 1 tablespoon lemon extract, and bake in a moderate oven till a toothpick pushed into the middle comes out clean. Frost when cold with confectioner's sugar moistened with a little milk and flavored with maple extract. Press rows of nut meats into the icing, so that each slice will have some nuts on it.—Lavilla Macomber.

Cover the bottom of a buttered pie plate with nut meats, and pour this taffy prepared after any plain sugar or molasses taffy recipe. Thin slices of fresh cocoanut are nice with lemon taffy.

A Christmas Carol.

The moon that now is shining
In skies so blue and bright,
Shone ages since on shepherds
Who watched their flocks by night;
There was no sound upon the earth,
The azure air was still,
The sheep in quiet clusters lay
Upon the grassy hill.
But the star that shone in Bethlehem
Shines still, and shall not cease,
And we listen still to the tidings
Of glory and of Peace.—Adelaide Af Proctor.

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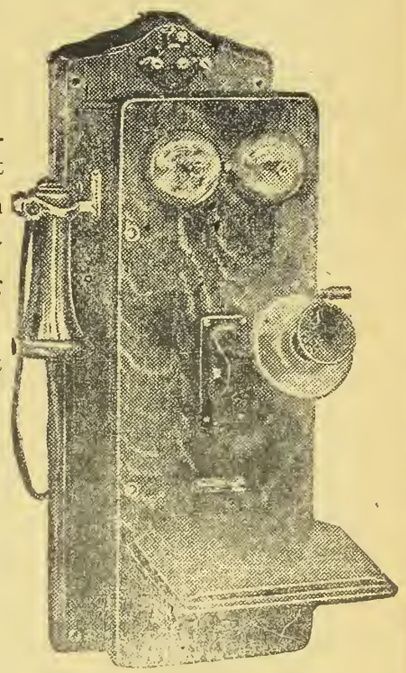

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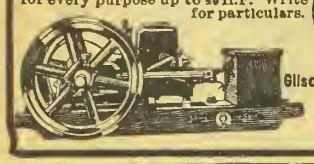

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Prize Winners at the 1913 Maritime Winter Fair.

(Continued from page 197)

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Rhode Island Reds, S. C.— C. J. Cock, 1 and 2r, 2 and 3p; Thos. S. Kyle, 3r, 1p.

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UTILITY PENS.

White Wyandotte—1, A. C. Read.

Golden Wyandottes—1, Hartland P. Yards.

Silver Wyandottes—1, Evans Kyle; 2, John D. Fraser; 3, Hartland P. Yards.

Buff Wyandottes— 1 and 2, William Beazley.

Columbian Wyandottes, 1, C. R. McKay; 2, Hartland P. Yards.

Barred Rocks—1, Craig Bros.; 2, L. H. D. Foster; 3, D. G. Stewart.

White Rocks—1, Albert Boswall; 2, Geo. Callbeck.

Buff Rocks—1, L. H. D. Foster; 2, Arthur Simmons.

Buff Orpingtons—1, E. S. Brown; 2 Albert Boswall; 3, Jas. Duncan.

Black Orpingtons—1, Hartland P. Yards.

White Orpingtons—1, C. J. Cock; 2, Carl E. Ripley.

Rhode Island Red, S. C.—1, Hartland P. Yards; 2, Thos. D. Kyle; 3,C. J. Cock.

Any Other Variety—1, Hartland P. Yards; 2, Wm. Beazley; 3, Jas. Fearon.

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Barred Rocks mated for Cockerels—1, Watson Lutz; 2, Craig Bros.

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Brown Leghorns, mated for Cockerels—1, Wolfville P. Yds.; 2, John A. Scott.

Brown Leghorns mated for Pullets —1, John A. Scott; 2, Burder Goodwin; 3, E. H. Hall.

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Best White Wyandotte Female — Evangeline Poultry Yards.

Best Buff Orpington Female—C. P. Thorne.

Best Rhode Island Red—C. J. Cock.

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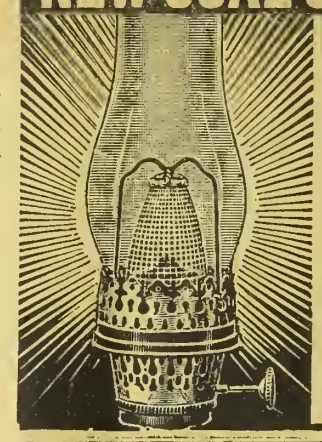

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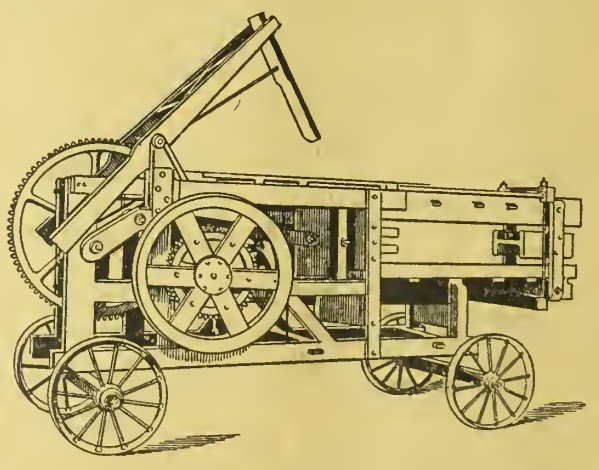

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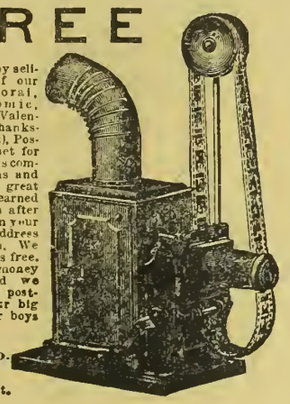

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S. C. Cock—W. H. Henry.
S. C. Hen—C. J. Cock.
S. C. Cockerel—F. W. Pickles.
S. C. PulletW. H. Henry.
R. C. Cock—C. J. Cock.
R. C. Hen—W. H. Henry.
R. C. Cockerel—John Higson.
R. C. Pullet—W. H. Henry.

Maritime Poultry Supply Co's. Special prizes for best Barred Rock Cock, Hen, Cockerel and Pullet— 1, Craig Bros.; 2, Watson Lutz.

Maritime Poultry and Pet Stock Association Silver Cup for best exhibit of American breeds of poultry—Won in 1910 by Seth Jones; Won in 1911-12—Hartland P. Yards; Won in 1913 by Hartland P. Yards, whose possession the cup now becomes.

Silver Cup, donated by the late Hon. W. T. Pipes for best Cock, Hen, Cockerel and Pullett—Won in 1908 and 1909 by Craig Bros.; Won in 1910 by Haszard & Duchemin; Won in 1911 and 1912 by A. C. Read; Won in 1913 by A. C. Read, whose possession it now becomes.

Silver Cup donated by Mr. Percy Johnson, St. John's, Nfld., for the best exhibit of poultry, American Breeds and Bantams excluded: Won in 1911 by Hartland Poultry Yards; Won in 1912 by Kingsdale P. Supply Co.; Won in 1913 by Hartland Poultry Yards.

Silver Cup donated by E. N. Rhodes, M. P., for best two cockerels & best two pullets in Utility Class — Won in 1908 by the late Wm. Robertson; Won in 1909 by the late Wm. Robertson; Won in 1910 by Craig Bros.; Won in 1911 and 1912 by A. C. Read; Won in 1913 by Watson Lutz.

Silver Cup donated by the Kingsdale Poultry and Supply Co. for the best male Plymouth Rock bird. Won in 1912 by Craig Bros; Won in 1913 by Watson Lutz.

The Reliable Poultry Journal's prize books for best exhibit in Utility Class, open only to new exhibitors—J. S. Thompson.

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Best 2 Turkeys, over 1 yr. females—1, T.J. Etter 1, Hartland P. Yds.

Best 2 Turkeys, of 1913 male— 1, T J. Etter; 2, Hartland P. Yards.

Best 2 Turkeys of 1913 female—1, Hartland Poultry Yards; 2, T. J. Etter.

Best 2 Geese, white—1, C. J. Cock; 2, L. H. D. Foster; 3, Hartland P. Yards; 4, T. J. Etter.

Best 2 Geese, colored—1, L. H. D. Foster; 2, T. J. Etter; 3, Hartland P. Yards; 4, C. J. Cock.

Best 2 Ducks, white—1, L. H. D. Foster; 2, T. J. Etter; 3, C. J. Cock; 4, Hartland P. Yards.

Best 2 Ducks, colored—1, L. H. D. Foster; 2 and 3, Elbert Black; 4, Hartland P. Yards.

Best Barred Plymouth Rock Cockerels—1, Mrs. Geo. Ripley; 2, John R. Harrison; 3 and 4, J. S. Thompson.

Best 2 Barred Plymouth Rock Pullets—1, John R. Harrison; 2, Hartland P. Yards.

Best 2 A. O. V. Plymouth Rock Cockerels—1, C. J. Cock; 2, John R. Harrison.

Best 2 White Wyandotte Cockerels and 2, J. S. Thompson; 3, Hartland P. Yards.

Best 2 White Wyandotte Cockerels—1 and 2 J. S. Thompson; 3, Hartland P. yds..

Best 2 White Wyandotte Pullets—1, J. S. Thompson; 2, Hartland P.

Best 2 A. O. V. Wyandotte Cock-

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Do you know that **ROYAL PURPLE POULTRY SPECIFIC** makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If **ROYAL PURPLE** does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give **ROYAL PURPLE POULTRY SPECIFIC** a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and $1.50 air-tight tins.

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erels—1, C. J. Cock; 2, Hartland P. yds.

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Best 12 chickens packed in suitable box for export, Maritime Poultry Assn. prizes—1, T. J. Etter; 2, Hartland P, yds.

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Heaviest and best dozen eggs, Brown—1, C. J. Cock.

White—1, Mrs. Geo. Ripley; 2, J. S. Thompson.

Best 12 doz. case—1, T. J. Etter; 2, Edgar Harrison.

Christie Bros. prize for best Exhibit of dressed Poultry—1, John R. Harrison.

Seeds

Spring Wheat, White Fife or Red Fife—1, John R. Harrison, Maccan, N. S; 2. J. E. Harrison, Maccan, N. S.; 3, Clark McFarlane, Fox Harbor; N. S.; 4, Ernest W. Bulman, Rustico P, E. I.; 5, L. H. D. Foster, Marshfield, P. E. I.

Spring Wheat, A. O. V.—1, John R. Harrison, 2, J. E. Harrison; 3, L. H. D. Foster; 4, Prospiere Gallant, Abrams Village, P. E. I.; 5. H. B. Parless, Sussex.

Oats, Banner Type—1, Henry Gordon, Chatham, N. B.; 2. H. B. Parlee; 3. E. J. Vessey, Litsle York, P. E. I.; 4, E. W. Bulmer; 5, L. H. D. Foster.

Oats, A. O. V.—1, E. W. Bulmer; 2, E. J. Vessey; 3, Clark McFarlane; 4, Henry Gordon; 5, John R. Harrison.

Oats, any black variety—1, W. H. Pope Cook, Little York, P. E. I.; 2, Peter Brodie, Little York, P. E. I.; 3, J. E. McDonald, Little Pond, P. E. I.; 4, J. E. Vessey; 5, E. W. Bulmer.

Barley, any 6-rowed variety—1, E. J. Vessey; 2, E. W. Bulman; 3, Gallant Prospiere; 4, John C. Chisholm, Lower South River, N. S.; 5, J. E. Harrison.

Barley, any 2-rowed variety—1, E. J. Vessey; 2, E. W. Bulman; 3, G. W. Wood & Son, Hazlebrook, P. E. I.; 4, John R. Harrison; 5, E. W. Bulman.

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Field Peas, large and medium varieties—1, J .E. Harrison; 2, Henry Gordon; 3, Edgar Harrison; 4, John R. Harrison.

Flax—1, John C. Chisholm; 2, E. J. Vessey; 3, Benj. A. Mallett, Little Yorv.

Timothy Seed—1, John E. Harrison; 2, John W. Murray, Balmoral Mills, N. S.; 3, John R. Harrison; 4, E. J. Vessey.

Field Beans, white, any variety—1, John R. Harrison; 2, J. E. Harrison; 3, Edgar Harrison; 4, A. H. Hatfield, Parrsboro.

Field Beans, colored, any variety—1, John R. Harrison; 2, J. E. Harrison; 3, N. B. Harrison, Athol.

Potatoes, Carman—1, John E. Harroson; 2, John R. Harrison; 3, Peter Brodie; 4, John R. Semple.

Potatoes, Green Mountain or Deleware—1, Peter Brodie; 2, John E. Harrison; 3, Henry Gordon; 1, R. R. Black, Amherst.

Potatoes, any other white variety—1, Harold Black, Amherst; 2, Freeman Casey, Amherst; 3, John R. Harrison; 4, Geo. Retson, Up. Brookside, N. S.

Potatoes, Rose Type—1, John R. Harrison; 2, John E. Harrison; 3, E. J. Vessey; 4, Peter Brodie.

Potatoes, any red variety—1, H. B. Parlee; 2, Henry Gordon; 3, Peter Brodie; 4, Geo. Retson.

Potatoes, McIntyre's—1, Peter Brodie; 2, E. J. Vessey; 3, Benj. A. Mallet; 4, John E. Harrison.

Potatoes, any other dark skinned variety—1, H. B. Parlee; 2, Henry Gordon; 3, Benj A. Mallet; 4, Geo. M. Holmes.

SAMPLES FROM THE FIRST PRIZE WINNERS IN THE NEW BRUNSWICK FIELD CROPS COMPETITION.

Wheat—1, E. Lorne Hume, Florenceville, Carleton Co 3, Donald Innis, Tobique River, Victoria Co.

Oats—1, Henry Gordon, Chatham, Northumberland Co.; 2, Wm. H. Moore, Scotch Lake, York Co.; 3, W. E; Palmer, Scotch Lake, York Co.; 4, Jos. D. Dayle, McLeod's Mills, Kent Co.; 5, E. Roy Raymond, Bloomfield, Kings Co.

SAMPLES FROM THE FIRST PRIZE WINNERS IN THE NOVA SCOTIA FIELD CROPS COMPETITION.

Wheat—1, Robert Kaulback, Mid. Musquodobit, Halifax Co.; 2, McFarlane Bros., Fox Harbor, Cumberland Co.; 3, R. D. McKay, Balmoral Mills, Colchester Co.; 4 and 5, John McMullin, George's River Station, Cape Breton Co.; 6, Jas. Dunn, Lower South River, Antigonish Co.; 7, Falconer McDonald, New Glasgow, Pictou Co.; 8, Jas. Smith, Upper Falmouth, Hants Co.

Oats—1, John T. Bain, Newtown, Guysboro Co.; 2, Robie Plamer, Windsor Forks, Hants Co: 3, Mark E. Rhodenizer, West Northfield, Lunenburg Co.; 4, W. G. Oulton, Lorneville, Cumberland Co.; 5, John A. McDonald, Maryvale, Antigonish Co.; 7, John L. McAuley, Grand River, Richmond Co.; 6, Patrick N. Thompkins East Margaree, Inverness Co.; 8, Murdo McGregor, Hillside, Boulardarie, Cape Breton Co.

BOYS 'TURNIP GRPWING COMPETITION.

Cumberland Co.—1, Roy Jackson; 2, Franford Oulton; 3, Russell Willis; 4, David Tulle.

Colchester Co.—1, J. R. Semple; 2, Clark Jennings; 3, Frank Crowe.

Ewing Silver Cup for best exhibit of seed grain. Won in 1911 by A. E. McLean, P. E. I.; won in 1911 by Ernest Bulman, P. E. I.; won in 1912 by E. J. Vessey, P. E. I.; won in 1913 by John R. Harrison, Maccan, N. S.

Silver Cup donated by S. J. Moore for best arranged group, exhibit of white oats—John A. McDonald, Maryvale, N. S.

COMPETITION BY MEMBERS OF THE C. S. G. A.

Spring wheat, sheaf of Red Fife, White Fife or Marquis—1, J. R. Semple, Brule, N. S.; 2, W. G. Oulton, Lorneville.

Spring Wheat, sheaf, any other variety—1, Jas. Dunn, Lower South River, N. S.; 2, Alex McPherson, Cloverville, N. S:; 3, M. B. Harrison, Athol, N. S.

White oats sheaf, any variety—1, Frank Dunn, Lower South River; 2, John R. Semple; 3, M. B. Harrison.

Six-rowed barley, sheaf—0, Jas. Dunn; 2, Thos. S. Waugh, North Bedeque, P. E. I.; 3, W. G. Oulton.

C. S. G. A. SECTION FOR NEW BEGINNERS-

Spring wheat sheaf, any variety—1, Robert Kaulback; 2, John W. Murray, Balmond Mills; 3, R. S. McCurdy, Mid. Musquodobit.

White oats sheaf, any variety—1, Robert Kaulback; 2, John W. Murray.

GROUP EXHIBITS.

Suring wheat, Red Fife, White or Marquis—1, R. D. McKay; 2, McFarland Bros.; 3, J. H. McKay; 4, Donald Innes.

Spring wheat, any other variety—1, Richard Creed; 2, Thas. S. Waugh; 3, E. E. Arsenault, Urbanville, P. E. I.; 4, W. H. McGregor, Muscouche, P. E. I.; 5, T. W. Wigginton, Bridgetwon, P. E. I.

White Oats. any variety—1, John A. MacDonald; 2, W. E. Palmer; 3, Thos. S. Waugh; 4, McFarland Bror.; 5, Harry Brown, Wallace Bay.

Blacl oats, any variety—1, Chas. Hastings, Little Shemogue; 2, E. E. Arsenault.

Six rowed barley, any variety—1, W. H. McGregor; 2, J. H. McKay; 3, E. E. Arsenault.

Peas, any field variety—1, J. C. Hogan, Amherst; 2, J. H. McKay.

Best Exhibit Seed from a multiplying field:—

Spring wheat, Red or white Fife or Marquis—1, Robert Kaulback; 2, R. H. Kennedy, Hilden.

Spring wheat any other variety—1, J as. Dunn.

White Oats—, any variety—1, McFarland Bros.; 2, Taylor Bros. Antigonish.

Six rowed barley—1, W. G. Oulton.

Best bushel of Potatoes from hand selected Seed Plot:—

Round white type—1, Peter Brodie; 2, Harry Brown; 3, H. B. Parlee; 4, D. C. McNeil, Antigonish; 5, E. Palmer.

Long white type—1, W. E. Palmer; 2, Peter Brodie; 3, Richard Creed.

Rose type—1, Peter Brodie; 2, H. B. Parlee; 3, J. H. McKay.

Best Bushel of potatoes from mother crop by new beginners:—

Ronnd white type—1, John R. Semple; 2, W. G. Oulton.

Rose Type—1, W. G. Oulton.

Steel Briggs Silver cup for most creditable showing of selected seed—Won in 1910 and 1911 by Robert McKay, Millsville, N. S., Won in 1912 by W. H. McGregor, P. E. I.; Won in 1913 byMcFarlane Bros., Fox Harbor.

BOYS AND GIRLS COMPETITION.

Wheat, any spring variety—1, Frank Dunn; 2, Margaret and Edith McFarlane, Fox Harbor: 3, Thos. S. Waugh; 4, Lawson Wood, Hazelford, P. E. I.

Oats, any white varieey—1 and 2, Margaret and Edith McFarlane; 3, Hazel L. McMackin, Butternut Ridge, N. B.; 4, Effa McMackin, Butternut Ridge.

COULD NOT STRAIGHTEN UP

For Lame Back.

Women are coming to understand that weak, lame, and aching backs from which they suffer are due to wrong action of the kidneys.

The kidneys are overtaxed—given more work that they can do, and when the back aches and pains it is almost impossible to do her housework, for every move and turn means pain.

On the first sign of any weakness in the back Doan's Kidney Pills should be taken, and thus do away with any suffering from kidney trouble.

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PURE BRED Hampshire Rams for sale. Box 45, Hillsboro, N. B.

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100 FINE WHITE ENVELOPES printed with your return card, 35c postpaid. HOWIE PRINTING CO., Beebe, Que.

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FOR SALE—Five yearling Guernsey Bulls. Three sired by Imp Canada's Jethro Bass. Best milking stock. T. D BLAIKIE, Great Village, N. S

WANTED by agricultural Society Pure bred, Registered Short Horn bull about one year old of a good milking strain. Write JAMES DOUGLAS, Concord, Nova Scotia.

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FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE OR EXCHANGE for pure bred stock or hay, one 6 H. P. Gasoline Engine in good running order. WALTER PAYNE, Lake Edward, N. B.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

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FOR SALE.—Twenty-five extra well bred grade pigs for sale, four and five weeks old at resonable prices. Also sow 18 months of age with or without her litter of pigs a few days old. L. M. ANDERSON, SACKVILLE, N. B.

FOR SALE OR EXCHANGE.—Three (3) Aberdeen Angus heifers from 6 months to three years old. 1st prize winners at Toronto, London and Amherst, will sell cheap. For particulars apply to A. M., care of MARITIME FARMER, Sussex, N. B.

600,000 FT. BELTING all makes 100,000 rods Wire Fencing. 60,000 lbs Barb Wire at 2c per lb. Also 1000 other bargains at 1-3 to 1-2 less than regular value. Special price lists on request- IMPERIAL WASTE & METAL CO., 713 Queen St. Montreal.

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We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to
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AYRSHIRE CATTLE.

Clydesdale Horses. Yorkshire Hogs. For sale a twelve month old bull from nice stock Sire Imported. Write for price.

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King, Herbert, Cuthbert and Hiram. Low prices for fall.

COLUMBIAN WYANDOTTES

Our entire flock for sale. The finest lot of any Columbians in the Maritime Provinces.

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Barred Plymouth Rocks

Victors again at Maritime Winter Fair, 1st and 2nd Mating Pens. 1st Breeding Pen. 1st pair of Utility Cockerels; 1st and 4th Cock; 1st and 6th Pullet; 2nd, 3rd and 6th Cockerels; 3rd and 5th hen is Record for 1913. Lusty Cockerels and Cock birds for sale. Address

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During the month of January we will sell Guernsey Bulls at 20 p. c. discount from regular prices. The dams of these bulls are large milk producers. The bulls are of good size and a good dairy type. They will be a credit to any Agricultural Society. Let us send you description and prices.

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EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

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Located on both sides and in the Interior of the dome of the "Great White Light" Burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely diffenent, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

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Turkeys, Bronze male over 1 yr.—1, Albert Boswall, French Fort, P. E I.; 2 and 4, M. H. Parlee, Lower Millstream, N. B.; 3, Henry Leithead, Lyons Brook.

Turkeys, Bronze female over 1 yr.—1, A. Boswall; 2, M. H. Parlee; 3, Henry Leithead; 4, Hartland Poultry Yards.

Turkeys, Bronze male of 1913—1, A. Boswall; 2, Hartland Poultry Yards;

Best doz. sec. honey in comb, heavy 3, H. Leithead.

Turkeys, Bronze female of 1913—1, A. Boswall; 2, H. Leithead; 3, H. P. Yards; 4, M. H. Parlee.

Turkeys, white—H. P. Yards, 1st in all sections.

Turkeys, buff—H. P. Yards, 2nd in aged sections and 1st in young sections.

Turkeys, A. O. V., 1 yr.—H. P. Yards.

Turkeys, A. O. V., male of 1913—1, A. Boswall; 2, H. P. Yards.

Turkeys, A. O. V., female of 1913—1, A. Boswall; 2, H. P. Yards.

Geese, Tolouse over 1 yr., male—1, H. P. Yards; 2 and 4, Geo. L. Boswall; 3, C. J. Cock.

Geese, Tolouse over 1 yr., female—1 and 2, Geo. L. Boswall; 3, H. P. Yards; 4, C. J. Cock.

Geese, Tolouse of 1913, male—1 and 2, Geo. L. Boswall; 3, H. P. Yards.

Geese, Tolouse of 1913, female—1 and 2, Geo. L. Boswall; 3, H. P. Yards.

Geese, Bremen or Embden, over 1 yr., male—1 and 2, A. Boswall; 3, C. J. Cock; 4, J. T. Barnes.

Geese, Bremen or Embden, over 1 yr., female—1 and 3, A. Boswall; 2, C. J. Cock; 4, J. T. Barnes.

Geese, Bemen or Embden of 1913, male—1 and 2, A. Boswall; 3, H. P. Yards.

Geese, Bremen or Embden of 1913, female—1 and 2, A. Boswall; 3, H. P. Yards.

Geese, African over 1 yr., male—1, C. R. McKay, Pictou; 2, Maritime Poultry Supply Co.; 3, H. P. Yards; 4, A. Boswall.

Geese, African, over 1 yr. female—1, Maritime Poultry Supply Co.; 4, A. Boswall.

Geese, African, male of 1913—1, H. P. Yards; 2, A. Boswall.

Geese, African female of 1913—1, A. Boswall; 2, H. P. Yards; 3, E. Chapman, Amherst.

Geese, A. O. V.—Courtney Lusby, Amherst, 1st in all sections; 2, G. B. Baker, Amherst.

Ducks, Pekin, over 1 yr., male—1, A. Boswall; 2 and 3, Maritme Poultry Supply Co.

Ducks, Pekin, over 1 yr. female—1, A. Boswall; 2, M. H. Parlee; 3, Maritime Poultry Supply Co.

Ducks, Pekin, male of 1913—1 and 3, A. Boswall; 2, Spring Park Poultry Yards, Charlottetown.

Ducks, Pekin, female of 1913—1 and 2, A. Boswall; 3, Spring Park Poultry Yards.

Ducks, Rouen, male over 1 yr.—1, H. P. Lawrence; 2, A. Boswall; 3, H. Leithead; 4, A. H. Boswall.

Ducks, Rouen, female over 1 yr.—1, A. Boswall; 2, H. Leithead; 3, H. P. Yards.

Ducks, male of 1913—1, T. J. Etter; 2, H. Leithead; 3, H. P. Lawrence.

Ducks, female of 1913—1, A. Boswall; 2, H. P. Yards; 3, H. P. Lawrence.

Ducks, Muscovey, male over 1 yr.—1, F. W. Pickles, Hebron; 2, H. P. Yards.

Ducks, Muscovey female over 1 yr.—1, H. P. Yards; 2, F. W. Pickles.

Ducks, Muscovey of 1913—1, F. W. Pickles; 2, H. P. Yards.

Ducks, Indian Runner over 1 yr.—1, H. P. Yards; 2 and 3, Maritime Poultry Supply Co.

Ducks, Indian Runner of 1913, male—1, J. T. Barnes; 2, Maritime P. S. Yards; 3, H. P. Yards.

Ducks, Indian Runner of 1913 female—1, H. P. Yards; 2, J. T. Barnes; 3, M. P. S. Co. Yards. P

Ducks, Cayuga, over 1 yr.—1, A. H. Boswall; 2, H. P. Yards.

Ducks, Cayuga of 1913—1, H. P. Yards; 2, A. H. Boswall.

Ducks, A. O. V., male, over 1 yr.—1, H. P. Yards.

Ducks, A. O. V., female, over 1 yr.—2, H. P. Yards.

Ducks, A. O. V. male of 1913—1, A. Boswall; 2, A. H. Boswall.

Ducks, A. O. V., female of 1913—1, A. Boswall; 2, H. P. Yards; 3, A. H. Boswall.

AIPIARY.

Best doz. jars honey, light—1, W. G. Asbell, Sussex; 2, Craig Bros., Amherst; 3, B. W. Baker, Amherst; 4, Julia Corbett, Amherst Point.

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Best doz. jars honey, dark—1, Julia Corbett; 2, B. W. Baker; 3, Craig Bros.; 4, W. G. Asbell.

Best doz. sec. honey in comb, light—1, W. G. Asbell; 2, Craig Bros.; 3, B. W. Baker; 4, Julia Corbett.

Best doz. sec. honey in comb, medium—1, W. G. Asbell; 2, Craig Bros.; 3, B. W. Baker; 4, J. Titus Barnes.

—1, W. G. Asbell; 2, B. W. Baker; 3, Craig Bros.; 4, J. T. Barnes.

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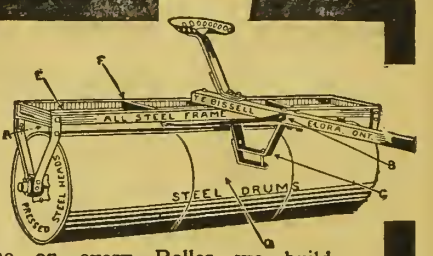

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, JANUARY 13, 1913. Number 7.

Combating the Brown Tail Moth With Parisites.

Help in Restoring the Balance of Nature by Hand Picking.

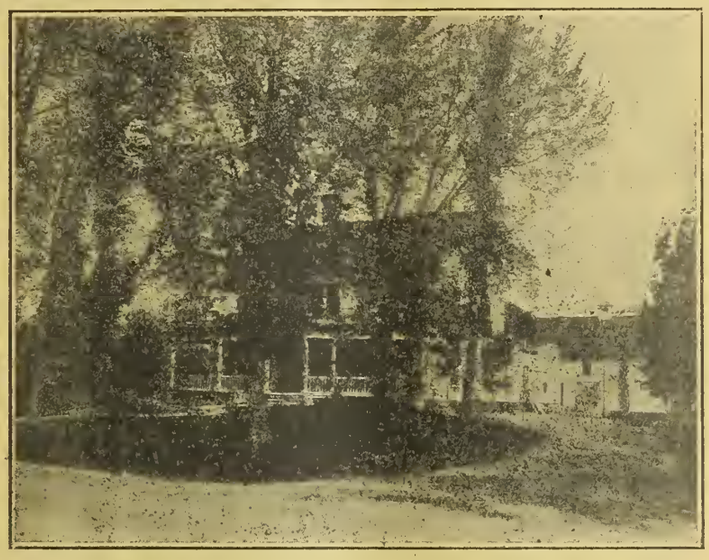
There are few if any of the readers of the Maritime Farmer who are not interested in the work that is being done both in our own provinces and in the United States for the extermination of the Brown-tail moth. Our readers will therefore be interested in reading an account of the introduction of parasites to help rid our trees of the troublesome pests as is explained in the following article by A. M. G. Soule, who has charge of the Maine State Laboratory:

The idea of importing insect enemies from one country to another is not new. Excellent work has been done in bringing to the United States enemies of scale insects, one being the very successful importation of a lady-bird beetle (Novius cardinalis) from Australia to California in 1889, which has resulted in the almost complete extermination of the fluted scale.

But when the work of introducing insects parasitic to the gypsy and brown-tail moth, to Massachusetts was begun, nothing practical had been accomplished with natural enemies of lepidopterous insects. At various times during the terrible ravages by these pests which have occurred since about 1880 in that state the question of importing natural enemies to assist in suppression was discussed by department heads in charge of the moth work. There were several reasons why the work was not undertaken before; the great initial expense for one, and another that all the work had been conducted along lines of general extermination of the gypsy moth and parasites would therefore be destroyed to a certain extent.

When, however, the amount of infested territory had grown so large that complete extermination, or even suppressions, could be accomplished only by an enormous amount of hand labor, the same conditions made it possible to establish colonies of parasites where hosts in abundance would insure a steady increase, and in 1905 the first importations were begun to that state.

The results have been so encouraging that after eight years' experience with hand work, it was considered most practical to attempt colonization of parasites to complement the hand work in Maine, and last March a laboratory for breeding parasites and for making observation on their wor. was established in Portland at 12588 Forest Avenue. A building 12x18 was built that accomodates the use of fifty feeding trays 4 feet long, 2½ feet wide and 5 inches deep, the construction and use of which will be described later in this article. Space



Residence of J. Elliott Smith, Fairview Fruit Farm, Wolfville, N. S.

is also afforded in this building for microscopic dissection and for keeping accurate notes on development and dispersion of the insects worked with.

In the work at the Maine laboratory the predaceous and parasitic enemies of the gypsy and brown-tail moths, used to breed, and liberate in the State, have been selected with great care as to thieir economic importance.

Several parasites have been imported and liberated in Massachusetts and are apparently working well, would not be practical to bring into Maine, as conditions at present would not warrant it.

The undertaking was begun only after a careful study of the relative value of the different pasasites dealt with at the U. S. laboratory and relying on the advice of the experts in charge of the parasitic work at Melrose Highlands.

The work of breeding and liberating thus far bas been with Apanteles lacteicolor and Meteorus versicolor as enemies of the brown-tail moth, Compsilura concinnata, parasitic on both gypsy and brown-tail and the Calomoma sycophanta beetle also predatory to both insects.

APANTELES LACTEICOLOR.

Apanteles lacteicolor is a very small hymenopterous fly, native to most European countries that are infested with the brown-tail moths, and those used for distribution in this country were brought from Russia, Germany and Italy.

The adult flies deposit their eggs under the skin of the newly-hatched brown-tail larvae; here they rest in the hibernating webs until spring and until the brown-tail caterpillars have reached their third or fourth moult; the maggots resulting from these eggs having received their support at the expense af the life of the caterpillar, crawl out leaving the brown-tail dead or possessed of only life enough to develop to the pupal stage. The maggot then spins its cocoon at once, rests in this form about seven days when the adult fly emerges; hosts are found in the fall web-worm and other native pests and when the brown-tail egg clusters begin hatching about August 1st, oviposition is begun on them, thus completing their several generations.

In European countries where this insect is well established it is possible to collect the cocoons in large quantities for the field and transport them to other localities. But as the Maine laboratory the following method of development was adopted.

Brown-tail webs, collected in localities known to be infested with Apanteles and Meteorus, were brought to the Maine laboratory and placed in feeding trays. These trays are made of a light wooden frame with cotton cloth bottom, the top open except for a narrow strip covered with tree tanglefoot. As the caterpillars emerged from the webs they were held in confinement by the tanglefoot and fed at once on fresh cherry leaves, or other suitable food plant. This feeding was continued at intervals of two or three hours for ten days when a section of coarse mosquito netting cut to fit the inside dimensions of the tray was spread over the refuse feed and larvae, more feed placed in the trays, thus drawing the maggot bearing larvae away from the refuse feed. After another six days this operation was repeated with similar effect. When the maggots began to emerge and spin cocoons, the sections of web bearing the refuse feed and moulting nets were transferred to the picking cage, leaving the more active caterpillars in the feeding trays.

The work of picking the cocoons from the refuse was very disagreeable and attended by great personal discomfort. The dried and partly eaten leaves, the moulting webs and all material necessary to be handled are covered with the poison spines from brown-tail hairs. To inhale this poison or acquire in the eyes is very dangerous. This disagreeable feature obviated to some extent by the use of a picking cage. This resembles an ordinary show case with top and sides of glass and at the back, holes cut, and armulets made of canvass inserted to protect the operator during process of picking. Even by this protection and by wearing rubber gloves great discomfort was experienced during this operation.

As soon as a sufficient number of cocoons were obtained they were carried into the field for colonization as quickly as possible before the adult flies had time to emerge; suitable localities having been selected by careful inspection, earlier in the season. In the field the cocoons were r in a waterproof box, this box being slightly perforated on the side, nailed to a tree, both tree and box smeared with tree tanglefoot to prevent destruction of the cocoons by ants, and here left to emerge.

In this manner colonies were liberated and about 15,000 cocoons distributed.

A sufficient number of Meteorus versicolor cocoons were also obtained to establish two colonies of this parasite, the life history of which is similiar in some respects to the Apanteles already described.

COMPSILURA CONCINNATA.

Work was then continued on Compsilura concinnata, a Tachinid fly, about as large as the house fly and unless carefully examined not unlike this common pest in appearance. In

their method of attack the Compsilura deposit beneath the skin of the host caterpillar the very small maggots which have hatched within the body of the mother; these maggots establish themselves within the alimentary canal of their host and in two weeks have attained complete larval development when they issue from the caterpillar leaving it dead. Within a few hours they develop to the pupal stage, rest in the stage a week, then the flies emerge and in two or three days the females have attained full sex maturity and are ready to begin larviposition, thus making possible a generation every month during summer.

Some maggots winter in the first stage larvae of the brown-tail and others in the state of puparia in the ground. The breeding of this parasite was accomplished in much the same manner as with the Apanteles already described. Gypsy moth larvae were collected, confined in the trays, fed on oak leaves and as the puparia developed, these were picked out and plantings made.

This insect should prove of great importance, as it will attack both the gypsy and the brown-tail moth with avidity and at least sixteen of our native insects are known to serve as its hosts. None of our native tachinid are known to have as many hosts. The cabbage butterfly and the tussock moth are readily attacked and great good may be expected to this vicinity where the tussock moth to Portland and the cabbage worm to Cape Elizabeth have at times been considered serious pests. At the time of collecting the parasite bearing larvae of the gypsy moth, the opportunity was improved to collect a number of Calosoma sycophanta beetles and two plantings were made, one within the city limits of Portland and one in the badly infested woodland of York. At the same time several hundred larvae of these beetles were collected and confined in hibernating ground cages at the laboratory, where they will be available for colonization as adults in the spring.

Calosoma syrophanta is a beetle about one inch in length and of a brilliant green color. It has long legs so it is able to get over the ground very rapidly and get into the trees after its prey. The beetles and their larvae secure their food by tearing into the caterpillars or pupae and eating the viscera found within. The beetle was first imported to Massachusetts in 1905 and the best results have been obtained from specimens received from Switzerland and Italy.

The eggs are deposited in the ground by the female beetles; from these eggs in from five to eight days the larvae hatch and begin feeding on caterpillars and pupae showing a preference for pupae. The three stages and two moultings of the larvae occupy from two to three weeks, during which time they feed in the manner already described; this feeding completed, the larvae makes its way into the ground and by burrowing forms a chamber in which to pupate; here it remains until the emergence of the beetle which begins feeding at once, thus completing the life cycle.

The average number of eggs laid in one season by the female beetle is about one hundred, although a single female has been known to lay six hundred and fifty-three eggs in a season.

Calosoma sycophanta can apparently feed on caterpillars affected with the "wilt-disease" without any ill results. The beetles have been known to live in captivity for one month and thirteen days, without food of any kind, and with natural conditions of liberty the time of fasting could be increased. Much that is good can be said of this predaceous beetle but the true parasites must not suffer by comparison. When the habits of this beetle and its larvae are observed by the average person, its usefulness is at once considered as most important, as its destructive powers are so apparent. But the work of the other parasites, as the hymenopterous flies, although not so readily observed, is fully as important from an economic standpoint.

ANASTATUS BIFASCIATUS.

Anastatus is a native of Europe and Japan and effective as a parasite there. This very small insect attacks the gypsy moth eggs before the larvae develop; the parasite eggs are laid one in each egg of the host and the maggot feeds on this, becoming fully developed in three weeks; when it rests, doing no more work until the following season. About three weeks previous to the appearance of the egg clusters, this Anastatus undergoes the change to pupa and adult and is ready to deposit eggs for another generation.

Blossom Time in J. Elliott Smith's Fair View Fruit Farm, Wolfville, N. S.

SCHEDIUS KUVANAE.

Schedius kuvanae is also an egg parasite but seems to prefer to attack the egg clusters in which the caterpillars have developed and completes a generation about every month during warm weather. Therefore two broods in the fall are possible before winter sets in. If colonies of these insects can be established the gypsy moth will have enemies for all but the imago stage.

CONCLUSION.

Whatever results may be obtained it must be observed by every owner of trees, that hand work must continue for a time at least, and a very active warfare be waged against the gypsy and brown-tail moths.

Time is needed for the predatory enemies to control the rapidly increasing infestations and assist in restoring "the balance of nature" which has been disturbed. In general no one need fear retarding or interfering with these parasites by general extermination of their hosts in orchards, and the sites selected for colonization of these parasites have been selected in localities where the moth colonies will afford abundant food for their support until they become strong and well established. It is the purpose of the department to give all information possible to interested people and their hope is that everyone interested in the examination of these moth pests will acquaint themselves with the nature of the parasites, that none may be destroyed through ignorance of the habits of these beneficial insects.

Fortunately it has been possible to secure the assistance at the laboratory during the summer, of college men (more particularly from the University of Maine), their courses in biology especially fitting them for the work, and their efforts have been greatly appreciated.

From the information obtained as to dispersion, the results of the season's work have been most encouraging and it will be the policy to breed and distribute parasit)s more extensively another season. The work of this year has proped that the building occupied and used at present is not large enough to accomodte the work contemplated for next season. A larger building possible of better ventilation, thus obviating the confinement of working among the poison spines which occasianed so much discomfort, will be built. This structure will have a capacity of two hundred trays and it is hoped with this equipment to increase the number of parasite colonies so that all the infested territory will be given protection which ought to assist hand work greatly.

What is Powdery Scab?

Several readers of the Maritime Farmer have written asking for information re the "Powdery Scab" of potatoes which has caused such a commotion among the potato growers vf the Maritime Provinces:

"CORKY" SCAB OF POTATOES.

(Spongospora subteranea Johns.)

Although the disease "Corky" scab, has part of its name in common with the ordinary scab it is in no way related, nor does it even closely resemble the common potato scab. Probably the name 'Powdery Scab,' is more appropriate for incrustations on the surface of potatoes in this disease are filled with a powdery, olive-green mass composed entirely of the spores of the fungus Spongospora. They are often present in such dense masses as to appear like the spore powder of smut fungi. The common potato scab does not alter the shape of the tuber, whereas the powdery scab frequently produced knarled, knobby tubers covered with deep sores, almost totally unfit for any purpose. The fungus, or more correctly speaking, the slime fungus (Myxomycete) belongs to the same group of organisms as that causing Club Root (Plasmodiophora) in turnips and other related plants. It produces millions of perforated spores which infest the soil and any sound tubers that may come into contact with diseased ones. The disease is widely spread in Europe, hence it affords one more reason to abstain from using imported potatoes for seed purposes. The great danger of introducing new diseases into any country should be fully realized. The examples afforded by the Late Blight of potatoes (Phytophthora infestans), which disease has also been introduced from abroad, should suffice to suppress any sceptical person of its serious importance and the responsibility of any grower who commits 'an error of judgment.' To spray potatoes, as they should be sprayed, to prevent any losses from Late Blight, costs, inclusive of labor and material, twenty-four dollars per statute acre. This expenditure, however, may save every cent of loss while spraying to prevent potato Canker and Corky Scab has been found of no value whatever.

A large quantity of imported tubers have been examined. While it must be said that some were of remarkably fine quality, there were whole consignments that showed Dry Rot, Rhizoctania, Scab, Late Blight, Sprain and Bacterial Rots to such an extent as to be useless for any purpose.

The risks involved from the introduction of new diseases are far more serious than they appear. It is not a question of injuring the crops and purses of one or more growers, but the whole industry of a nation may be seriously compromised. The sooner this question receives international attention the better, for only by international agreement will it be possible to prevent the wholesale exportation of diseased vegetation, and thus the distribution all the world over of diseases against which every country spends thousands of dollars annually in its efforts of control, but but which it shows no concern about when exporting into any other country.

The following order in council was passed last year in Canada:—

"Every person using for seed other potatoes than such as have been raised by himself must obtain, preserve and exhibit on demand, previous to planting, a certificate from the seller or his agent stating that the potatoes to be used for seed have not been imuorted from Europe."

The following provisions have been copied from the Destructive Insect studied, as any farmer or grower on whose land this Potata Canker or any Corky Scab disease is subsequent ly found will be asked to furnish evidence of the origin of the potatoes used for seed. Anybody found to have contravened the Act or any regulation will not only render himself liable to a fine or imprisonment provided under the Act, but will also forfeit the entire crop without any compensation.

"Compensation not exceeding two-thirds of the value as assessed by the inspector, of the vegetation or vegetable matter or containers thereof destroyed by the instruction of an inspector, shall be granted by the Governor in Council upon the recommendation of the Minister, except in cases where these regulations are carried out under the direction of the government of a province not granting compensation, or in the case of potatoes or potato crops."

"Every person who contravenes any provision of this Act or any regulation made thereunder, shall be liable, upon summary conviction, to a fine not exceeding one hundred dollars, or to imprisonment to a term not exceeding six months, or to both fine and imprisonment. Any vegetable matter imported or brought into Canada contrary to this Act, or to any

regulation made thereunder, shall be forfeited to the Crown."

"The owner, occupier or lessee of any premises or place where any of the insects, pests or diseases specified herein shall be found, shall immediately notify the minister, and shall also send to him specimens of such insects, pests or diseases."

Powdery Scab of Potatoes.

Quite a furore was caused in potato growing sections and shipping circles of the Maritime Provinces by the order issued by Secretary Houston, Washington, D. C., continuing the quarantine put temporarily into effect September 20th last, forbidding potato importations from the British Isles and all continental Europe.

The Secretary's action was modified, however, by a second order, under which the quarantine may be raised under proper regulation and inspection, from foreign countries or districts, including Canada, which can show that they are free from potato wart and powdery scab, the two diseases which the department ol agriculture aims to keep out of the country.

The first order became effective on December 24th, 1913 but will admit until January 15th, 19144 potatoes covered by consular invoices on or before December 24th. The second becomes effective on January 15th.

A conference on this matter was held in Washington early in December at which Mr. Geo. O'Halloran, Deputy Minsister of Agriculture and M. G .Gusson, Dominion Botanist and other representatives of the federal and local departments of agriculture were present and the modified order already referred to is the outcome of the meeting.

The export of potatoes to the United States is considerable, and if an embargo were put on it would work considerable hardship. For the past ten years, from 1902 to 1912, the average amount exported was 433,000 bushels valued at $197,000. The heaviest year was 1904, when there was a shortage in the United States when the exports totalled $1,450,000 bushels.

It is believed at Ottawa that dealers who have been trying to corner the American potato market are behind the attempt to place an embargo on Canadian potatoes.

In the case of certain provinces in Canada and certain countries and districts of Europe the officials of our agricultural departments believe the absolute prohibition can be lifted in time to allow the movement of the present year's crop, under the regulation and inspection, which, under the secretary's order, is similar to that for nursery stock.

According to a statement recently issued by the U. S. Consul for Prince Edward Island, the Island Province potatoes are free from powdery scab and other diseases on which a ban has been placed, the Island farmers feel quite confident that so far as the garden of the Gulf is concerned the embargo will be cancelled at an early date.

The New Brunswick Department is also busy trying to ascertain the correctness of the claim that some districts in New Brunswick are infested with the Powdery Scab. But so far as we are able to ascertain both Nova Scota. aad New Brunswick are free from the Powdery Scab and ere long we trust to see the bars removed that at present hinder the moving of the 1913 crop.

There is no doubt but our potato growing friends in the eastern sections of the neighboring republic will do their utmost to keep the bars at top notch and we cannot blame them if there is the least shadow of suspicion in regard to the existence of the Scab on this side of the line. However, we believe the Maritime Provinces can produce a clean hill of health that will be above all suspicion. Our farmers will then, as in the past, be allowed to enjoy the opportunities offered by the larger markets.

In the meantime it behooves every farmer to acquaint the secretary for agriculture for their province with the conditions existing in their respective localities, and il they have observed any suspicious potato diseases to help solve the problem by acquainting their agricultural departments re the facts of the case.

Following is a letter recently issued by the New Brunswick Department of Agriculture.

"This is to certify that R. P. Gorham and D. B. Flewelling are regular members of the staff of the Department of Agricu,ture in the Province, and at present are authorized to examine potatoes in every and any locality throughout the province.

"It is charged by the Government of the United States that we have the disease among our potatoes known as "powdery scab" and it is proposed to place an embargo upon the localities effected. The proposed legislation of the Government of the United States is of such a nature that it behonves the Government of this Province to made faithful endeavours to determine where the disease exists. Not only is this important in the matter of shipments to the United States, it is important for our local markets.

"If this disease becomes general througnout the Province, it will mean a large financial loss to our farmers; therefore we solicit the hearty co-operation of all the farmers and buyers in our efforts to locate this disease, and afterwards to enforce such measures as we may deem best to eradicate the same from the Province. I would call your attention to legislation passed by this Province on the 20th of March, 1313, known as "The Injurious Isect and Pest Act." Sections 5, 6, 7 and 8 of the Act are as follows:—

"Sec. 5. The Minister of Agriculture may appoint inspectors and other officers for carrying out this Act and the regulations made thereunder, and such inspector other officers so appointed shall act under his direction.

"Sec. 6. Any inspector or other officer so appointed may enter in or upon any place or premises in which there is reason to believe that any such pest or plant disease exists.

"Sec. 7. The Minister of Agriculture upon the report of any inspector as to the existence of any such insect, pest or plant disease, in any locality confined in such report, may prohibit the removal from such locality of any vegetation, vegetable or other matter, which is likely to result in the dissemination of such insect, pest or plant disease.

"Sec. 8. Any person contravening or neglecting to carry out, or offering any hindrance to the carrying out of any provision of this Act, or any regulation made thereunder, shall be liable, upon summary conviction, to a fine of not less than twenty dollars nor more than one hundred do,lars, together with costs, and in default of payment to imprisonment for a period of not less than ten, or more than thirty days.

"I trust that the officers of this Department will have the hearty co-operation of all the potato growers of the Province.

"From information gathered at the hearing recently held in Washington, I am satisfied that this disease can be soon eradicated."

Secretary for Agriculture
J. B. DAGGETT,

Conserving the Moisture by Cultivation on J. Elliott Smith's Fair View Fruit Farm, Wolfville, N. S.

The N. S. Farmers Association.

The annual meeting of the Nova Scotia Farmers' Association will be held this year in the town of Bridgewater, County of Lunenburg, on January 27th, 28th and 29th.

We have not yet received a copy of the programme but we are creditably informed that Geo. H. Barr, Chief Dairy Division, Ottawa and W. A. McKay, Supt. of Dairying for Nova Scoria, Miss Jennie A. Fraser, Supt. of Women's Institute for N. S., J. M. Trueman, Prof. of Agriculture and Farm Supt., Truro and Prof. Straw, Horticulturist at the N. S. A. C. will be there and give addresses on subjects of interest to farmers, their wives and families.

Prof. M. Cumming and F. L. Fuller will also be there and none will be listened to with a keener interest by the farmers of Nova Scotia than they.

W. W. Baird Supt. of the Experimental Farm, Nappan, has also been invited to take part in the proceedings and if he sees his way clear to accept the invitation, something good may be expected from him.

It will do you good to go to Bridge water and associate with the other progressive farmer that will be there.

The citizens of Bridgewater and the farmers of Lunenburg county will deliver the goods in making your stay both pleasant and profitable.

Warbles in Cattle.

Sunscriber writes: "I am told that there is a cure for warbles that grow in the backs of cattle during the winter. If this true?"

A recent publication from the Health of Animals Branch, Ottawa, deals with this subject at some length. This department can give no cure for this trouble, further than to suggest that any application which will prevent the warble fly from attacking the cattle and laying its eggs during the summer will prevent the development of the grub in winter. The eggs are laid on cattle that run out of doors during June and July. As to where and how the insect passes the different stages of life from the time the egg is laid until the grub appears in the animal's back is not perfectly understood as yet by the veterinary profession.

The most common and most feasible method ol ridding cattle of these pests is to squeeze them from the skin in the late winter. Any form of injection that kills the grub while in the flesh is injurious, as the grub must then be absorbed by the animal body. In districts where cattle are dipped for mange and ticks, there is scarcely any trouble from grubby hides, the dip evidently destroying the eggs or the newly hatched larvae. A fairly strong solution of sheep or cattle dip applied during June and July might be tried.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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JANUARY 13, 1914.

DATES OF ISSUE.

January 13-27
February 10-24

A Happy, Prosperous 1914 to all.

* * * *

If you have made some errors in past years that were not conducive to the best returns for your labors try and not repeat them in 1914.

GOOD MACHINERY.

Every farm should be equipped with first-class machinery but it is not necessary to spend so much money annually as is done in order to do this. More is lost yearly to the average farmer through lack of care than is necessary. When an implement has served its purpose it should be cleaned of oil, repainted if needed, and put under cover. There is not another industry in the world perhaps that takes as little care of its machinery as the farmer. The accomplishment of destruction by rust and rain is always more than by use.

THE N. S. FRUIT GROWERS MEET.

The annual meeting of the Nova Scotia Fruit Growers' Association will be held in the town of Kentville on January 20th, 21st and 22nd. A good programme is assured. The various topics for discussion will be of such vital importance to each and every fruit grower that they cannot afford to miss the meetings. The practical and theoretical phases of questions confronting the best interests of fruit culture and marketing will be compared by men who knaw, men who are doing things, and after whom the world at large is beginning to pattern.—Hear them, it will do you good.

SKILL COUNTS IN FARMING.

There are not a few who still believe that skill counts only in business, in manufacturing or in the professions, and that the farmer has not any great need for this quality in pursuing his calling. There is no greater fallacy than this. Of the different callings we have named, we would place farming at the top of the list of those requiring the highest skill and intelligence in its successful operation. To practice soi, cultivation so as to obtain a maximum return, to breed and raise stock in a way to reap the greatest reward, and to carry on the business of farming in the most profitable manner, requires no mean skill and intelligence. For this reason the cleverest boy should be kept on the farm. Educate and train him for his work, and other things being equal, he will have a greater chance than his competitor who has not been so trained and educated.

NEEDS TO BE AN OBSERVER.

There is no occupation that demands wider observation and good judgment than that of agriculture. Especially is this seen in spring time. Plans for the utilization of the ground have been resolved in the farmer's cranium during the winter months. He had to take into account the past crops on that field, the probable, and, if possible, the exact nature of the soil, the question of fall prices, the suitability of the weather, and the cost of help and harvest. Anyone will get a return of some kind on any land with any management, so that the wayfarer, though a blockhead, need not starve, yet to become affluent, and the most serviceable to society and industry, he must produce the maximum. That getting of the maximum makes of the farmer a man of rare executive ability. One common mistake that tillers of the soil fall into, is not being quick enough to adapt themselves to the changed circumstances. The man who can see ahead as to what the demand will be, and the one who will quit raising what his farm was never intended to produce, is the one to prosper.

WHERE THE FARM SHINES.

In writing for the May Century, Luther Burbank says some things in his article, "The Training of the Human Plant," that will bear repeating. Mr. Burbank says: "I should not only have the child reared for the first ten years of its lile in the open, in close touch with nature, a barefoot boy with all that implies the physical stamina, but should have him reared in love. Love must be at the basis of all our work for the race; not gush, not mere sentimentality, but abiding love, that which outlasts death. A man who hates plants, or is neglectful of them, or who has other interests beyond them, could no more be a successful plant cultivator than he could turn back the tides of the ocean with his finger tips. The thing is utterly impossible. You can never bring up a child to its best estate without love. God made religion, and man made theology, just as God made the country, and man made the town. I have the largest sympathy for religion, and the largest contempt I am capable of for a misleading theology. Give the child nature. Let their souls drink in all that is pure and sweet. Rear them, if possible, amid pleasant surroundings. If they come into the world with souls groping in darkness, let them see and feel the light."

DON'T RELY ON INERTIA.

Merchants and manufacturers in the of the tide of a magnificent business era are liable to rest on their oars and depend on the inertia acquire from the first wave to carry them to fortune. It will be wise to remember that motion continues no longer than the time when fiction and other resistances combined become equal to the force from which the motion is derived. If the efforts of the last few months have brought orders at a rate that equals the capacity of a factory for production or a store for sales, don't imagine that the force can be drawn and the rate still maintained. Motion is not perpetual. A moving body gradually moves more slowly until it stops, after the impulse ceases, and much more exertion is required to set it in motion again than to keep it moving after it is started.

Let us remember how difficult it was to start this new prosperity, and continue to employ the agencies which helped. Too many orders this month end too few next are not first rate business. However busy one may be today, sound business considerations require that he shall keep in operation the influences for bringing business tomorrow. Those who neglect to apply this rule of action to their affairs will in a few months hence have plenty of unwelcome leisure to devote to vain regret.

THE FARM WORK-SHOP.

There are but few farms on which a workshop is not needed, for there are several reasons why they are profitable investments. Some one will say, 'the blacksmith shop is too handy for me to put up one of my own.' But even if the shop is just across the road from your house, the shop bill will be the same. Material costs the blacksmith but little, the shoe and nails to put on cost him but five cents and for his work he gets fifteen to twenty cents for a few moments work. Other work is practically the same. With a farm shop, the hired man can do most of the work, on rainy days, under your supervision. My blacksmith bill, to say nothing of the carpenter work, has been as high as twenty dollars a year and this was only part of what I was out. My time was worth something. I have sent to a shop nearly a mile away and found that others were before me so that my work could not be done that day. Another trip next day and my machines must stand idle. No matter how simple the break or how easy to mend, we must go to the shop, if we are not prepared to do it at home. Then if we have an outfit at home we can fix it or have it fixed to suit ourselves which is not always the case when we are obliged to send to the shop, for the smith does not understand the nature of the trouble, as we do, and so does not know how to fix it. Another point, this is good training for the boys and hired men. They can learn to put up buildings, fences, gates, make and repair harrows, plows, rollers, repair machines, shoe horses and many other things, the "know how" of which will be a great help in after life. Every farm should be equipped with some kind of an outfit if it is only a wood working one costing a couple of dollars. A complete outfit for wood and metal work need not be expensive, say cost from ten to twenty dollars. I have spent that much in a year in direct pay-out besides quite a lot of time consumed. The house in which to house them, should be roomy but not expensive, in most of the cases they are made of second hand lumber and covered with boards, planks or felt.

THE POSSIBILITIES OF A SEED GROWING CENTRE IN ANTIGONISH.

We have frequently referred in the columns of the Maritime Farmer to the important role, in the development of a better agriculture that has been and is being assumed by prominent clergymen of all denominaions.

The far-seeing clergyman takes an active interest in the temporal as well as in the spiritual welfare of his parishioners. Many of them are leaders in the introduction of innovations in certain localities that tend for better business methods in the various transactions connected with agriculture.

We had the pleasure of hearing Rev. Dr. Hugh McPherson, of St. Francis Xavier College, Antigonish, give an address before the meeting of the Maritime Seed Growers' Association at the recent Winter Fair, Amherst, on "The Possibilities of a Seed Growing Centre in Antiganish.

The County of Antigonish is rich in agricultural possibilities. She is also rich in men, many of whom have had the opportunity of attending that splendid educational institution in which Dr. McPherson is one of the instructors.

The graduates of St. Francis Xavier are not, however, confined to the County of Antigonish. You will find them filling prominent positions in church and state all over the world and a great many of the more recent graduates owe their love for the promotion of agriculture to the teachings and example set by Dr. McPherson.

Many of our Nova Scotia readers, who attended the annual meeting of the Nova Scotia Farmers' Association at Antigonish some years ago well remember how kindly they had been used by the Dean of St. Francis Xavier College, whose name, by the way is also Dr. Hugh McPherson but not the Dr. McPherson of our sketch, although he too, takes a deep interest in agricultural subjects.

In agitating for better conditions of growth, selection and sale of seeds in the rich agricu,-tural district of Antigonish, Dr. McPherson is doing a work that is sure to be far reaching in its results.

Dr. McPherson's address will be found on page 221.

Rev. Dr. Hugh McPherson.

The Possibilities of a Seed Growing Centre in Antigonish.

The question I am about briefly to discuss is whether conditions are favorable in the County of Antigonish for the production of high class seed in such quantities as will supply whatever local demand there may be, and also enable farmers to place seed on the market in carload quantities.

Before answering the question in the affirmative as I am going to do, I may be permitted to say that there is noticeable in Antigonish, as indeed in other parts of the Provinces, an awakening in the agricultural life of the country. This is very apparent to any observant man who is in touch with the community. Among our best farmers especially, in fact among all classes, there is increased interest in the work of the farm and an optimism and quiet enthusiasm which give promise of good developments in the near future. The farmers seem to be ready to enter heartily into any advance movement and are desirous and eager to take hold of new and better methods.

With nearly a century gone by since pioneer days, we are yet only young as a community, and as with all beginnings development is at first slow and on general lines; but already differentiation is taking place, tendencies are showing themselves, organization is the order of the day. A sign of this growth is the fact that specialized work is being taken up and it seems to me we struck our specialty, at least a good special line when last summer we organized a local branch of the Canadian Seed Growers' Association. This club was started with a membership of about twenty, with enough more members in sight when we are ready for them. Our work is nearly all ahead of us, but we can see no difficulties big enough to prevent us in a few years from having a smart seed producing community. Our object will be, of course, to produce seed under the rules of the Canadian Seed Growers' Association to help one another in the task by each other's experience, and to co-operate in the disposal of the product. The members are starting with cereals only. When we get well under way it is probable some other seeds will be taken up. Antigonish is a good county for potatoes and other roots. Some fields could have been seen this year from which clover and timothy seeds might have been gathered and the possibility of propagating a native strain of alfalfa has on more than one occasion been demonstrated.

We have this advantage in starting that there are among our numbers some who have been members of the Canadian Seed Growers' Association for a number of years and whose experience will be invaluable to the beginners.

Now, as to the adaptability of Antigonish for this work. On the live stock side of farming there is a strong tendency towards dairy stock, and this would seem to go admirably with seed growing. To keep up the fertility of the soil there is nothing better than the dairy cow, and a good fertile soil is a first essential for seed-growing. On the other hand, good seed for the farm crops is just as necessary to produce plenty of feed for the cow, and seed for the market is an excellent cash crop to supplement the income from the dairy. And let me remark that a suitable money crop has an important place in the evonomy of the farm, and that high-class seed seems to be a most suitable one for our county, especially for such farms as are a considerable distance from the Railway. Nor will the objection against selling crops off the farm hold when there is question of such a valuable article as high grade seed. Its feeding value can be replaced at a much less price.

Looking at the problem in the abstract the elements upon which the formation of a successful seed growing club depend, would seem to be, the land, the climate, and the men. Of suitable land we have plenty beyond question. True some of it has been "run out" by injudicious methods of cropping; but even that will respond generously to proper treatment.

Without going into detail as to soil, I may say that a large percentage of the area of the county is good soil capable of being brought into a high state of cultivation. About one-half of it is underlain by limestone and a considerable area of shale and smaller areas by sandstone and crystalline rock. There are several types of soil in the meadows or intervales there are alluvial soils. The uplands are mostly various grades of clay, which make strong retentive soils. The faces of the hills are often gravelly. The topography or lay of the land is also an important feature. To present the best conditions for cultivation, to get an even stand and even maturity, the land must be level and of the same quality. Not only do our meadow lands possess this important feature but also the same condition can be secured on a large portion of the upland. Beyond the elevations which rise from the valleys are stretches of comparatively level land where excellent cultural conditions can be procured.

In climate there is no essential difference between our country and the rest of these provinces. In the springtime the land is probably a few days later in "warming up" than in the counties west of us on account of the ice which sometimes packs on our North Shore. This drawback may in part at any rate be offset by drainage. In any case the condition could be taken advantage of for the natural selection of hardier strains.

In regard to the third very important element the people, I think I may say that when they take hold of a thing they have the intelligence, determination and energy to carry it through.

Of more practical importance are the steps to be taken to convert our possibilities into actualities. Inducements in the way of a good market are open to us; and the various exhibitions and fairs, provide a stimulus and give zest to the work. It must be recognized that the work of producing high-class seed like that of producing high-class stock calls for the exercise of the highest form of the husbandman's skill. With an army of scientific men both at home and abroad at work on this question the course to be followed has been made clear. There is still however, quite a chasm between the laboratory of the man of science and the ordinary man's farm. We are in hopes that our new club will help to bridge it over. But a great deal of practical work must be done. Good foundation stock must be procured. The beginners have a whole lot to learn about judging, selecting, the preparation of the seed plot and the multiplying field. All this will involve much work and demonstration on the part of the officers of the C. S. G. A., and on the part of all who are interested in the promotion of this good cause.

Nor should the value of meetings and discussions be overlooked. It would be, of much advantage to those who are now engaged or who are about to engage in seed growing to come together as frequently as possible. Scientific men could explain to them the vast importance of improvement in seed, and the laws upon which plant improvement rests. Talks could be given on the advance that has already been made at home and abroad, on the questions that are still awaiting solution, so that all might participate in the wonderful interest that attaches to the whole work. An evening a month of work of this kind would prove interesting and of value in connection with the work on the farm.

Paper read by Rev. Dr. McPherson, St. Francis Xavier College, Antigonish, at the annual meeting of the Maritime Seed Growers' held at Amherst during Winter Fair week.

Importance to the Farmer of Growing His own Seed Grain.

This paper is presented for discussion with the admission that it is not filled with new thoughts on the above subject but is only another repetition of oft repeated truths. My license being the fact that a good thing is none the worse of being twice told.

In the season of 1912 many Maritime Province farmers suffered serious losses through the use of western grain for seed. To these men it is quite unnecessary to say "raise your own seeds." The other side of the argument comes from the men themselves in the statement that partial failure of their crop in 1911 resulted in a scarcity of seed grain so suplies must be bought. The situation resolved itself down to this, not every man need, should or can raise all his seed grain every year but when he cannot, the supply should come from his neighbor's farm where conditions are similiar to his own and where he has watched the growing and the handling of the crop. If he has to go farther afield still, it is obvious that the more closely he has been following the care, handling and selecting of that seed, the climate, the type and cultivation of the soil on which it was produced, the more surely can he judge whether it will be likely to produce the crop which he desires. This association finds a great deal of unfullness here not only in the improvement of the seed of the farm on which the selections are made but in its control of the conditions of seed production.

The lesson taught by the experience of 1912 has been of inestimable value but there is still room for improvement. Some samples of Western grain were sent me in 1913, which were lacking in vitality, one sample having only about 30 per cent. germinable seeds. Discussing this question with a farmer in the vicinity of Truro last Spring, I was surprised to hear him say, "There was no frosted grain in the West last fall." I am not sure whether I undeceived him or merely confirmed his belief that my knowledge of such matters was of little value.

Why raise your own seed grain? It is a fact well recognized among live stock breeders that selection and breeding must go hand in hand with feeding and care if good results are to be obtained. No one expects to produce and maintain a large draft type of horse under the conditions which have produced the Shetland pony or the Bronco of our Western plains. On the other hand forced feeding and hot house conditions in general do not give us the most valuable animal. In short, to produce a breed, strain or family of most value it is essential that the conditions under which the work of improvement is done shall at least approximate those in which that particular animal is expected to do its work. Does the same apply to plants? It most assuredly does. In the final analysis the work of the animal breeder and that of the plant breeder are identical. The laws of heredity are exactly the same. The inheritance of acquired characters has equal importance.

Most of our cultivated plants have been known in the wild state within the written history of men. Selection and cultivation have made them different and more valuable today. If this selection and cultivation has been and is being done with the purpose of improving the value of these crops, is it not obvious that the conditions should be as nearly as possible those under which the crop is expected to yield returns?

No seed grower likes to procure his seed from a country where the growwarmer since that seed tends to be ing season is perceptibly longer and less hardy and to require a longer season for growth and maturity. Proof of this lies in the fact that Siberia and other parts of Russia have given to Canada some of the best varieties of oats that we have. Sweden stands next in line. In fact for the Maritime Provinces the Swedish varieties may even beat the Russian. On the other hand, more unfavorable conditions than ours do not aid in making any variety or strain better suited to our own. It is true that the more rigorous the conditions the easier it is to select from the plants produced those which have the ability to thrive despite these conditions. Even where man does not interfere there is a process of natural selection resulting in the survival of the fittest. Fittest for what? Certainly the fittest to endure hardship and to make growth under adverse conditions, but not necessarily, in fact not usually, the fittest to make use of those more favorable. The American Banner, an oat produced under conditions similar to our own, is perhaps the most popular variety in the Maritime Provinces while Daubeney improved in part of Canada where the season is drier than ours, is only a light cropper here. No certain family or breed of animals after having been stunted in size and made more hardy by being forced to endure exposure and to

(Concluded on page 244)

HORTICULTURE.

Important Booklet on Brown Tail and Gypsy Moth.

The department of Agriculture of Nova Scotia has just given to the public one of their most important publications for the past year.

It is Bulletin No. 5 entitled "The Brown Tail and Gypsy Moths" by Robert Matheson, Ph. D., the Provincial Entomologist, but now in research work at Cornell University Utica., N. Y.

Dr. Matheson has done his work exceedingly well, and has not only given us a most readible bit of interesting literature, but has put in condensed form the history, distribution, and areas infested by these destructive moths, and in detail tells of our control—work against these pests, cost of such a necessary campaign and the necessary precautions must be taken, if we will eradicate these most injurious and obnoxious insects from orchard, field and garden.

This booklet is artistically illustrated with colored plates, so at a glance one can tell the "Brown-Tail" or "Gypsy Moth" if discovered, by comparing it with the colored cuts of these moths.

This is a most useful report and all interested should have a copy, and you can get one free, as long as the supply lasts, by applying to the Agricultural College, Truro.

The Farmers Worst Enemy—From an Article by Forrest Crissy in the Saturday Evening Post.

What is the grower's worst enemy? The whole round of the farmer's life is a running fight against enemies—seen and unseen. Every sowing, every planting, is an enlistment for sharp, active service against a horde of hostile forces, every profitable harvest is a victor's portion of the fruits of conquest.

Science has trained the microscope on some of the enemies and forced

Water Lilies in the Ezperimental Farm Gardens, Charlottetown, P. E. I.

them into the open, and chemistry has followed up this coup, by finding an effective firing range on these hostiles once ambushed in their own invisibility. After all, though the microscope of the scientist and the retort of the chemist seem to have left this vital problem still unsolved. The big question—What is the farmer's wornst enemy?— yet remains without a conclusive answer.

Recently I put the question to one of the shrewdest and most successful fruit growers in America—and to draw him out I added:

"Is it frost, flood or drought? Is it weeds? Is it animal disease, plant disease or insect pests? Or, as some say, is it the oppressive middleman?",

"No," he answered, after a reflective pause; "it isn't the codling moth or the chinchbug, the smut or the cut worm, the cattle tick or hog cholera, the untimely frost or the withering drought, or even the middleman, that costs the farmer—at least my kind of farmer—the heaviest toils of unrealized rewards. It isn't any kind of a bug that can be spotted with a microscope or banished with a sprayer. The worst enemy of the farmers of America is the crooked farmer who puts his product under false pretenses and thinks that his short-sighted tricks are putting him ahead in the game. He fouls the whole nest for himself and every man in his particular line of production."

"Next in rank to this man as an enemy to his kind is the farmer who is too ignorant of markets, of standard and of up-to-date business practice to put up a really honest pack of anything. Take apple growing, for example. There are states in which this industry ought to be at its best because of superior natural advantages, but where it has been given a black eye, a knockout blow, by the crooked and the ignorant practices of growers who have been numerous and persistent enough to befoul that state's reputation in the big general market. Maybe this sounds sensational. but keep your eyes open, dig down into the situation and see what you find. I know it's much more popular—especially at grower's conventions and farmers' institutes—to pound the commission merchants and the middleman and call them robbers. A good many of them are, and a great many more of them are the victims of a malformed and unstandarized selling system that makes exact honesty a mighty difficult practice. But dishonesty outside the ranks can never do quite the harm that crookedness right in one's own camp does. I offer this as a plain business observation, not as a moral text. The grower who puts up a crooked pack or the one who, from ignorance or shiftlessness, puts up a shoddy pack, is a more effectual enemy to the whole body of growers than the dishonest and greedy middleman. Personally, I regard these men as really the worst enemies of the whole farming fraternity."

Steady Demand for Apples.

There is a steady demand for apples at the present time accompanied by and appreciable enchancement of prices. In Scotians the leading lines are Fallawaters, Ribstons and Blenheims, at prices ranging from 18s. to 24s. per barrel for No. 1 grade, 16s. to 20s. for No. 2, and 13s. to 16s for No. 3. Canadian Golden Russets, usually a popular line for the holiday trade, are dearer, the best marks fetching 32s. per barrel. Baldwins worth worth 24s. to 28s., Spies 22s. to 26s. and Fallawaters 21s. to 24s., 32s. to 36s. and York Imperials 30s. to 33s. per barrel.

These prices are likely to be maintained for some weeks.

Your Commissioner visited Smithfield market during this week where he found a first rate, large consignment of Golden Russets readily saleable at 33s. per barrel.—Birmingham Trade Commissioner, Dec. 17, 1913.

The Fall Web Worm.

Those unsightly webs, which in the fall of the year are to be seen in the orchard, make known the presence of the fall web worm. This insect should not be confused with the tent caterpillar which appears earlier in the season.

In habits and life history these two insects are quite dissimiliar in many respects. The tent caterpillars, which caused so much damage in some districts this season, are now in the egg stage of the life circle. In the character of the web there is a marked difference. The web worm builds a large web, generally near the ends of the branches, and always remains in the web. As new feeding grounds are required, the web is enlarged. For this reason the web becomes most unsightly because of the cast of skins and excrements of the inmates.

On the other hand, the web of the tent caterpillar is more compact and found usually in the crotch of two or more limbs. The caterpillars remain in it only between feeding periods. When feeding they consume the entire leaf while the web worm feeds only on the upper surface, giving the leaves a characteristic brown appearance.

The parent moth of the web worm is white in appearance with black markings on the wings. In early summer it emerges from the cocoon in which it has passed the winter. The females lay their eggs in patches on the under side of the leaves. During the latter part of July and the month of August the caterpillars begin to make their appearance. They then proceed to form the web. When full grown—about one inch in length —they spin their cocoons in preparation for the winter.

Because of the season at which this pest makes its appearance, spraying as a means of eradication is hardly practical as few orchardists care to spray so late in the season. Occasionally the last spray far codling worm remains on the leaves long enough to be of assistance in combating the web worm.

Usually the only remedial measure necessary is to keep a sharp lookout for the webs and destroy them as soon as noticed. As the webs are nearly always found at the tips of the branches, little damage is done to the tree by removing them.

Cold Storage of Apples.

A large proportion of the difficulties in cold storage of apples is the result of delaying the storage of the fruit after it is picked. The apple ripens more quickly when picked than it does when hanging on the tree and maturing in the same temperature. The diseases with which the fruit is effected appear to develop more rapidly when storage is delayed. If the weather at the harvest time is warm —that is, if the temperature avecages above 60 degrees Fahr.—the fruit matures and the diseases grow with unusual rapidity. On the other hand, if the weather at this time is cool, the ripening process is slower and the diseases may not increase in severity. The ripening that occurs during the period of delay between picking and storing shortens to that extent the life of the fruit in the storage house. Keeping (oe apples in piles or packages in the orchard before storing, or delays in transit, or at the warehouse before they are placed in storage, therefore, cause the fruit to ripen and diseases to spread, and the ap ples may already have commenced deteriorating when they enter the warehouse.

The importance of storing fruit immediately after picking is greatest in the warmer apple belts of the country, though it is equally important in the northern apple-growing sec tions when the fall months are unusually warm.

In handling the apple for cold storage the ideal is reached when the fruit can be taken directly from the tree to the warehouse. So far as the fruit is concerned, a similiar condition is approached when it is shipped to a distant warehouse in refrigerator cars, or the ideal is attained in those sections or seasons in which the picking and handling of the crop occur in cool weather. It may not be parcticable for the apple dealer who is located in a distant city to store his fruit in warehouses situated near the orchards, nor is the local warehouse advisable in sections where there are inadequate facilities for transporting the fruit to distant mar kets during the winter. As a general rule, it is to the mutual interest of the owner and the warehouseman that the fruit be stored where it can be watched carefully throughout the season by the owner, as the warehouseman is responsible only for the proper management of the building and its contents, and not for the ultimate condition of the fruit.

A system of warehouses located in orchards and managed by growers, or operated by companies in near-by towns, would reduce some of the difficulties with which the growers in the warmer apple belts have to contend, and would thereby give greater stability to the industry in those sections. There can be no question, from the standpoint of the keeping of the fruit, of the advantage of a ware house located near the orchard, but its usefulness to the business as a whole depends not on the keeping quality of the fruit alone, but on the larger question of adaptability to the present requirements of the apple trade.

The same variety of apple may vary widely in keeping quality when grown under different conditions. The apple is affected by its geographical environment, by the type of soil, by the condition of the trees, and by other factors connected with its production. It is probably safe to say that an environment which causes the fruit to grow with unusual rapidity causes it also to mature correspondingly fast after the fruit is picked.

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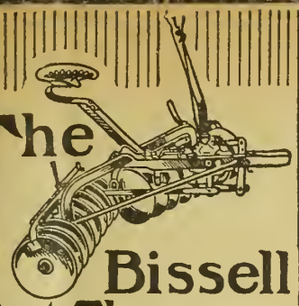

The Bissell Out-Throw Disk Harrow

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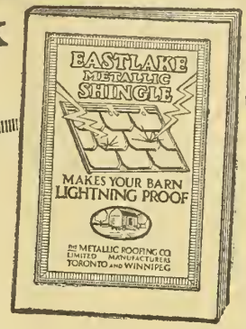

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Apples grown on low, rich land or on young trees are abnormally large and are likely to deteriorate sooner than fruit of the same variety from older trees on a more congenial soil. Fruit stimulated by nitrogenous fertilizers in orchards in which the water-holding power of the soil has been largely increased by the incorporation of vegetable matter is often inferior in keeping quality. Similiarly, apples produced on quick-acting sandy soils and on the strong new lands in some of the newer apple-growing regions are apt to reach the end of their life early in the season. The grower should recognize the fact that the apple is greatly modified by its environment, and that the inherent differences in each lot are not eliminated by storage treatment.—T. A. Tefft, New York, in Pennsylvania Farmer.

The Importance of Ventilation for Stored Fruit.

As fruit-raising is limited to a few regions enjoying favorable climatic conditions, the widespread consumption of its perishable product is regulated by the efficiency of transportation and storage facilities. If fruit can be put on a distant market in first-class condition, its excellence creates an enlarged demand. If it can be stored for any length of time without deterioration, the season is lengthened to just that extent. While recent progress in the art of cold storage has been the biggest factor in the unbuilding of large centralized fruit industries, the frequency of carloads spoiled in transportation, indicates that there is still room for improvement in our present methods of packing, loading and car refrigeration.

Recent scientific investigations on the subject emphasize more than ever the necessity of ventilation at all times for mature fruit in transportation or in storage. Carloads of peaches leaving the point of shipment in first-class condition, well packed, with individual wrappers and loaded on board with air space around each box, have been known to suffer seriously in comparatively few hours in an iced car at 45 degrees. When fruit deteriorates rapidly in refrigerator cars the damage is usually most marked in the top tiers, especially in the center of the car.

A study of the physiological chnages that occur in ripe fruit will aid in realizing the importance of ventilation. All plant and animal life breathes, taking in air or oxygen and giving off carbon dioxide, an inert gas. This process of respiration is carried on by ripe and ripening fruits as well as by the leaves, with this difference, matured fruit will continue to give off carbon dioxide long after it has ceased to absorb oxygen. The practical application of this scientific truth is that in a sealed refrigerator car the fruit soon uses up the pure air and fills the enclosed space up with the excreted gas. In afew hours when all the oxygen in the car is used up, an unnatural physiological action called anaerobic respiration (breathing without air) begins. This results in several important tissue changes.

DESTRUCTION OF TEXTURE.

In any kind of breathing oxygen is required. If this is not supplied by the outside air, the fruit takes it up from its own body cells; feeding on itself, as it were. This brings about changes that result in a general breaking down in texture so that when the fruit reaches the grocery store and becomes warmed to the street temperature, a rapid softening occurs. In the case of peaches the fruit may appear first-class, but it is brown in flesh underneath the normal skin, tasteless and mushy. Among dealers fruit of this kind is said to be affected with ice-scald. Cherries and bananas are also species that suffer considerably from anaerobic respiration. Some fruits like apples lose their beautiful red color and become bleached by the inertert gases.

Besides the destruction of texture, anaerobic respiration frequently produces alcoholic fermentation within the fruit. Of all the fruit experimented with, this is most noticeable in the case of cherries. When fruit is allowed to ripen in pure air, any alcohol that may be formed is converted into volatile oils. These oils are the source of the distinctive flavor and the aroma associated with fruits, and are not produced when the ripening is checked by the accumulation of carbon dioxide. Hence poorly ventilated fruit may have the snappy, sharp taste of alcohol or be bitter and repugnant because of other chemical changes set up.

PRESERVATION OF GREEN FRUIT.

The scientific researches which pointed out the loss in texture, flavor and aroma of ripe fruit from anaerobic respiration, also reveals the fact that green peaches under the same conditions may be kept considerably longer than in air. In all green fruit there is a stiff gummy constituent called pectose, which makes the cells turgid and the fruit hard. In the sunlight and air, this is changed into a thin jelly soluble in the cell sap. Green fruit does not respire readily without oxygen and hence anaerobic respiration checks al, the processes of life including the transformation of pectose. When put in fresh air again respiration slowly comes back to normal and ripening takes place. If some gas may be found which will retard these life processes and still not destroy the flavor, the fruit may picked greener, transported and then ripened.

The practical upshot of this scientific investigation is that all refrigerator cars should contain provision for allowing carbon dioxide to escape and for the admission of fresh air. Certain companies, appreciating this need of plant tissue for air, have conducted experiments with car ventilators. The results have been so satisfactory that one large company is putting on a special ventilator, which can be opened or closed as the shipper prefers, over the doors of its refrigerator cars.

The question of wrappers for fruit is worthy of an extended investigation from the standpoint of ventilation. The good points in favor of separate wrappers for peaches, apples and pears are numerous, but such wrappers only allow a very small air space around each fruit. This limited supply of oxygen is used up in a few hours and air circulation is practically impossible. Some type of perforated or porous wrappers has been suggested as a possible means of combining the desirable features of wrappers with the better ventilation of fruit.

Apple Day.

The International Apple Shipper's Association, of which U. Grant Borden as Chairman, with headquarters at Baltimore, Md., are busily engaged telling the people of the country what the apple really is—what it means to the producer as an income-yielder when properly handled, graded and packed, and at the same time enlightening the housewives as to its merits for culinary uses. The Association has recently published a booklet entitled "Housekeeper's Apple Book," in which is contained among other things, 197 receipts for preparing the apple, each one tested and approved by one of the leading experts in domestic economy. This booklet is mailed free upon application to the Chairman.

October 21st of each year has been set apart to celebrate feast-day of the apple, when this national fruit is to be talked about, devoured, bought, donated or what not just so the apple figures in the transaction. Thus will our great American fruit boom itself.

How Potatoes Can Multiply.

A lady in Oakville has been conducting some interesting experiments with potatoes. The year before last she discovered a large potato weighing a pound, which boasted 13 good eyes. The next winter she cut the eyes out and planted them in strawberry quart baskets, keeping watch over them. In the spring time these were planted, being enough to make five hills, which when cultivated, brought forth enough seed to plant 26 hills this spring. The 26 hills finally produced 208 potatoes, weighing 56 pounds.

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ANDREW McPHERSON.

DAIRYING.

The Guernsey.

Editor Maritime Farmer:

During the last winter, while in the employ of the United Fruit Companies Ltd., of Nova Scotia, having a few days of spare time at my disposal during the Easter Holidays, I decided to spend them on the Island of Guernsey.

The Island had particular interest to me from a dairyman's standpoint. Some twenty years ago I purchased my first purebred Guernsey, and from that time to the present I have been endeavouring to build up a purebred herd of the best milking qualities.

During this time I have purchased cows from different places, and have selected, and discarded until at the present time it is my policy not to keep any but those which will qualify for registration in the "Record of Performance."

Guernsey is quite a popular pleasure resort; and it is no wonder, for a more beautiful spot would certainly be hard to find. In England, while they do not have the severe cold which we have in this country, yet there is prevailing damp cold weather, so that vegetation is kept dormant. Not so in the Island of Guernsey. Here on the 23rd. of March we are greeted with the songs of summer birds and beautiful blooming flowers, while the Palm and other southern trees, which are abundant on the Island, all went to give us the impression that we had been landed in the warm and Sunny South.

The Guernsey Cow Fleur De Jardin.

I was under the impression that dairying was the principal industry of the Island, but I soon found that this was only one of the ways it manifested itself. It is from this country that England receives large supplies of early flowers and vegetables. It is estimated that Guernsey has fully fifty acres under glass. In these hot-houses they produce early tomatoes, cucumbers and other vegetables. We saw acres of cultivated flowers which were being cut for the English markets. But of course it was the Guernsey stock that interested me most.

We put ourselves under the care and guidance of Mr. Lapatrol who is Secretary of the Agricultural Association, and under his direction were driven around the Island and saw the best herds. All the stock on the Island are purebred, as nothing has been imported except for butchering for over seventy years. And yet, here as well as other countries, some have had the intelligence to select and build up excellent dairy herds, while others have pursued the slipshod methods, and consequently have not made any advancement.

How have Guernseys become the famous dairy breed which we now find them? Why is it that these people have an active demand for their stock at prices ranging from $100.00 to $1000.00 per head? One does not need to be an experienced dairyman to perceive that the Guernsey herds are of exceptional quality. In the early times previous to fifty years ago, the early settlers laid great stress on selecting and patronizing bulls from the best producing cows. This was done in these early times regardless of any particular type. There is no doubt but that this idea did much towards making the Guernsey the famous dairy cow which we now find her.

Some fifty years ago, the stock shows came into prominence, which without doubt, while encouraging better stock, yet in a way tended to give prominence to looks rather than performance. There is no doubt that the prevalence of a beefy type of Guernseys on the Island is due in a great measure to the fact that the shows demanded animals in good condition and sleek appearance. Within the last ten years, type and performance have each been given their proper place, with the result that no time in the history of the breed has there been such advancement.

At their annual exhibition the most coveted prizes are the silver cups offered by the King. Two cups are offered for the two best bulls. In winning these prizes it is imperative that the dam been shown with the bull, also as many of his progeny as is possible. It can readily been seen that under this system of awarding prizes, it is not the exceptional individual that wins, but the nearest perfect individual surrounded by the best family.

It is quite customary in Nova Scotia to keep a bull until he is three or four years old, then dispose of him but on the Island I find that the bull that is valued is the one that has offsprings that have proved themselves large milk and butter producers. One of these bulls, Masher Sequal has forty-two decendants in the Advanced Registery.

The Champion cow of the Island, Fleur Di Jardin had dropped a calf a few days before my visit. Her record for the previous year was 11845 lbs. milk. In addition to hay and pasture, this cow was being fed four quarts of bran and two quarts oat meal. In my examination of the different herds, I was rather inclined to

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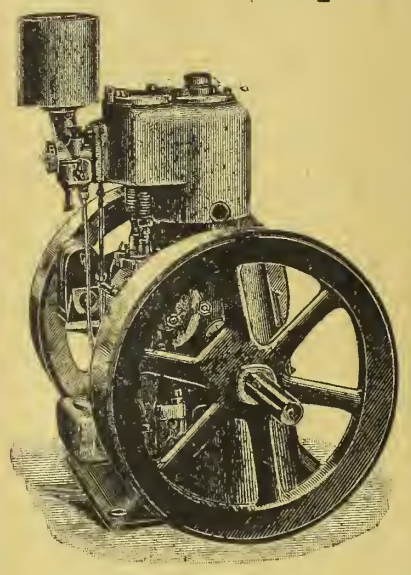

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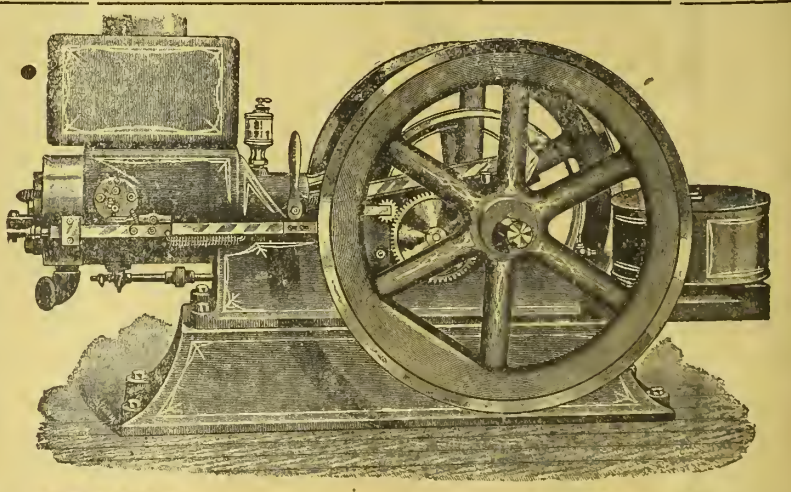

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criticise, in my own mind what I considered their weak points, but for "Fleur De Jardin" I had nothing but the highest admiration. She showed dairy quality of the highest order.

From the cut herewith given you can easily see the clean cut head, without any surplus meat, slim horns and neck, open build, large lood capacity, good sized udder with prominent milk veins. "Fleur Di Jardin" is built for business, and with the heavy feeding which is given for large test in America would make a large record.

The Guernsey people have lately adopted an advanced registry, under Government Inspection. Some cows have already qualified and a large number are now under test. These people have never adopted the excessive feeding for the large tests which is common among the dairymen on this side. We can learn much from them in the matter of making the most out of what we have. With 16,000 acres of arable land they support not less than 5,000 head of cattle. The season is warm so that they pasture most of the year. The cows are tethered out and in the flush of milk are milked three times a day.

These dairymen give the business their very best attention, and I believe get the best results.—John N. Caute, Berwick, N. S.

Summer Months Yield.

The average yield of 9,349 cows tested in dairy record centres maintained by the Dairy Division, Ottawa, in Ontario, Quebec, and the Maritime Provinces in August was 622 pounds of milk, 3.6 test, 22.6 pounds of fat, almost identical with the average yields in August of 1912 and 1911.

Concealed beneath the comforting blanket of such a general average are widely different yields in various provinces, counties and herds. For instance at St. Joseph N. B. the average yield was 458 pounds of milk, at St. Prosper, Que., 611 pounds, at Woodstock Ont., 809 pounds. Similarly the yield of fat varied from 17 to 27 pounds per cow.

But comparing districts not so wide ly apart; the total yield of 446 cows at Farmers Union, Ont., was 10.472 pounds of fat, but with 19 fewer cows at Frankford, Ont., the yield of fat was 889 pounds more. In the St. Hyacinthe, Que., district, a more startling comparison than this is the fact that one herd of 14 cows produced actually 4,940 pounds of milk more than another herd of 14.

Similiar comparisons might be made for herds at the several centres: but what is of infinitely more concern to the average patron is the comparative yield of each individual cow composing this herd. The wise, the far-seeing dairyman, knows from his records, so easily kept, just what each cow gives, not only for an odd month, but for the whole year. Then he strides towards intelligent improvement, not wanting the 458 pounds-per-month kind, but the type that yields six or seven or more thousand pounds per year.

Some Cows from Glengarry.

Among the records collected by the dairy division, Ottawa, this season are some from Glengarry that show the average yield of 155 cows to be 4,450 pounds of milk, 3.5 teast, 159 pounds of fat. Included in that is the yield of one herd of nine cows including one three-year-old that averaged 6,209 pounds of milk, 3.3 test, 205 pounds of fat.

It will be noticed that this herd produced 1,669 pounds of milk and 46 pounds of fat above the average of the 155 cows. Another herd averaged 220 pounds of fat, or 61 pounds per cow above the average; with fat reckoned at thirty cents per pound, this is equivalent to over eighteen dollars per cow, indicative of the thousands of dollars extra that might be coming into a district if the cows were keyed up to a higher producing level.

One noticeable feature of this section is the large number of poor yields from two and three year olds. But it is not only the heifers that are responsible for lowering the average yield. There are cows from six to ten years old that gave only 2,800 pounds of milk and 159 pounds of fat.

So that instead of a contrast of only eighteen dollars, it is found that there is an actual difference of over forty-one dollars in the cash received from mature cows in the same period. This is surely a statement strong enough to cause every dairyman to examine closely into the performance of each cow he keeps. Milk records are easily kept and a composite sample from each tenth day's milk can be tested once a month. Is this not worth doing?

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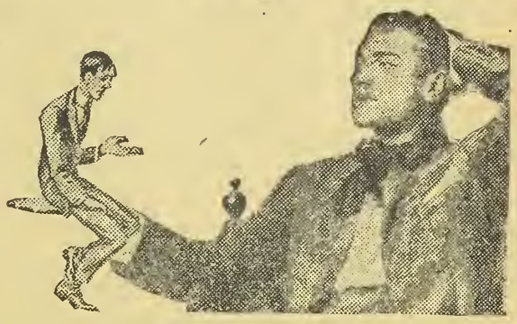
MANLY, VIGOROUS MEN RULE THE WORLD
In reference to manly strength, I believe it is now more generally acknowledged than ever before that the manly man stands back of all that makes for progress, development and achievement in the world, a truth which any of us can easily verify if we but look about us with impartial eyes.
As a matter of fact, the man who is debilitated, unstrung and enervated cannot, for perfectly obvious reasons, expect to approach those real and masterful attainments which seem but a natural and easy accomplishment for him whose nerve force, brain power and manly strength are perfectly normal. Hence, we acknowledge the debilitated, weakened man to be handicapped in every walk of life where real manhood counts, yet it would indeed be cruel of me to here so state the fact in public print were I not of the honest opinion that there is every hope for the unmanly man to restore himself to a state of health and vigor, if he but clear his mind of abnormal fear, and then make a fair, square effort to redeem himself.
There are two specimens of humanity for which I have no earthly use. One is the man who, though now strong and vital, yet plunges into dissipation and excess with the certain knowledge of his unmanly fate. The other is the man who, though knowingly debilitated and enervated, makes no effort to get away from his life of dissipation and wrong practices. As a matter of fact, there is no hope for either of these unfortunates But for him who acknowledges his errors, who may come to me and say, "I have paid the penalty of my past follies, but I am THROUGH with my life of dissipation, and I am going to make a manly effort to restore myself," to such a man, I carea not what his physical condition may be, I can say in all truthfulness, "You, my friend, are on the right road to new strength and new manhood", for he really is, and there is no doubt about it.
I make a little appliance that I call a VITALIZER, which I designed to aid just such men who seek manly strength. I am not offering this VITALIZER here for sale, but merely suggest that you, reader take this opportunity to learnall about what this little appliance is doing today everywhere throughout the world; then, if in the future you want to use one yourself and will so write me, I will gladly make some liberal proposition whereby you may have one to try. The VITALIZER is fully described in one section of the free book which the coupon below entitles you to,
The VITALIZER is made up in a very light form weighing only several ounces, and you wear it on your body all night. It generates a great, soft, pleasant FORCE which I call VIGOR, and which flows in a continuous stream into your nerves, organs, blood and muscles while you sleep. I am satisfied in my own mind that I have access to a great POWER in this little VITALIZER which in the future will be more and more relied upon all over the world in the treatment of debilities and nerve weaknesses.
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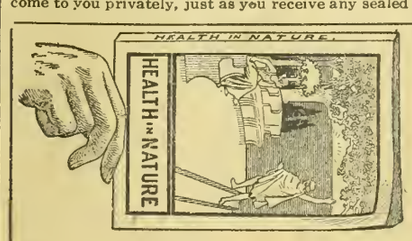

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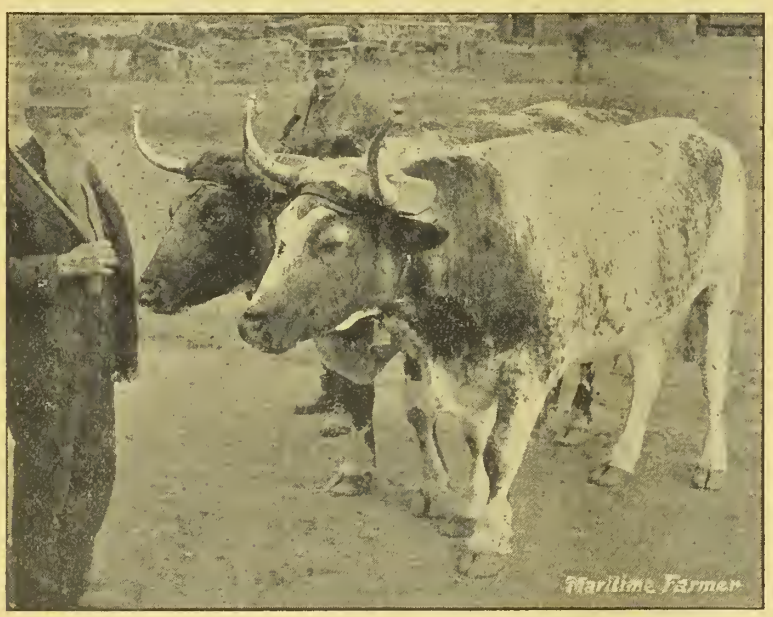
Editor Maritime Farmer:

I am sending you a picture of my oxen. These oxen won first prize at the Lunenburg Co. exhibition in the five year old class. They also won third prize in the pulling match. They gird seven feet, one inch. Their dams were grade short-horns; their sire a grade Ayrshire. Fine oxen hring a fancy price here from $200.00 to $275.00. Most of our agricultural society members are breeding Short-horns as it is the general opfnion of the members that beef pays better than dairying.

Following are the prices that the consumer had to pay for his Christmas dinner at Bridgewater.

Turkey, 35 cents per pound; geese, 30 cents per pound; ducks, 25 cents per pound; best roast of beef, 18 cents per pound; rib roast of pork, 16 cents per pound; butter 28 cents per pound; eggs, 35 cents per dozen; potatoes 70 cents per bushel.

One of our dealers sold half a ton of geese bought in Shelburn Co. The Christmas trade was better than was anticipated.—Wallace Rodenizer.



A Prize Winning Pair of Oxen Owned by Wallace Rhodenizer, Lunenburg, N. S.

Harry Always Raises a Good Pig.

Editor Maritime Farmer:

Last year I sent in a report to the Maritime Farmer on the weight of my two pigs, seven months and 12 days old. The two just weighed 600 pounds. This year I killed one just seven months old that weighed 315 pounds. Last year my pigs were grade Yorkshires. The pig I had this year was just pig. I bought it at three weeks old from Mr. Harry Payne, of Spring Hill. I would like to hear through the Maritime Farmer if this record is beaten. Remember this is no fish story. It is all truth. I did kot keep the pig for my own use as it was too fat for my taste. If we can make pigs weigh as much as this one at seven months we are doing all right. Some of the pigs from the samc litter as mine weighed 200 pounds and under. I hope to hear about some of the heavy oncs in Nova Scotia as their were good ones there last year.—Harry Alliston, Spring Hill, York Co.

Age of Cattle.

For the purpose of settling any disputes at any time that may arise out of protests made against exhibitors who show animals out of their class, from the standpoint of ages, the International Live Stock Exposition management has adopted the following specifications as a basis for determining the ages of cattle:

Twelve months—Any animal of this age shall have all of its milk (calf) incisor teeth in place.

Fifteen months—At this age, center pair of incisor teeth may be replaced by center pair of permanent incisors (pinchers), the latter teeth being through the gums not yet in wear.

Eighteen months—The middle pair of permanent incisors at this age should be fully up in wear, but next pair (first intermediate) not yet cut through gums.

Twenty-four months—At this age the mouth will show two middle permanent (broad) incisors fully up and in wear, and next pair (first intermediate) well up, but not in wear.

Thirty months—The mouth at this age may show six permanent incisors, the middle and front intermediate pairs fully up and in wear and the next pair (second intermediate) well up, but not in wear.

Thirty-six months—Three pairs of broad teeth should be fully up and in wear, and the corner milk teeth may be shed or shedding, with the corner permanent teeth just appearing through gums.

Thirty-nine months—Three pairs of broad teeth will be fully up and in wear, and corner teeth (incisors) through gums, but not in wear.

These specifications are based upon a large number of observations made upon animals of various ages, and may be used by those who purchase young animals to use permenently in their herds as a means of determining their ages should they be in doubt as to their being such as they are representated to be by the sellers. Of course, animals that are well fed and forced to early maturity from forced feeding frequently have their teeth appear considerably before the usual time that they make their appearance, but the above specification may be relied upon as a good guide, as they reasonably allow for such cases. A matter of a few months does not make much difference, except in the very young animals.—Colman's Rural World.

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp;

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Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

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will be given to the person who shows us an oil lamp equal to this Aladdin in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest douht as to the merits of the Aladdin? We want one person in each locality to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get ONE FREE.

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to demonstrate in territory where oil lamps are in use. Experience nnnecessary. Many agents average five sales a day and make $300.00 per month. One farmer cleared over $800.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and sample.

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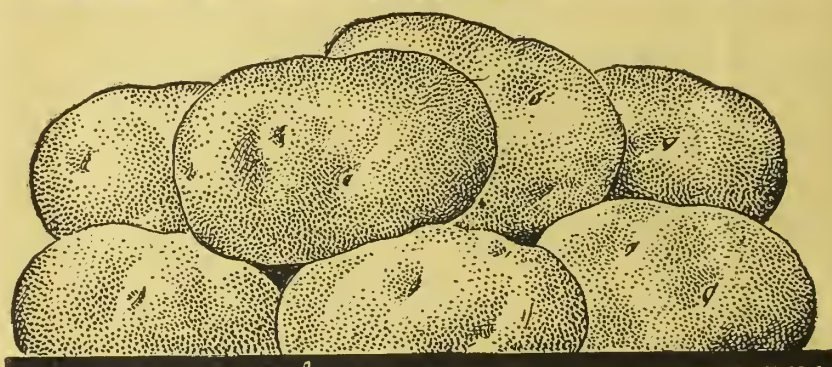

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Scores, yes hundreds, of my farmer friends have got bumper crops from soils they thought were worn out. They now swear by

Harab FERTILIZERS

One of them, A. Robinson of Rosemount, tells me that he used Harab Fertilizers on potatoes and turnips without any manure on the land which was very old and poor. He got a bumper crop and is more than satisfied. Another man, D. J. Ferguson, got a grand crop from very light land that had been hard run by tenants.

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Progressive Jones

The Harris Abattoir Co., Limited, Toronto

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For 15 years the Eureka Potato Planter has been successfully used throughout the world.

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It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Diseases of the Liver in Cattle.

The commonest disease of the liver is known by the name of jaundice (a modified old English name), characterized by suppression, or alteration of the liver functions. Symptoms: Yellowness of eyes and skin, constipation, dullness, loss of appetite, colouration of milk in milch cowl, also of urine, slight fever, skin harsh and dry and abnormal thirst, which if neglected, or if allowed to go beyond treatment, lead eventually to dropsy or other complications. We are all familiar with the red appearance of the blood; it is due to a coloring matter called Haemoglobin (Greek Haima blood). This is changed into a new chemical product in the liver cell—i. e., a pigment, Bilirubin, which gives the yellow colour to jaundiced subjects. Haemoglobin contains iron, and in a normal way acts as a storer or go between of oxygen and the blood cell, and possibly the morbid condition of the liver cell in changing this constituent of the blood may have a great deal to do with the ill effects of jaundice. The yellowness of the skin is only one symptom; it may occur in health from the nature of the food, and is constantly found in some of the best breeds. The causes of jaundice are too much fatty food, want of daily exercise (the working ox is not very liable to it), exposure to cold and wet, whereby the blood is thrown abundantly inwards from the skin, causing congestion of the abdominal viscera—the liver being the earliest to suffer.

GALL STONES.

Gall stones are biliary calculi, and are generally found in the gall bladder from crystallised cholestrin. During their passage they are a cause af great agony by blocking up the common bile duct; when passed into the first intestine the pain ceases. (There is no means of diagnosing gall stones from a case of ordinary colic). If they are not passed, or are some time in passing, jaundice must ensue.

HEPATITIS.

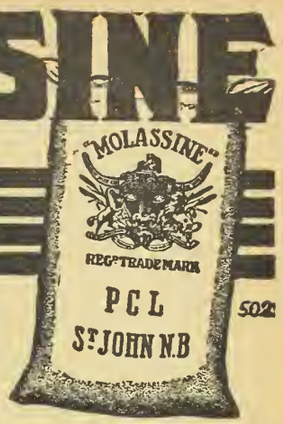
The affix "itis" always means inflammation. Hepatitis, or inflammation of the liver, is most prevalent in hot weather, and may lead to jaundice. In its early stages it is recognized by flatulence, grinding of teeth, flinching if the region of the liver is pressed, high coloured urine, constipation, and clay-coloured dung. Tumors of the liver in many cases produce this disease, so also enlargements of the lymphatics of the capsule, tubercle, cancer, and in so nervous an animal as the ox several cases have occurred which cannot be accouned for except on the supposition of anger or fear causing a spasm of the common duct. An enormous quantity of bile is secreted, and if it cannot be transmitted as fast as it is secreted, the gall bladder gets full and cannot receive the excess, which will be forcibly returned upon the hepatic system. This is not likely to occur in the horse, it having no gall bladder. Abscess of the liver and simple congestion arising from obstruction or disease of the valves of the right side of the heart, malignant growth, fatty degeneratian and many other causes might be mentioned, but these are the principal.

In diagnosing or prognosing this disease and others of the liver one feels the truth of Bacon's remark: "He who taketh in but a few considerations easily decides." It is obvious to those who have taken the trouble to peruse this article that it is not at all an easy matter. One may roughly divide the causes under two heads: Are they functional? Are they organic? In the former, treatment will be successful; in the latter, useless.

TREATMENT.

Now as to treatment. First, house the animal, if in cold weather especially, in a comfortable, airy, warm, box or yard. Gentle voluntary exercise is of the greatest service. Feed sloppy foods, chopped roots of any kind, green stuff, no oats or cake, only a little long hay, no chaff stuff, and give a plentiful supply of pure, fresh water. Isolation from other animals is also indicated, as the animal affected feels irritable and fretful and desires rest and solitude. A change of byre or pasture helps materially. As to medicine, experience has taught us that mercurial preparations and salines combined have occasionally produced most beneficial effects. I prefer at first to try a drench composed as follows:—2 drams of grey powder, 2 drams of powdered cayenne pepper, ¾ lb. of glauber salts. Mixed in sufficient quantity—at least a quart—of thin gruel. Give drench slowly, not putting it down like water into a sewer, as if given hastily it may drop into the rumen and not reach the true stomach, and will only act when rumination starts, which may be in abeyance. A similar drench may be administered for three days in succession. So much, however, depends on the conditions of the case that only the professional can safely advise upon it after careful examination. Speaking generally, the following may be prescribed: Low diet for a time with tonics and salines. I sometimes prescribe a quart of old ale with 1 oz. of bicarbonate of soda dissolved in it twice daily, and it seems to have a very good effect. If the animal is difficult to drench, then try malt extracts mixed with or sprinkled over rations. They apparently supply the blood indirectly with sugar, where the liver is not secreting sufficient glycogen. As there is often some congestion of the lungs a good rubbing of the sides once daily with a stimulating liniment, such as white oils or hartshorn and oil, affords a good deal of relief. During the convalescent stages tonics should be given. A useful tonic is made with 1 oz. of sulphate of quinine, 2 oz. of dilute nitro-muriatic acid, water to one pint. Four tablespoonfuls to be added to half a pint of water, and given twice daily, or ½ oz. of powdered cinchona bark, ½ oz. of powdered chloride of ammonia, and ½ oz. of powdered ginger for each dose. Unfortunately, in all bad attacks of liver complaints there is great emanciation, and it often takes months for the animal to recover its condition.—Southern Vet.

MOLASSINE MEAL



is as good as pasture all the year round. Your horses, milch cows, steers, pigs and sheep will be in the pink of condition in the spring and can be turned on grass without any loss if fed regularly with MOLASSINE MEAL through the winter.

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Handy Feed Carts.

The dairy or beef feeding farm that does not use one or more handy feeding carts in serving the rations is not up to the minute. With hired labor high in price and limited in quantity, the progressive farmer has to employ every possible labor-saving device on his farm that is not too costly and yet thoroughly efficient. The grain and silage feeding carts satisfy these requirements.

With the aid of those food wagons one man can feed 50 animals in less time than it would take three men to perform the same work by hand. The carts can be made in size to correspond to the herd, so that when both are loaded, they will accomodate about enough grain and roughage for one meal for the animals.

Any farmer handy with tools can easily construct these carts. Use a pair of old buggy or light wagon wheels and their axle for the lower part of grain cart and build the body out of sound lumber. If desired he can equip the grain wagon with an upright on which a pair of scales can be hung, so that the grain ration of each animal may be rapidly weighed out.

The silage cart may well be placed on several pairs of old truck wheels, the wheels being so placed that the cart can be turned around in a relatively small space as compared with its size. In feeding one cart can be placed in front of the other and one man can push both wagons down the feeding alley, distributing the grain and silage as he goes along.

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THE HORSE.

Horses Teeth and Their Irregularities.

With the exception of troubles of a quite temporary nature which may be caused during the periods of teeth ing, when they are young, it is ordinarily very rare for horses to suffer from any defects of the teeth. It is only in their old age, as a rule, that the latter are liable to become defective, and this circumstance will then cause the masticating powers to become more or less impaired, although in a large portion of cases the teeth of even very old horses will remain in perfectly good condition to the end, and not give the slightest trouble, the animal continuing to be able to chew its food just as readily and completly as in its younger days. Practically the only operation in connection with the teeth which is of any importance or at all likely to be required consists in filing or rasping down the sharp edges of the molars, or some of these when, owing to some abnormality or other, they hurt the gums and in consequence prevent the horse from using its teeth properly in grinding its food.

There is, however, seldon any real cause for resorting to this operation, and there can be little doubt that in certain instances it is performed quite unnecessarily and had better had been left undone. The edges of a horse's molar teeth normally get worn more or less sharp, as anyone can easily ascertain for himself, or may painfully experience when administering a ball by hand in a clumsy manner, and the fact of their being so in no wise inconveniences the animal. It is quite a mistake to suppose, as some apparently do, that because the teeth are sharp at the edges it would be advantageous to have them rasped down. In itself the rasping may not be a painful operation, but it is most distasteful to a horse to have its mouth forcibly pried open and the teeth operated upon, and consequently the procedure is much resented. The great objection to it—and certainly this is a very grave one—is that after such a disagreeable experience the horse will almost for certain be rendered shy of having its head touched for some long time afterwards, if indeed this does not become established as a permanent habit, and that this involves serious disadvantages every horseman will know, for it gives rise to much trouble in grooming, clipping, and bridling a horse, or on any occasion when it becames necessary to handle the horse about the head. There are exceptional cases recorded of horses suffering from a broken molar tooth, caused by the animal having bitten hard upon a stone or bit of iron accidentally picked up with the food. This, however, need not necessarily entail very serious mischief, though it will cause some of the food to be quidded. In any case, such accidents are so rare that ordinarily horse owners are not likely even to come across a case of this kind.

MALFORMATION OF TEETH.

Sometimes we get in horses a certain malformation or irregularity of the teeth known as parrot mouth which consists in the upuer incisor (front) teeth much overlapping and protruding beyond the lower row. This is found to occur principally in old horses. The tendency to this irregularity is generally already present in the young animal, but it is not at that stage sufficiently developed to be noticeable, developing fully only when the horse has aged. In pronounced cases of parrot mouth it becomes necessary to remedy the abnormality by means of operative measures.

WORN TEETH.

In cases of crib-biting an indication to the fact that the horse is addicted to this pernicious habit is very usually afforded by the condition of its front teeth, which will show signs of being much worn away in consequence of the animal continually biting on the edge of the manger or some other object when practising its trick. But in the allied vice of windsucking no such signs are discernible on the teeth, because in the case of this habit the teeth are not used by the animal in order to catch hold of some support when indulging in it, as is done when cribbiting. The abnormal wearing away of the teeth associated with the habit of cribbing renders it more or less difficult, or even impossible, to determine the horse's age with exactitude in the usual manner by the marks on the teeth, for these will become obliterated before their time.

IMPAIRED MASTICATION.

When a horse is unable to masticate its food properly—either owing to tecth trouble, or to defective teeth consequent upon old age, or to some dental irregularity or injury, or to an inflamed or swollen condition of the palate, a complaint commonly known as lampas—it will very often be found to "quid" its food, as it is termed. Quidding consists in small particles or pellets of partially chewed food being dropped out of the animal's mouth, and which will be seen lying in the manger after the

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Thier use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds

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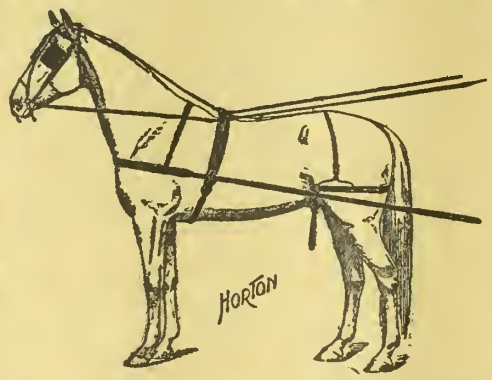
Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.



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STATISTICS prove that the majority of accidents could have been prevented by a little forethought.

There is no longer any excuse for a horse floundering or falling on icy streets, sustaining sprains and bruises, perhaps becoming permanently or even fatally injured.

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present a safe, easy way of sharpening that assures absolute safety to horse and driver. They are easily and quickly adjusted and once in will stay in, wearing sharper with use.

Do not confuse RED TIP calks with imitations. Look for and insist upon the RED TIP and you will get the best. Booklet tells why. Send for it. "O"

The Neverslip Mfg. Co

U. S. Factory, New Brunswick, N. J.
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horse has finished feeding. Whenever a horse is observed thus to quid its food, its mouth should be examined to find out what is wrong. In cases the difficulty will, of course, only be of teething trouble and of lampas, of a temporary nature, the quidding ceasing as soon as the normal condition of things become re-established. When the trouble is due to the masticatory powers having become impaired by old age, the obvious course to adopt is to serve the grain in a crushed state, so that it may be more readily chewed by the horse, while the hay and chaff given should be of as soft and fine a character as possible. Hard hay, with tough stalks, and clover hay should be avoided, as such is more difficult to masticate. A good idea also is to mix bran instead of chaff with the crushed corn, the first not requiring so much chewing. These measures may not—in fact, they probably will not—completely prevent the animal from quidding its food, but they will certainly tend to minimise the trouble as well as prove a considerable boon to the old horse.—Argus.

Horse Pointers.

Don't hold the box stall door open and allow the colt to rush through it into the yard for execise, writes an exchange.

He might not strike his hip or shoulder on the post in his haste, and if he did it might not cripple him for life; but chance is a poor thing to bring a spirited colt up on.

Better lead him quietly through before releasing him. The extra restraint will do him no harm anyway.

The time to teach a colt to back is when he is a colt. A good way to do this is to put halter on him, lead him out of the stall, take hold of the halter close up to the chin, then gently but firmly push back, saying over and over again, "Back! back!" He will soon take the hint, and a little practice will make perfect.

"That horse would go anywhere I told him to, if it was right out of the back door of the barn, ten feet down!" That is what a man once said to me, and I believe it.

But that man never asked his horses to do unreasonable things. This is why they had such perfect confidence in him. A horse is first rate judge of human nature—better than most of us are of horse nature.

No amount of pounding or shaking musty hay will make it fit for horses to eat. The best thing to do when you must feed such hay is to wet it thoroughly before putting it into the manger. But it is bad stuff anyway.

An old file is a good thing with which to clean the currycomb when it gets all gummed up, as it sometimes will. A big nail will do the same work, too.

When the brush gets all stuck up from long usage, throw it away and get a new one. You can't get much good out of it in that condition.

Gait.

An open, smooth, frictionless trotting gait is just as essential as blood inheritance to the success of any stallion as a sire of uniform trotting speed. Some of the best bred trotting stallions have proved disappointments as sires even after having taken records in standard time, because they were rough gaited, ran behind, or labored in their action. Some fifteen years ago an exceedingly well-bred stallion was given a time record at Mystic Park. His gait was so faulty that several horsemen remarked that notwithstanding his choice breeding, they would not accept the gift of his services. This stallion was given exceptionally good opportunities, but though upwards of twenty years old, he is credited with only three that have made standard records.—Horse Breeder.

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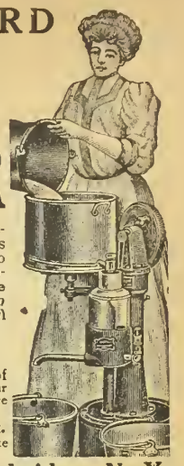

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Working the Breeding Mares.

A large farmer in the Midlands who has recently started breeding Shire horses states that it is his intention to keep in his working teams only pedigree animals. He let it be understood that his working stud was to consist exclusively of mares, and that a certain number of them would be bred from every season. The idea is interesting and the result will be followed closely, since (says the "Times") it puts into practice on a large scale a system that has been adopted with success on many farms of moderate size. There is no reason to anticipate other than a successful issue. It has been proved that work is no hindrance to breeding; indeed, the evidence is to the opposite effect. Mares that do a reasonable amount of suitable collar-work are the most regular breeders, while many of the most noted prize colts and fillies are the offspring of mares employed in the regular teams. There is the additional consideration of economic production. Unfortunately working and showing are incompatible proceedings, but the number prepared for the showyard is but a small proportion of the aggregate used for breeding.

A Horse's Gait.

To tell the seat of lameness is often a task of great difficulty, in which the most experienced are at a loss and where the most skilful differ in opinion. You say "dragging hind feet"—i. e., both feet. I think that dismisees the question of lameness from spavin, or stifle trouble, as one would hardly expect both hocks, or both stifles, to be simultaneously affected. This resolves it to be a question of back trouble, and I am inclined to put it down to some interference with the motor nerves, which is a far more serious matter, and one requiring rest, patience, and prolonged treatment. If it is paraplegia, which may be sympathetic disease, fuctional or otherwise, of the urinary or digestive system, it is usually called reflex paraplegia, and is amenable to treatment. If due to injury, and charges in the nerves themselves, or the vertebrae, or sprain of the psoae muscles—i. e., those lying underneath the spinal column, then in the first three cases the horse will get worse, and complete paralysis will ensue, but if it is a case of sprain, time and rest may restore him. The treatment is rest in a fairly large loose box, half the usual quantity of grain, and hay, bran mashes, crushed carrots, as usual. I doubt very much the value of external applications. Of course, there is no objection to trying frictions with the usual white oils along the back part of spine, but I should prefer rather to try the effect of one drachm of powdered nux vomica and two drachms of nitrate of potash mixed, given once daily in damped feed. Try this for three weeks, and note result.—Vet.

POULTRY.

Chart For Line Breeding.

We reproduce on this page the Felch Line Breeding Chart. The work of following out such a system is too complicated for the majority of our readers. The object of line breeding is to conserve blood, and race char. acter Rithout inbreeding, that is to use the same blood with several generations between. In the chart illustrated each, dotted line represents the group No. 1, and the solid line the males, taken from group No. 2, the clear circles representing their progeny. Thus a female from No. 7, mated with male, No. 2, produced No. 3, which is half the blood of sire and dam. Females from this group, No. 3, mated back to their sire, No. 2, produce group No. 5, which is three quarters No. 2 sire blood, and one quarter the bolld of dam, No. 1. Then a male from group No. 3, mated back to his own dam, No. 1, produced No. 4, which is three quarters the blood of dam, No. 1, and one quarter blood of sire No. 2.

Again, a cockerel from group No. 5 and a pullet from group No. 4, or vice versa, will produce group 7,

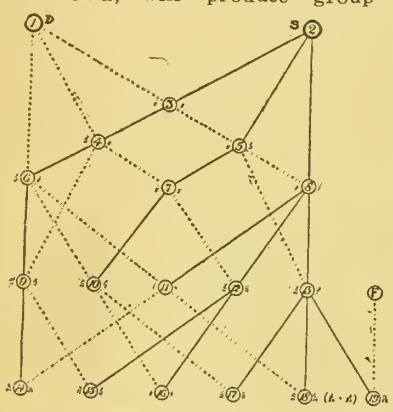

Chart For Line Breeding.

which is mathematically half the blood of each of the original pair, No. 1 and No. 2. This is a second step towards producing a new strain.

Females from No. 5 mated back to the original male, No. 2, produce group 8, that are seven-eights the blood of No. 2, and a cockerel from No .4, mated back to the original dam, No. 1, produces group No. 6, that is seven-eights the blood of the original sire.

A male from No. 8 and a female from No. 6, produce chicks, in group 11, that are half the blood of the original pair. This is the third step, and the ninth mating in securing complete breeding of our new strain. In all this we have not broken the line of sires, for every one has come from a group in which the preponderance of blood was that of the original sires, Nos. 2, 8, 13 and 18, and are virtually the blood of No. 2.

A point has been reached where we would establish a male line whose blood is virtually that of our original dam, and from No. 6 a male is selected and mated with a female from No .4, producing group 9, which is thirteen-sixteenths the original dam, No. 1, and three-sixteenths the blood of the original sire.

Then, a male from No. 9, and a female of the new strain, No. 11, produce group 14, which becomes 21-32 of the blood of the original dam, tnus preserving her strain of blood. A male from No. 13, which is thirteen-sixteenths the blood of the original sire, No. 2, mated to females from No. 10, which are five sixteenths the blood of said sire.

While in number 16 we have the new strain and in No. 18 the strain of our original sire, No. 2, we have three distinct strains, and by and with this systematic use we can go on breeding for all time to come.

Something About Ducks.

1. Don't spend all your money to buy eggs or breeders. Save enough for feed and buildings.
2. Don't buy exhibition birds, but the best utility stock you can afford.
3. Don't get the "blues" if your stock will not respond by an egg yield in two weeks, or four weeks.
4. Don't let your ducks get wet on their backs under four weeks, but give cbem all the water they can drink.
5. Don't overfeed at any time.
6. Don't feed any kind of formula offered and think your ducks should do well.
7. Don't feed whole grain at all times. You can keep your ducks alive, but you get a few eggs only. A little some times as a relish is good for them.
8. Don't leave the dogs or children chase your ducks around their yards.
9. Don't frighten your Runner, as her disposition is wild, but she can be made to be just as tame.
10. Don't set your duck eggs under a lousy hen.
11. Don't fail to give them all the drinking water they need in their pen.
12. Don't change your feed on laying ducks if they lay well a whole season.
13. Don't forget the grit hopper. They need it.
15. Don't mate more than six ducks to one drake.

First Prize Box of Dressed Poultry Packed for Export at the 1912 Maritime Winter Fair, Exhibited by Jack Thompson, Fort Lawrence, N. S.

16. Don't leave your ducks range over your whole farm.
17. Don't forget to handle your ducks by the neck when you are hand ling them.
17. Don't feed your cull ducks over winter. It doesn't pay.
18. Don't leaves your ducks roam all night if you want lots of eggs. Confine your ducks to your laying house until 9 o'clock in the morning.
19. Don't keep your duck eggs four to six weeks and think they will hatch well. Set them fresh for best results.
20. Don't give more than eleven eggs to one setting hen. If you do, it is your loss.
21. Don't think you can't succeed with kucks; you can. Try it and be convinced.
22. Don't forget that eggs kept in a room with temperature from 75 to 85 degrees spoils an egg in three or four days.
23. Don't leave the drakes kill your ducks during the hot July days. When the egg season is past, separate sexes in separate pens.
24. Don't fail to give your ducks a trough of water four or five inches deep when five or six weeks old.
25. Don't forget—25 ducklings in one pen for best results.
26. Don't fail to use a little black pepper for seasoning their mess. Especially if they have diarrhea. Cayenne kepper should be mixed with the black.
27. Don't forget that sprouting oats are the best greens you can give your breeding ducks and young.

TELLING DIFFERENT SEX.

The drakes can be told when seven or eight weeks old by the curl in their tail. Also larger head and has more straight carriage.

The duck as a rule is smaller and by the sound of the noise she makes one can easily discern her sex.

MARKETING.

The ducks for roasting have no equal. They can be made ready for marketing in six or eight weeks, and by hatching your young so that a hatch comes off every week you have eight pens. Every week your ducks are changed from pen No. 1 to pen No. 2, and pen No. 2 to pen No 3, and so on in the regular order, which saves labor and at the same time you have every pen filled. Killing and dressing is much easier with Indian Runner Ducks than with any other strain. They pick almost like a hen. When scalded there is no difference. As a rule they dress very nicely and command good prices. There is always a ready sale for them. Great care should be taken in dressing your broilers and ducks. Have them look nice and clean. You should have a tub of cold water ready to put all ducks into as soon as picked. This will give them a nice color. It all depends on how well your ducks look when dressed to command the highest market price. All feathers should be saved and kept clean, as they will pay for picking and there is always a ready sale for them.

CARE OF DUCKLINGS.

The best care of ducklings should be taken. We told you how to make a brooder. Transfer your ducklings from incubator to your brooder. Leave them in this brooder three weeks and then transfer them to a larger run and colony brooder, made 3 feet wide and 5 feet deep, floor raised from ground 6 inches, front 2½ feet high, back 18 inches high, sides and back boarded solid, front open 2 feet, with mice netting over to pen ducklings up during night, to keep out dogs, skunks, etc.

Have your ducklings clean. Give them straw on floor. From five to eight weeks your ducklings will be a lively set and should have a grass run. The ground aroknd your feeding troughs will soon get muddy. Change places as your ducklings will soon get crusty, which will stop them from growing. Ducklings six to eight weeks old should have a good bath after their meal. They should have a trough of wat?r four or five inches deep to take their bath after meal. Have a regular time for meals, three times daily, and have each to contain about twenty-five to thirty duck lings for best results. However, you can have fifty or sixty to a pen. But you will find that the smaller ones will soon be trampled over and die. You will always find different sizes in a pen of fifty. You had better cull out the smaller ones to save the death rate, At the age of six and seven weeks there is a mighty scramble by making your pens smaller in number.

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Gentlemen:—There is no fault to find with your fence. The fencing I put up 4 years ago is just as good as the day I put it up, showing no sign of rust, and giving good satisfaction. The Peerless stands the test better than any other make that I have seen. Yours truly, JOHN MASON. Spring Brook.
Gentlemen:—I have been in the fence business for ten years, and I find no fence like the Peerless, both for galvanizing and workmanship. I consider it equal, if not superior to any other make of fence on the market today. I have always found the Banwell-Hoxie Fence Co. people of their word. Yours respectfully, MACK. LILLIS. Glenburnie, Ont.
Send for our latest catalog. Ask about our poultry fencing and ornamental gates.
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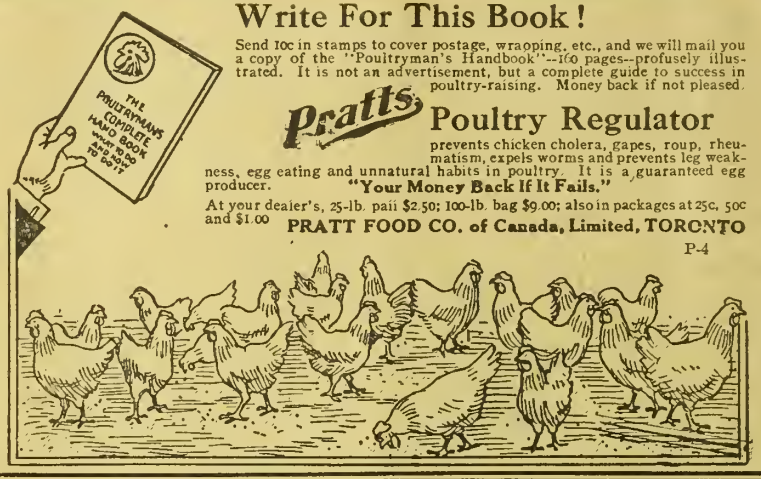
Banwell-Hoxie Wire Fence Co., Ltd. Winnipeg, Man., Hamilton, Ont.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Egerton Poultry Show.

The fifth annual exhibition of the Egerton Poultry Show and Pet Stock Association was held recently in the New Glascow Curlers' Rink. The occasion was made more attractive by speech-making, which fell to Principal Cummings, of the Agricultural College,, Truro; C. E. Tanner, M. P. P., Pictou; Mayor Rogers of Stellarton, and S. G. Robertson, Esq., Pictou. Principal Cumming, who has a strong, clear voice, was about the only one of the orators who successfully combated the opposition of the crowing roosters, yelping dogs and the barkers of fakirs' row. He complimented the Association on the success of the show and the quality of the exhibits. The Egerton had been the first poultry association in the Province to organize and hold a show, five years ago. Their example was a good one and since then similiar organizations have been established all over Nova Scotia. This year, said the Principal, similiar poultry shows were being held in six provincial towns. He detailed the good work done by such an annual feature, and urged the Association to persevere, and the Department of Agriculture would aid them in every way they could. It gave him great pleasure to declare the show open and he trusted he might be permitted to visit many more such exhibitions.

The other gentlemen, as they were introduced by Master of Ceremonies Eastwood, made pleasing addresses eulogistic of the good work done by the Association.

When you simmer it down it is quite an undertaking for the Directors of this organization to stage this interesting feature each year. There is nothing in it for them but lots of hard work, yet they willingly undertake the task and are not dismayed when they run coknter to bad weather and make monetary loss. Up to this year they did not receive any grant of moneys to lend them a little leeway, and the speech-makers were not unduly given praise when they applauded this work. In Secretary Frehill thay have a capable manager to whom the work from practice, now comes easy. S. Eastwood, as Treasurer, has been almost the back-bone of the institution, with his undaunted energy. In addition to these officials are Mr. Osborne, who has served as President; Mr. Higson, and several others who have been energetic from the start and bore the burden and heat. They are deserving of every credit, and success should attend their efforts.

But to the show proper. Nothing was more noticeable than the improved quality of the stock shown in the poultry classes. The entries were as numerous as last year, and the different varieties were fully ?overed. Mr. Landry, who placed the birds and has watched the progress of the show since its inception, was delighted with this year's classes, and declared that the show is getting rapidly into the premier class. Add to this the fact that there were fewer imported birds, but that the show has attained the desired results and placed Pictou County in the foremost rank as a breeding ground of high class poultry. Four long double rows of coops were required to house the exhibits, and really many splendid birds were shown.

The dogs naturally come in for a large share of admiration, and with the cannies the show has had its effect also. When the show originated, every moon-bayer and cat-chaser in the community was rooted from under the kitchen stove, scrubbed, dragged thither and paraded in the anticipation of a ribbon; we were guilty ourselves. It was then a simon-pure dog show, with the emphasis on dog. After learning a few things it is now a Bench Show, with only the dogs and puppies representative of the different breeds on exhibition. The improvement is marked and the effect much to be appreciated. Mr. Milligan judged, and there is no doubt as to his ability to properly place the entries.

New features have been added this year which greatly enchanced the show. A special department of ladies' fancy work was added, and was well patronized by ladies proficient in fine needle work and fancy art. This is a department that could be greatly added to judging by the success of this year's venture.

Another interesting feature was an exhibit from the Agriculture College at Truro, showing a model poultry house, sample of grains and roots, and a display of insects and pests which are injurious to fruits and farm crops. This was an educational exhibit in charge of Mr. Cunningham, a college student, who was most willing to answer any enquiry respecting the exhibit.

In all, the 1913 show was a marked improvement on all the previous attempts and indicates that this organization has taken the most advanced step in its history. The attendance was most satisfactory, and this also augurs well for future success.—Eastern Chronicle.

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Wild Turkey Passes.

Sixty or seventy years ago, in the Niagara Peninsula and all up along Lake Erie's shore, wild turkeys were very plentiful, says C. M. C. in Toronto Star Weekly. What happened to them? Shot out—trapped out— decimated; taking his size and rare flavor into consideration—once the King of Canadian game birds! A Government report of 1892 remarks: "It is now becoming very rare, and is found probably in the counties of Essex and Kent, and even there it is only a matter of a short time when it must become extinct." From all we ever hear of it this is precisely what has happened. As far as this province is concerned the wild turkey has apparently flown to join the Great Auk and our storied Passenger Pigeon "sun-screens."

I remember meeting several people who had been familiar with the wild turkey around St. Catharines—those magnificent creatures of three and a half feet long and five feet in wing spread, often weighing over 20 pounds —and almost the exact counter-part in appearance of our highest valued barnyard fowls.

Whenthe young wild turkeys were hatched, beside some close-hidden log or in the seclusion of the deepest thickets, ten—sometimes fifteen—went to the brood. The mother bird made them the objects of her most constant solicitude and care, the little ones following close as she crept stealthy about among the densest available growth, where the grasses, plants, and fruits that they fed on most abounded. Seeds and buds, too, they loved, and could never resist such delicacies as beetles, tadpoles, and small lizards. The only audible sign of the advance would be the mother's low, tender piping. Any danger ahead, and—at her instant change of tone—every toddler of them disappeared, only to emerge at the cautious parent's soft cluck.

They were very rarely caught sight of on the ground but a dog could always flush them into the lower branches of the nearest trees, which was where the guns could flame their deadly work. Oftener, nowever, "trapping" was resorted to, for the wild turkey was swift in addition to its wariness, and like as not ended its flight in the tallest tree instead.

The ways and means of trapping wild turkeys were as varied as the strategy of the farmer's boy was superficial or profound. Generally a measure of corn, bagged from dad's crib, and a hatchet were the only accessories asked for—or purloined without the asking. An hour or two in the bush was sufficient for the gathering together of enough poles and brush to erect a small "stockade fort," built square, and contracting towards the top, where a rough thatching completed the death chamber. Again the hand axe was called into requisition; this time to facilitate the construction of a "sally port" or ditch-like entrance, of size ample to admit of the entrance of a single turkey. The trap was complete. To bait it was simplicity itself, for the turkey-trapper only laid a few tempting trains from his corn bag, starting at some distance away, and leading through the bush from opposite directions to the entrance of the pen, which also was strewn with the yellow grains that were so litterally "a delusion and a snare." Once in the dark interior whither his love for maize had led him, all reason seemed to leave the big, wary bird at once, and he flew round like one possessed, wounding himself against the sides and narrowed top till incapable of remembering, or finding, the shadowed aperture through which he had entered. In such manner often an entire flock of turkeys used frequently to be deluded and captured.

Dates to be Remembered

St. John Exhibition, September 5th to 12th, 1914.

Nova Scotia Provincial Exhibition Halifax, N. S., Sept. 9th to 17th, 1914.

Poultry Show, Moncton, N. B., January 13, 14, 15 and 16, 1914.

Annual Meeting Nova Scotia Fruit Growers, Kentville, January 20th, 21st and 22nd, 1914.

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

He writhed himself quite off his stool in the excitement of his feelings, and, being off, began to make arrangements for going home.

"Mother will be expecting me," he said, referring to a pale, expressive-faced watch in his pocket, "and getting uneasy; for though we are very umble, Master Copperfield, we are much attached to one another. If you will come and see us, any afternoon, and take a cup of tea at our lowly dwelling, mother would be as proud of your company as I should be."

I said I should be glad to come.

"Thank you, Master Copperfield," returned Uriah, putting his book away upon the shelf.—"I suppose you stop here, some time, Master Copperfield?"

I said I was going to be brought up there, I believed, as long as I remained at school.

"Oh,indeed!" exclaimed Uriah. "I should think you would come into the business at last, Master Copperfield!"

I protested that I had no views of that sort, and that no such scheme was entertained in my behalf by anybody; but Uriah insisted on blandly replying to all my assurances, "Oh, yes, Master Copperfield, I should think you would, certainly!" over and over again. Being, at last, ready to leave the office for the night, he asked me if it would suit my convenience to have the light put out! and on my answering "Yes," instantly extinguished it. After shaking hands with me—his hand felt like a fish, in the dark—he opened the door into the street a very little, and crept out, and shut it, leaving me to grope my way back into the house: which cost me some trouble and a fall over his stool. This was the proximate cause, I suppose, of my dreaming about him, for what appeared to me to be half the night; and dreaming, among other things, that he had launched Mr. Pegotty's house on a piratical expedition, with a black flag at the mast-head, bearing the inscription "Tidd's Practice," under which diabolical ensign he was carrying me and little Em'ly to the Spanish Main, to be drowned.

I got a little the better of my uneasiness when I went to school next day, and a good deal the better next day, and so shook it off by degrees, that in less than a fortnight I was quite at home, and happy, among my new companions. I was awkward enough in my games, and backward enough in their studies; but custom would improve me in the first respect, I hoped, and hard work in the second. Accordingly, I went to work very hard, both in play and in earnest, and gained great commendation. And, in a very little while, the Murdstone and Grimby life became so strange to me that I hardly believed in it, while my present life grew so familiar, that I seemed to have been leading it a long time.

Doctor Strong's was an excellent school; as different from Mr. Creakle's as good is from evil. It was very gravely and decorously ordered, and on a sound system; with an appeal, in everything, to the honour and good faith of the boys, and an avowed intention to rely on their possession of those qualities unless they proved themselves unworthy of it, which worked wonders. We all felt that we had a part in the management of the place, and in sustaining its character and dignity. Hence, we soon became warmly attached to it—I am sure I did for one, and I never knew, in all my time, of any other boy being otherwise—and learnt with a good will, desiring to do it credit. We had noble games out of hours, and plenty of liberty; but even then, as I remember, we were well spoken of in the town, and rarely did any disgrace, by our appearance or manner, to the reputation of Doctor Strong and Doctor Strong's boys.

Some of the higher scholars boarded in the Doctor's house, and through them I learned, at second hand, some particulars of the Doctor's history. As, how he had not yet been married twelve months to the beautiful young lady I had seen in the study, whom he had married for love; for she had not a sixpence, and had a world of poor relations (so our fellows said) ready to swarm the Doctor out of house and home. Also, how the Doctor's cogitating manner aws attributable to his being always in looking out for Greek roots; which, in my innocence and ignorance, I supposed to be botanical furor on the Doctor's part, especially as he always looked at the ground as he walked about, until I understood that they were roots of words, with a view to a new Dictionary which he had in contemplation. Adams our head-boy, who had a turn for mathematics, had made a calculation, I was informed, of the time this Dictionary would take in completing, on the Doctor's plan, and at the Doctor's rate of going. He considered that it might be done in one thousand six hundred and forty-nine years, counting from the Doctor's last or sixty-second, birthday.

But the Doctor himself was the ideal of the whole school and it must have been a badly-composed school if he had been anything else, for he was the kindest of men; with a simple faith in him that might have touched the stone hearts of the very urns upon the wall. As he walked up and down that part of the court-yard which was at the side of the house, with the stray rooks and jackdaws looking after him with their heads cocked slyly, as if they knew how much more knowing thay were in worldly affairs than he, if any sort of vagabond could only get near enough to his creakfng shoes to attract his notice, and tell a tale of distress, that vagabond was made for the next two days. It was so notorious in the house, that the masters and head-boys took pains to cut these marauders off at angles, and to get out of windows, and turn them out of the court-yard, before they could make the Doctor aware of their presence; which was sometimes happily effected within a few yards of him, without his knowing anything of the matter, as he jogged to and fro. Outside his own domain, unprotected, he was a very sheep for the shearers. He would have taken his gaiters of his legs, to give away. In fact, there was a certain current among us (I have no idea, and never had, on what authority, but I have believed it for so may years that I feel quite certain it is true), that on a frosty day one winter-time, he actually did bestow his gaiters on a beggar woman, who occasioned some scandal in the neighborhood by exhibiting a fine infant from door to door, wrapped in those garments, which were universally recognised, being as well known in the vicinity as the Cathedral. The legend added that the only person who did not identify them was the Doctor himself, who, when they were shortly afterwards displayed at the door of a little secand-hand shop of no very good repute, where such things were taken in exchange for gin, was more than once observed to handle them approvingly, as if admiring some curious novelty in the pattern, and considering them an improvement on his own.

It was very pleasant to see the Doctor with his pretty young wife. He had a fatherly, benignant way of showing his fondness for her, which seemed in its self to express a good man. I often saw them walking in the garden where the peaches were, and I sometimes had a nearer observation of them in the study or the parlor. She appeared to me to take great care of the Doctor, and so like him very much, though I never thought her vitally interested in the Dictionary; some cumbrous fragments of which work the Doctor always carried in his pockets, and in the lining of his hat, and generally seemed to be expounding to her as they walked about.

I saw a good deal of Mrs. Strong, both because she had taken a liking for me on the morning of my introduction to the Doctor, and was always afterwards kind to me, and interested in me; and because she was very fond of Agnes, and was often backwards and forwards at her house. There was a curious constraint between her and Mr. Wickfield, I thought (of whom she seemed to be afraid), that never wore off. When she came there of an evening, she always shrunk from accepting his escort home, and ran away with me instead. And sometimes, as we were running gaily across the Cathedral yard together, expecting to meet nobody, we would meet Mr. Jack Malden, who was always surprised to see us.

Mrs. Strong's mamma was a lady I took great delight in. Her name was Mrs. Markleham; but our boys used to call her the Old Soldier, on account of her generalship, and the skill with which she marshalled great forces of relations against the Doctor. She was a little, sharp-eyed woman, who used to wear, when she was dressed, one unchangeable cap, ornamented with some artificial flowers, and two artificial butterflies, supposed to be hovering above the flowers. There was a superstition among us that this cap had come from France, and could only originate in the workmanship of that ingenious nation: but all I certainly its appearance of an evening, wheresoever Mrs. Markleham made her appearance; that it was carried about to friendly meetings in a Hindoo basket; that the butterflies had the gift of trembling constantly; and that they improved the shining hours at Doctor Strong's expense, like busy bees.

I observed the Old Soldier—not to adopt the name disrespectively—to pretty good advantage, on a night which is made memorable to me by something else I shall relate. It was the night of a little party at the Doctor's, which was given on the occasion of Mr. Jack Maldon's departure for India, whither he was going as a cadet, or something of that kind Mr. Wickfield at length having arranged the business. It happened to be the Doctor's birthday, too. We had had a holiday, and made presents to him in the morning, had made a speech to him through ,the head-boy, and had cheered him until we were hoarse, and until he had shed tears. And now, in the evening, Mr. Wickfield, Agnes, and I, went to have tea with him in his private capacity.

Mr. Jack Maldon was there, before us. Mrs. Strong, dressed in white, with cheery-colored ribbons, was playing the piano, when we went in; and he was leaning over her to turn the leaves. The clear red and white of her complexion was not so blooming and flowery-like as usual, I thought, when she turned round; but she look-

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 909, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

TWO WOMEN SAVED FROM OPERATIONS

By Lydia E. Pinkham's Vegetable Compound—Their Own Stories Here Told.

Edmonton, Alberta, Can. — "I think it is no more than right for me to thank you for what your kind advice and Lydia E. Pinkham's Vegetable Compound have done for me.

"When I wrote to you some time ago I was a very sick woman suffering from female troubles. I had organic inflammation and could not stand or walk any distance. At last I was confined to my bed, and the doctor said I would have to go through an operation, but this I refused to do. A friend advised Lydia E. Pinkham's Vegetable Compound, and now, after using three bottles of it, I feel like a new woman. I most heartily recommend your medicine to all women who suffer with female troubles. I have also taken Lydia E. Pinkham's Liver Pills, and think they are fine. I will never be without the medicine in the house."—Mrs. Frank Emsley, 903 Columbia Avenue, Edmonton, Alberta.

The Other Case.

Beatrice, Neb.—"Just after my marriage my left side began to pain me and the pain got so severe at times that I suffered terribly with it. I visited three doctors and each one wanted to operate on me but I would not consent to an operation. I heard of the good Lydia E. Pinkham's Vegetable Compound was doing for others and I used several bottles of it with the result that I haven't been bothered with my side since then. I am in good health and I have two little girls."—Mrs. R. B. Child, Beatrice, Neb.

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Presto! A Clean Collar

CHALLENGE BRAND WATERPROOF COLLARS

—can be cleaned as easily as washing your hands.

Always neat and tidy—with none of that celluloid or rubber shininess about them.

They look and feel like linen — but outwear a dozen linen collars.

All of linen's whiteness and comfort—without linen's expense.

Sold at all Men's Furnishing and Dry Goods Stores—or send 25c. for sample collar. 6

Absolutely the best Waterproof Collar Made.

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Even as you read this publication you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *jujutsu*. What is *white coal?* This NEW CREATION answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority.*

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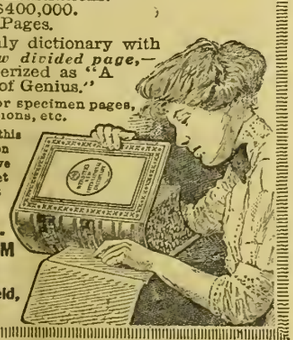

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

ed very pretty, wonderfully pretty.

"I have forgotten, Doctor," said Mrs. Strong's mamma, when we were seated, "to pay you the compliments of the day: though they are, as you may suppose, very far from being mere compliments in my case. Allow me to wish you many happy returns."

"I thank you, ma'am," replied the Doctor.

"Many, many, many, happy returns," said the Old Soldier. "Not only for your own sake, but for Annie's and John Maldon's, and many other people's. It seems but yesterday to me, John, when you were a little creature, a head shorter then Master Copperfield, making baby love to Annie behind the gooseberry bushes in the back-garden."

"My dear mamma," said Mrs. Strong, "never mind that now."

"Annie, don't be absurd," returned her mother. "If you are to blush to hear of such things, now you are an old married woman, when are you not to blush to hear of them?"

"Old?" exclaimed Mr. Jack Maldon. "Annie? Come?"

"Yes, John," returned the Soldier. "Virtually, an old married woman. Although not old by years—for when did you ever hear me say, or who has ever heard me say, that a girl of twenty was old by years!—your cousin is the wife of the Doctor, and, as such, what I have described her. It is well for you, John, that your cousin is the wife of the Doctor. You have found in him an influential and kind friend, who will be kinder yet, I venture to predict, if you deserve it. I have no false pride. I never hesitate to admit, frankly, that there are some members of our family who want a friend. You were one yourself, before your cousin's influence raised up one for you."

The Doctor, in the goodness of his heart, waved his hand as if to make light of it, and saved Jack Maldon ftom any further reminder. But Mrs. Markleham changed her chair for one next the Doctor's, and putting her fan on his coat sleve, said:

"No, really, my dear Doctor, you must excuse me if I appear to dwell on this rather, because I feel so very strongly. I call it quite my monommania, it is such a subject of mine. You are a blessing to us. You really are a Boon, you know."

"Nonsense, nonsense," said the Doctor.

"No, no, I beg your pardon," retorted the Old Soldier. "With nobody present, but our dear and confidential friend, Mr. Wickfield, I can not consent to be put down. I shall beg to assert the privileges of a mother-in-law, if you go on like that, and scold you. I am perfectly honest and outspoken. What I am saying is, what I said when you first overpowered me with surprise—you remember saying how surprised I was?—by proposing for Annie. Not that there was anything so very much out of the way, in the mere fact of the proposal—it would be ridiculous to say that!—but because, you having known her poor father and having known her from a baby six months old, I hadn't thought of you in such a light at all, or indeed as a marrying man in any way,—simply that, you know."

"Aye, aye," said the Doctor, good humoredly. "Never mind."

"But I do mind," said the Old Soldier, laying her fan upon his lip. "I mind very much. I recall these things that I may be contradicted if I am wrong. Well! Then I spoke to Annie, and I told her what had happened. I said, 'My dear, here's Doctor Strong has positively been and made you the subject of a handsome declaration and an offer.' Did I press it in the least? No. I said, 'Now,

Free School Flag

¶ The Maritime Farmer will send a Unoin Jack, three and a half yards of Finest English Sewn Bunting.

FREE

To any school in the Maritime Provinces sending us only

Six New Subscribers

At one dollar each per year

¶ The Flags are from one of the best known makers in England and are guaranteed by them.

¶ No conditions other than above.

¶ Every school should have its Union Jack..

¶ Here is an opportunity to get one with comparitively little effort.

The Maritime Farmer

Sussex, - - N. B.

Annie, tell me the truth this moment; is your heart free?' 'Mamma,' she said crying, 'I am extremely young'—which was perfectly true—'and I hardly know if I have a heart at all.' 'Then, my dear,' I said, 'you may rely upon it, it's free. At all events, my love,' said I, 'Doctor Strong is in an agitated state of mind, and I must be answered. He cannot be kept in his present state of suspense.' 'Mamma,' said Annie, still crying, 'would he be happy without me? If he would, I honor and respect him so much, that I think I will have him.' So it was settled. And then, and not till then, I said to Annie, 'Annie, Doctor Strong will not only be your husband, but he will represent your late father: he will represent the head of our family, he will represent the wisdom and station, and I may say the means, of our family, and will be, in short, a Boon to it.' I used the word at the time, and I have used it again, to-day. If I have any merit in its consistency."

The daughter had sat quite silent and still during this speech, with her eyes fixed on the ground; her cousin standing near her, and looking on the ground too. She now said very softly, in a trembling voice:

"Mamma, I hope you have finished?"

"No, my dear Annie," returned the Soldier, "I have not quite finished. Since you ask me, my love, I reply that I have not. I complain that you really are a little unnatural to wards your own family; and, as it is of no use complaining to you, I mean to complain to your husband. Now, my dear Doctor, do look at that silly wife of yours."

(Continued in oext issue)

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

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The Annual Convention

OF THE

Nova Scotia Farmer's Association

WILL BE HELD AT

BRIDGEWATER, N. S.

Tues., Wed., & Thurs. Jan. 27, 28, 29, 1914

The usual interesting programme is being prepared. Geo H. Barr, Chief of Dairy Division, Ottawa: Miss Jennie A. Fraser, Superintendent of Womens' Institutes for Nova Scotia; John M. Trueman of the Agricultural College, Truro; and others will be found on it.

The opening session is at 7.30 p. m. Tuesday and return Railway fares at single rate has been arranged for on Standard Certificate plan.

Chas. R. B. Byran,

Sec'y-Treas., - - Truro, N. S

Better Butter— Bigger Profits!

If you wish your butter to be smooth and uniform, use the

"BRITISH" Butter Worker

Adopted by the best dairies in Gt. Britain and Canada. Makes the butter firm-even-consistent all through. Results in better butter and bigger profits!

Sold by dealers everywhere. Three sizes — 14 in., 17 in. and 20 in. wide.

DAVID MAXWELL & SONS - St. Mary's, Ont. 4

Labor Saving Devices at Ten Cents Apiece.

Not every one can have all her kitchen utensils of aluminum ware, but many useful pieces can be had for ten cents each that will greatly lessen the work in and about the kitchen. The aluminum ware is very desirable as it is so durable, and then it is so easily kept clean and so light to handle.

The small funnel that is so indispensable in filling jugs, bottles, vinegar cruets, etc., can be had for ten cents in this ware.

There is the measuring cup also for the same price, in this ware, and it is marked off so one can measure dry or liquid materials accurately.

Also there is a small scoop to be bought, also in this ware, and for ten cents. It is often found marked, too. These are convenient in the sugar drawer or in the flour bin when only a small amount is wanted. They can be placed and used in various other ways, as they are so small and light.

An egg separator that will fit the top of a cup is also to be had for ten cents in aluminum, and it saves lots of time. Having this little labor saving device at hand, there is never any danger of the yolk getting into the white of the egg.

Then there is also the lemon squeezer that will fit the top of a cup. In this way one can squeeze the juice from a lemon into the cup and never waste time picking out the seeds from the juice. This handy little device costs only ten cents too and in the same ware.

The tea ball is also to be had for ten cents in this material. The tea is placed in the tea ball and allowed to remain in the tea pot or cup long enough to give the desired strength. In this way one can always have clear tea. If one does not care to use the tea ball, there is the dainty tea strainer in the aluminum ware

For the coffee pot there is a handy little receptacle with a long handle so one can lift it in and out of the coffee pot while the coffee is boiling hot. This also is to be had in aluminum and for ten cents. The coffee is placed in the receptacle and allowed to remain in the coffee until it is done. Then it is removed. It is not an improvement over tying the coffee in a rag? One can often save more than ten cents worth of time hunting for a rag by having this handy little device always at hand.

A doughnut cutter, biscuit cutter, plain and fancy cookie cutters can also be found in this ware and for ten cents. Sometimes one can often find the doughnut, biscuit and plain cookie cutter in this ware for ten cents combined. The handle is made so and arranged that it will turn to either cut doughnuts, biscuits or cookies.

Did you ever find you had a receptacle to clean where you disliked to place a whole bar of soap or even your hand? You can get the nicest little soap shakers in this ware for ten cents, and they are so convenient to use in such places. They are nice to use in the dish pan or to make suds to wash some dainty bit of lace. had for ten cents apiece in tnis ware,

Tea spoons and table spoons can be and they are indispensable to use in the kitchen for measuring and cooking. A good sized mixing spoon can often be picked up for the same price.

Then one can also get the plain and fancy individual moulds in this ware for ten cents each and they are nice to use in making desserts and various other dishes.

One can also get an individual drinking cup that is collapsible and it will be found just the thing for the child's lunch box, as it is so light.

Then there is a mug,too, with a handle for the baby to handle and often saves cleaning for the mother as there is less danger of the baby spilling it. It is often cut in a pretty design around the top to take away some of the plain look, yet it is as serviceable as ever.—Mrs. W. C. Palmer.

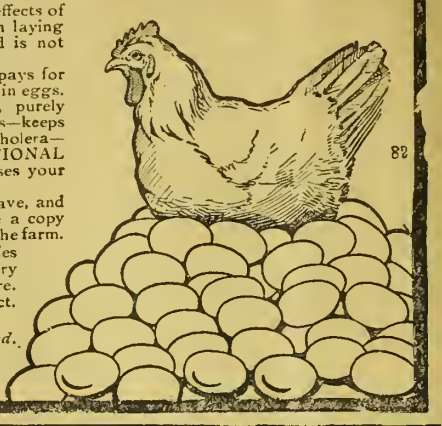
THIS IS THE WAY YOUR HENS WILL LAY WHEN YOU GIVE THEM

International Poultry Food

Right now is the time to feed INTERNATIONAL POULTRY FOOD. Hens need the tonic effects of this wonderful egg producer to start them laying and to keep them laying. Ordinary feed is not enough to make hens lay regularly.

INTERNATIONAL POULTRY FOOD pays for itself - over and over again—in the increase in eggs. It is not an ordinary food, but a tonic, purely medicinal. It actually produces more eggs—keeps fowls well and vigorous—prevents Chicken Cholera—cures Roup. Just feed INTERNATIONAL POULTRY FOOD and see how it increases your egg production.

Write telling us how many chickens you have, and what other stock, and we will send you free a copy of our $3,000 Stock Book. You need it on the farm.



International Poultry Food and Poultry Remedies also International Stock Food and Veterinary Preparations are for sale by Dealers everywhere. If your Dealer cannot supply you, write us direct.

All our goods are sold under a spot cash guarantee of your money back if not satisfied.

International Stock Food Co. Limited TORONTO ONTARIO

IT'S WASHDAY IN THE MORNING!

What does it mean to you? Is it a burden—a toil—a weary round of drudgery? Get a

Maxwell

"HIGH-SPEED CHAMPION" WASHER

and laugh at washday. Just put the clothes in. The washer does all the hard work. Clothes come out clean and white—better than if you spent hours scrubbing over a steamy tub. The Maxwell washer works with crank handle at side as well as top lever. Use which you like. Either way's just as easy.

Ask your dealer to show you the Maxwell High-Speed Champion. Also enquire about our Washers for Water, Electric or Gas Engine power.

DAVID MAXWELL & SONS ST. MARY'S, ONT.

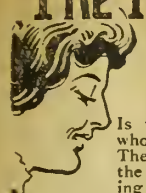
5

WOMEN CURED AT HOME

Women's disorders always yield from the very beginning of the treatment to the mild, but effective, action of Orange Lily. Within two or three days after commencing its use the improvement becomes noticeable, and this improvement continues until the patient is completely cured. Orange Lily is an applied or local treatment, and acts directly on the womanly organs, removing the congestion, toning and strengthening the nerves, and restoring perfect circulation in the diseased parts. In order to convince all suffering women of the value of this remedy, I will send a 35-cent box, enough for ten days' treatment, absolutely FREE to each lady sending me her address. MRS. FRANCES E. CURRAH, Windsor, Ont. 6

For Sale by Leading Druggists Everywhere.

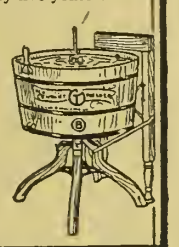
The "New Century" SMILE



Is worn by every housewife who uses one of these washers. The reason is quickly found for the New Century makes washing easy. It removes the hard rubbing and does the work more thoroughly than any other way.

The New Century Hand Washer works quickly and easily. It gushes the water through the fabric, leaving it sweet and clean in a few minutes. It cannot injure the finest garment you possess.

The product of twenty-five years experience in making washers, the New Century is without an equal. Patented features make it the leading hand washer.



Examine it at your dealer's or send to us for information.

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Our specialty is CANADIAN RAW FURS. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

HALLMAN FUR CO., Toronto Ontario

N. Hallman, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

Family Home Fireside.

There is no other joy in life like mental and bodily activity, like keeping up a live interest in the world of though and things. Old age is parctically held at bay so long as one can keep the currents of his life moving. The vital currents, like mountain streams, tend to rejuvenate themselves as they flow.

I still find each day too short for all the thoughts I want to think, all the walks I want to take, all the books I want to read, all the friends I want to see.

(So says John Burroughs at the age of seventy-six.)

"LET THE SIPHON DO THE WORK

It is wash day; you have a boiler full of water and are going to dip it out into the washing machine or wash tub.

Don't do it; let it "do itself." Your son or daughter who is studying physics could tell you just how to do it.

First the washing machine or tub must be lower than the boiler.

Have a piece of hose long enough to extend from the bottom of the boiler into the wash tub.

Fill the hose with water and stop one end with a cork.

Hold the hose so that the water does not run out of the other and put that end carefully into the water in the boiler.

Put the other end into the wash tub and remove the cork. The water will flow.

If the water in the boiler were not so hot, both ends of the hose could be corked, and the cork removed by the hand underneath the water.

If a slight weight is tied to each end of the hose it will stay in place more securely.

This is really a very simple proccess. The edge of the boiler is the highest koint of the hose, the top of a hill, as it were. When the end of the hose in the wash tub is opened, the water in the hose runs down this hill just as any right minded water would. The water in the hose from the edge of the boiler to the surface of the water in the boiler would not naturallly follow since it would be up hill, but the water running out of the otner part of the hose makes a vaccuum and the pressure of the air on the surface of the water in the boiler forces the water up the hose into the vaccuum, thus establishing a continuous flow. The flow will continue until all the water is emptied from the boiler if the hose extends to the very bottom. You can go on about other work and let the boiler empty itself.

This principle of the siphon can sometimes be put to various good uses. In one case it proved a friend indeed.

A rain water tank was situated under the flow of a third story. A leak appeared; the problem was to empty the tank in the quickest possible time. Of course, the faucets were opened, so that it would run out by its legitimate channels as fast as possible. In addition it was siphoned out by a long hose carried from the tank out of a window and down to the ground.

In another case a cistern was emptied by means of a hose acting as a siphon. This was possible only because the cistern was on the side of a hill and the hose could be carried down the hill so that its outlet was lower than the water in ths cistern.

We may not need the siphon in any unusual way, but we can all let it empty the boiler for us, which is much rasier than doing it by muscle power.

Butter Your Bruises.

We always expect a bad bruise to be followed by extreme discoloration of the tissue. Yet this annoying after effect can be prevented. Simple butter will do it. Immediately upon receiving the bruise rub butter, plenty of butter into the tissue. Keep the spot well covered with butter for perhaps two days or until the severe soreness is past. Strange as it may seem there will be no discoloration whatever. If butter cannot be had use cold cream or vaseline. They will help, but are not as effective as butter. This sounds too simple to be true, but prove it the next time you have need.

Moisture in the Air.

Many times people are troubled as winter comes on with a very annoying itching of the skin. This is often attributed to the heavier underwear, especially if it is wool, and that is the cause in some cases. Much more frequently, however, the cause is lack of sufficient moisture in the living rooms.

...

It is not enough that we guard against too high a temperature. We must also watch lest the air become too dry and unwholesome for that reason. A hygrometer will show the degree of humidity and it should be kept at 50 or above. Most furnaces have a receptacle for water. This should be kept filled. There are on the market various kinds of receptacles to be attached to radiators, but anything that will hold water and present a broad surface for evaporation will answer the purpose equally well.

Cause of Colds.

Besides the germ which is the exciting cause of the cold there are contributing causes, such as sudden exposure to cold, exposure to hot stuffy air, overfeeding, underfeeding, failure of the organs of elimination (bowels and kidneys) to carry away all waste products, errors in clothing, over indulgence in alcohol stimulants. —Dr. W. A. Evans.

They use Maxwell's Churns in Denmark—

Fancy! Denmark—the great butter-producing country of the world—send all the way to Canada for Maxwell's Churns! Also used in Australia, New Zealand and S. Africa. Convincing proof, this, of the excellence of these well-known churns. Best of all is the—

Maxwell

"FAVORITE" CHURN (with Bow Lever)

Notice the adjustable handle on the bow lever. No other churn has this. Handle can be moved to centre or either side, whichever is most convenient for driving.

You can buy the "Favorite" in eight sizes. Strongest and best made churn on the market. Easy to work. Gives splendid results. Ask your dealer.

DAVID MAXWELL & SONS ST. MARY'S, ONTARIO 1

Cheese Fondu.

1 cup crumbs.
1 cup milk.
1 cup grated cheese.
¼ teaspoon white pepper.
1 egg.
½ teaspoon salt.
¼ teaspoon white pepper.
1 egg.

Scald milk in double boiler and add bread crumbs to it. Then add grated cheese, melted butter and seasonings. Cook in double boiler until cheese is melted; add the slightly beaten egg gradually. Cook five minutes and serve on dry toast.

Baked Cheese With Egg.

4 eggs.
1 cup grated cheese.
1 cup soft bread crumbs.
¼ teaspoon salt.
Few grains cayenne.

Break the eggs into a buttered baking dish and cook in hot oven until they began to turn white around the edges. Then cover eggs with white sauce and over this the mixture of cheese, crumbs and seasonings. Brown in very hot oven so eggs will not be overcooked by time cheese is brown.

Cheese Omelet.

Yolks of two eggs.
2 tablespoons hot water.
1 cup grated cheese.
Salt and pepper.
Whites of 4 eggs.
1 tablespoon butter.

Beat egg yolks until lemon colored; add the hot water and seasonings. Beat the whites until stiff, then add the cheese. Cut and fold the two mixtures together, beat the butter in omelet pan. Add the mixture and cook very slowly until brown on under side. Brown top of omelet lightly in hot oven.

Help the Mail Service.

Every man, woman and child who starts a letter on its way can help the mail service and save the eyes of hundreds of men.

Address your letter very plainly and in good black ink. Poor writing and pale ink cause delay and tax the eye sight.

How to Avoid Catching Cold.

Being very subject to catching cold on the slightest provocation, I am for that reason well qualified to instruct others how to avoid it, and how to check it when contracted. The fact that I am seldom successful in keeping at bay any chill that glances in my directian is no disparagement to the prescriptions, for two reasons; constitutional tendency first; and a carelessness that goes on working under the most unfavorable conditions, thinking, "Oh, it will go off!" or, "Bother, I haven't time to fuss today, I'll take a hot drink perhaps at night." Perhaps! But my wise readers scent the chill when it first breathes through them, and double bar the door against it, thus:

At the first suspicion of a chill, take 5 drops of camphor on a lump of sugar every few hours or a teaspoonful of ammoniated tincture of quinine in a wineglass of water. At bed-time, bathe the feet and legs in a very hot water and drink at the same time a good basin of hot milk gruel; undress quickly, put an oiled flannel on the chest, and a dry, hot flannel over that, get into a warm nightgown, and then into a warmed bed, and rejoice when the perspiration oozes profusely from every pore. On getting up next morning sponge the whole body with cold water, and rub briskly with a rough towel till the flesh glows.

To harden the skin against changes of temperature, take a cold sponge bath every morning; or, if this is not convenient, or too much of a shock in cold weather, at least sponge the face, neck, chest and arms, and dry vigorously with a coarse towel. Formanint tablets are much recommended as an antiseptic against the infectious germs which attack the respiratory passages; but the one person I know who used them regularly died of pneumonia. That sounds pessimistic. But experience prevents me from being optimistic.—Gretchen.

Home Hints.

TO SMOOTH THE FLAT-IRON.—Glue down a piece of linoleum on a board 6in. wide and 1 ft. long. Bore a hole at one end for hanging it up out of the way when not in use. When a flat-iron has got smoky and sticky just sprinkle a little fine salt on the board and rub the face of the iron on it. It smooths and cleans the iron at once.

A NEW TIN KETTLE.—It requires very careful and thorough cleaning before any water from it is used for drinking or cooking purposes. Nearly fill it with water, and put in a knob of soda. Stand it aside on the kitchen hob where it can gradually boil. Afterwards pour away the stale liquid and refill with clean water. Allow this to slowly boil, then follow with several rinsings of clean water.

Dr. Morse's Indian Root Pills

are made according to a formula in use nearly a century ago among the Indians, and learned from them by Dr. Morse. Though repeated attempts have been made, by physicians and chemists, it has been found impossible to improve the formula or the pills. Dr. Morse's Indian Root Pills are a household remedy throughout the world for Constipation and all Kidney and Liver troubles. They act promptly and effectively, and 49

Cleanse the System

Style 110

Few Great Pianos

Most piano makers will tell you that their instruments are the **best** made. Some of them **think** so: Others **merely say** so. But, as a cold, business proposition there are only **a few really great** pianos manufactured —**their hidden parts are identical**—and the

Sherlock-Manning 20th Century Piano

is recognized as one of them. Here is another remarkable fact: A competitor **originated** our slogan. After **studying** our instruments he declared: The Sherlock-Manning is

"Canada's Biggest Piano Value"

You cannot buy a **better** piano than the **Sherlock-Manning** pay what price you will, and when you **do** buy a **Sherlock-Manning** you can **rest assured** that your instrument is

—one of the **few great pianos** made

—that it is **unrivalled in brilliancy of tone**

—that it is **built to endure,** and YOU **save $100,** by our **different** and **better** way of doing business.

Don't you think that it would **pay** you well to **consider** our proofs of these claims? Write to-day for our handsome **Art Catalogue.** And the proofs! 43

SHERLOCK-MANNING PIANO CO.

(No street address necessary)

London, - - Canada.

Pulping Fruits.

An industry parctised in Europe but only started in America. The pulping of fruits which has been practised in Europe especially in France for years past as an important industry has hardly been started on this side of the ocean.

The object of this practise is to con vert various kinds of fruits into a condition into which they may be preserved for shipping long distancee for use in the prices are highest. Many hundredweight of black currant pulp is produced annually in France and is used largely in confectionery. The pulps of cherries, raspberries, red currants, and plums, in fact any kind of fruit may be pulped and are used on a large scale. The workers employed become very rapid in the different processes being able to remove the stems from 110 to 220 pounds of currants in a day; and an average operator can pulp about eleven pounds of cherries in an hour. After the removing of the stalks and pits in the process of pulping, the pulp is sterilized and packed in air proof bottles, care being taken to avoid actual cooking.

In the case of the pulping of the apricot it is interesting to note that the pits are dried and broken, the kernels being sold for the manufacture of "extract of bitter almonds," a familiar flavoring.

It is possible that the practise may in time become an industry in these parts of America where fruit grows abundantly and the needless waste of the fresh fruit might in this manber be turned into a source of wealth.

To the housewife this pulping of fruits is of great importance for in many cases fresh fruit may be thus preserved when canning is not desirable and stored in glass jars for future use. Reference to the various methods of using such fruit pulp has been mentioned in last isue.

In a later article the pulping of vegetables will be discussed and recipes given for its use in the household.—D. E. H.

Here is a remedy that will cure cure your cold. Why waste time and money experimenting when you can get a preparation that has won a world-wide reputation by its cures of this disease and can always be depended upon? It is known everywhere as Chamberlain's Cough Remedy, and is a medicine of real merit. For sale by all dealers.

New I. C. R. Station at Truro.

Truro, N. S., has a new station building of which it is justly proud, and which adds very greatly to the appearance of the town. It is the finest station building on the line of the Intercolonial.

The new building is the third Truro has had since railroading began in Nova Scotia. The first was opened in 1855 when the old Nova Scotia railway was completed from Halifax to Truro. It was a fair enough structure in the pioneer days of the "iron horse," but something new was determined on in 1871, when the Intercolonial railway was completed and Truro became a more important junction point. The second station was for several years through a sufficiently adequate for all the business, but it needs only a glance at it today to realize how far such a structure fell short of the modern demand for station facilities and accomoda. tion. The new building is a handsome and commodious structure of red sandstone, with rock faced body and dressed trimmings. It has a length of 338 feet, the cent(al part

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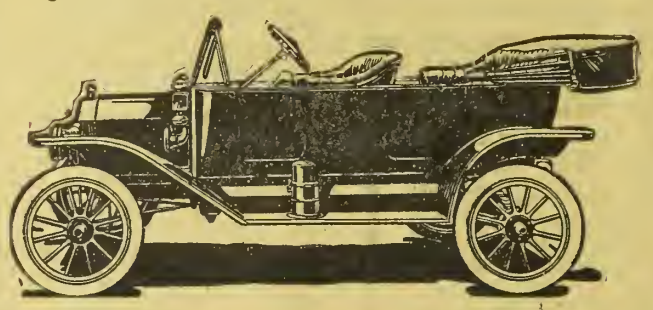
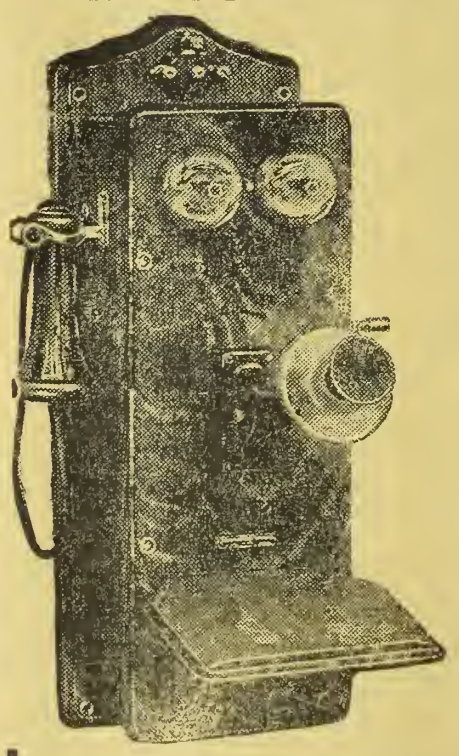


It's A Pleasure To Use These Telephones



They are the clearest talking and loudest ringing bridging telephones on the market. They are guaranteed to be superior in design material and workmanship. They have several exclusive features that add to their efficieny. Made in wall phones as illustrated, and desk or table styles. If you are operating a telephone line and not using our telephones and equipment, write for our Free Trial Offer. If there is no telephone line in your locality write us and we will tell you how to organize an independent municipal or local company. Ask for our No. 3 Bulletin—containing the latest information about building telephone lines.—Also No. 4, describing our magneto telephones, is free on request.

SEND FOR A COPY.

Canadian Independent Telephone Company, Limited.

1820 Duncan St., - - Toronto, Canada.

"Also Manufacturing Agents for the Magnaphone Co. under Mr. George R. Webbs' Canadian Patents No. 123363, No. 124537, No. 131145."

Advertise in The Maritime Farmer.

being 137 feet long, 56 feet wide, surmounted by a tower on the street side 19 feet square and 78 feet high. The foundations are of concrete and the floors of reinforced concrete and structural steel. The roof is supported on steel roof trusses and is built of slow burning wood covered with pitch and gravel. A ten foot verandah supported on structural brackets with roof covering of asbestos shingles, extens along the whole track front and around the two ends affording outside shelter and shade. Inside the building is handsomely equipped on a scale more artistic than the Intercolonial has previously attempted. The ground floor of the central part contains the general concourse, 52x51 feet with a ceiling 19 feet high. The main street entrance is through the tower while there are two entrances from the station platform and side entrances and the floors of apartments leading from it are of "Terrazo" on top of concrete. The walls for a height of 7 feet are tiled, the upper part and the ceilings being done in rough cast plastering with finished cornices, beams, etc. All the wood furnishings are of quartered golden oak. The ticket office is a handsome structure with an oval front and an art glass canopy roof, and has ample window accomodation for the growing needs of traffic. Off the main concourse is a finely appointed ladies' parlor and lavatory, telegraph office and station master's office. A passage runs from the concourse into the restaurant and dining rooms. The main restaurant is 57x30 feet. The furnishings of these rooms are very attractive, and the kitchen and pantry equipment the most modern that could be obtained. The baggage rooms, express offices, mail room and conductor's and trainmen's rooms are in the southern extension.

On the second floor of the central part of the building are located very fine offices for the use of the divisional superintendent and staff, the chief dispatcher and his operators, the divisional engineers and trackmaster. The Webster modulation system of heating is used throughout the building.

The plumbing is installed according to the most modern sanitary methods. Special attention has been paid to the electric lighting, the wiring being carried in conduits and the fixtures in excellent taste. The lighting will be found ample in the waiting rooms so that the passengers while resting there can read comfortably. Most comfortable are the large open fire places in the ladies' parlor and the men's smoking room.

In the spring it is the intention to extend the concrete esplanada all around the building, and grass plots with flower beds will grace the town side. The local trains will be dispatched from each end of the station where ample track accomodation will be constructed as soon as the old station is removed from its present site.

Some New Quirks in Farming.

It is a peculiar fart that some farmers won't think anything of throwing $1,450 into a new red barn and let their wives get along with a kitchen range that won't cook anything but shredded wheat biscuit. There are too many men in this country laying $70 cement floors in the hog barn and making their wives put up with a rag carpet in the parlor that has been patched every spring for 19 years. If we had a hasband who spent all of the money on corn cribs and doled out pocket money in two-bit pieces, we would meet him at the gate some peaceful summer evening and separate him from his pocketbook with a rolling pin. If the wives of some men had more spunk, there would be fewer patented water tanks for the pigs and more crintz curtains in the parlor bedroom.

You can't produce a corn crop by hanging both legs over a cracker box and discussing Schedule K. The man who would rather consort with a pool table than a corn cultivator is generally the one who has to slap a third mortgage on the back 40 in order to raise the first payment on an automobile.

We read in the papers the other day of a farmer in a neighboring county who attempted to play a joke on a tall gaunt Jersey heifer by milking her on the wrong side. The Jersey has no sense of humor whatever and on this occasion she promptly introduced the milker to the evergreen shore by stepping on the side of his head and flatening it out like a palm leaf fan. No doubt the deceased was one of those farmers who went broke in the grocery business and finally graduated to the farm.

(Continued on page 240)

YOU may have an idea because western wheat flour makes a big loaf of bread, that the quality is in keeping with the size. The largest men have not accomplished the greatest deeds.

Size is the only feature that can commend western wheat flour to any cook. And the good cook quickly discovers that quantity without quality is not worth buying.

"BEAVER" FLOUR GIVES BOTH QUALITY AND QUANTITY, because it is a blended flour. It is mostly the choicest Ontario fall wheat with sufficient Manitoba spring wheat to equalize the strength.

In "Beaver" Flour, you get the famous pastry-making qualities of Ontario wheat—you get the fine texture, the evenness and the delicious flavor of Ontario wheat—you get the nutriment of Ontario wheat—with the "strength" of Manitoba wheat which makes the dough "stand up" in the oven.

One of the big conveniences of "Beaver" Flour is the fact that it is equally good for bread and pastry—and best for both.

"Beaver" Flour is superior to any western wheat flour for any and all kinds of baking, and is the cheapest flour you can use because the most economical.

DEALERS—write us for prices on Feed, Coarse Grains and Cereals.

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18k roll gold jewelry at wonderfully low prices

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

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A $3.50 watch for..... ....$1.36

Boys Watch..... .....69 cents nickel

All mail charges prepaid

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These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

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MRS. ALVIN ZINK, Rose Bay, N. S.

States that she has been cured of

INDIGESTION

and Stomach trouble by the use of

Gates' Invigorating Syrup & Life of Man Bitters

after having been under the care of physicians without receiving benefit.

And although three years have passed has no returning symptoms.

She highly recommends these medicines to her friends and the public.

Sold everywhere at 50c. per bottle, $5.50 per dozen.

Highland View Dairy.

Young Guernsey Bulls, also Buff Orpington and White Wyandotte Cockerels and Pullets.

R. R. BLACK, Amherst, N. S.

Sub-Soiling With Dynamite.

The United States Department of Agriculture issued on March 26th, Bulletin No. 92, entitled "Wells and Sunsoil Water," by W. J. McGee, expert in charge of subsoil investigations.

This bulletin is of great importance to every citizen because, as it states in its opening paragraph, the habitability of any continent depends on its water supply—no water, no plants; no plants, no people.

The bulletin is an exhaustive treatise of 185 pages and the data therein covering 31 typical states, show that the subsoil water level is lowering at the rate of 1.422 per decade, as determined by the height of water in the wells.

The author concludes from the statistics and observations that the chief causes of this lowering of water level are: (1) Clearing the land of forests. (2) Heavy consumption of water by manufacturing plants, artesian wells and by the increasing population. (3) Improper methods of farming whereby the rainfall is not conserved in the subsoil.

In suggestng a remedy for this threatened water famine and increasing tendency towards protracted drouths, the author observes that the first cause cannot be corrected except in a small way by forestry; that the second cause cannot well be corrected because of the needs of the population and that therefore the obvious remedy consists in improved methods of soil cultivation that will prevent the surface run-off of rainfall.

The means suggested to prevent such surface run-off is to adopt measures whereby each farm shall be "made to take care of all the water falling on it during the entire year; and all that part of the water not needed for immediate crop growth or cistern or other supply, should be so caught and absorbed by mulch or well-tilled soil or contour furrows and ridges as to pass into the ground, there to be stored against need for the steady supply of stream through seepage and for the gradual restoration of the sadly depleted reservoir of subsoil water."

Progressive farmers everywhere are alive to the advantages of growing plants in an absorptive soil, as it tends to prevent wet weather saturation of the top soil, or dry weather drouth.

Until recently, deep plowing with a subsoil plow or other deep tillage machinery was apparently the only means of increasing the absorptive power of the soil, but the plowing of soil to a depth of from 12 to 18 inches is accomplished only with great difficulty and considerable expense. Within the last two years, however, the general introduction of dynamite in agriculture has demonstrated that the best means of increasing water storage capacity of the subsoil is by blasting it. Blasts of a half-cartridge or a quarter-pound of low grade dynamite placed in bore ho,es to a depth of about three feet will break up the most impervious subsoil in a spongy mass. In lact, English agriculturists describe this work as the establishment of "soil sponges."

In ordinary subsoil where the charges are placed at adistance of 15 feet apart, these "soil sponges" over-lap as the explosive has an average radius of efficiency of 10 feet. Thus the whole area blasted becomes an enormous earth sponge six to eight feet deep and the water storing capacity of an acre of land so treated is increased by many tons. This does not create a mucky condition of the land On the contrary, it produces a condition most favorable to plant growth.

When heavy rainfalls occur the water, instead of washing off the valuable surface soils into streams, clogging them and making navigation more difficult, sinks into the ground and remains in storage until the dry weather exhausts the moisture in the top soil. The stored water then begins to rise by capillarity, carrying the plant through the protected drouths that are now causing millions of dollars loss every year in this country.

Further, this subsoil blasting makes available for solution in the constantly moving soil water, tons of natural plant food, otherwise unavailable, because not in solution. This is no longer a theory but an established fact as shown by largely increased crops where subsoil blasting has been properly done. The chief precaution to be observed is that the blasting be done when the subsoil is dry, because then the shattering or sponge creating effect of the blast is greatest, whereas in wet subsoil the blast tends to form a small pot hole packed tight around its periphery.

It is worthy of note in this connection that the cnief cause of the disastrous floods that have recently occurred in this country, is the lack of absorptive power of the soil and the denudation of the land by clearing. As the majority of farm soils that have not been opened up by blasting of subsoil plowing will absorb only a small portion of the rainfall, it is obvious that there is an excess run-off of surface water which has no let excepting the small streams and they in turn empty into the large rivers and cause, in a few days' time a rush of water which the largest river channel is incapable of handling.

If subsoiling with dynamite were practiced generally throughout the country, it is not too much to expect that these disastrous floods would be a thing of the past.

A Healthy Demand
THERE'S always a healthy demand for bread and pastry made with
REGAL FLOUR
Your family know a good thing when they taste it, and they know things made with Regal are invariably good. There's no time like the present for trying it, for the sooner you'll reap the advantages of using a superlatively good and absolutely uniform flour. Buy a barrel of REGAL from your grocer to-day. Your money back if you're not satisfied with it.
The St. Lawrence Flour Mills Co., Ltd.
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REGAL
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The Use of Iodine.

Dr. A. S. Alexander, the well-known American veterinary authority advocates a more general use of iodine both as a tincture and in ointment form. For bites of poisonous insects and for germ infections of various sorts he finds treatment with tincture of iodine to give good results. He says:

"Tetanus often kills horses that simply have collar or saddle sores. The owner daubs the parts with axle-greese or some smear, salve or ointment, thereby excluding air. Better saturate the wound with tincture of iodine, or with 1-500 solution of corrosive sublimate, which is deadly to all germs and the spores of some of the worst diseases, notably anthrax.

"Use iodine freely if a boil is starting on man or beast, and particularly on what the farmer often terms a blind boil. By this he means one of those angry, sore, dark-red or purple bunches which does not readily come to a head. Such an infected center has come from the entrance of a germ, or the bite of an insect. Flies from the carcasses of animals may cause them. They may turn into malignant pustule from the bite of an insect. They most commonly come from infection from pus, blood or other discharges getting onto the hands, when one treats a wounded or diseased animal. They are often contracted at hog killing or cattle-butchering time—the knife or a bone scratching or cutting the hand. Saturate such wounds with tincture of iodine and repeat the application once or twice daily, until the wound heals and there is no sign of infection. This is home treatment; it always is best, of course, to employ the physician in serious cases of emergency or where neat danger is thought to exist.

Iodine tincture is also a great value in the tteatment of all grandular swellings and in lumpy jaw (actinomycosis) Goitre on the neck of a young animal is well-treated painting the swellings with tincture of iodine, or rubbing them with iodine ointment every other day. Iodine in another form—the iodine of potash—also is used in sulch cases being given internally in small doses for a few days.

The tincture and iodine are sovereign remedies in wooden tongue (actinomycosis of the tongue) of cattle. The enlarged tongue is sacrified light ly and ulcers are scraped. Then tincture of iodine is applied and repeated in a few days. Iodine of potash is given internally, in one dram doses two or three times a day, for several periods of ten days to two weeks, with similiar intervals without the medicine, until the disease is cured. The drug causes iodine poisoning (iodism) when given in these large doses for the time mentioned, and the intervals without treatment are inl tended to allow recovery from iodism before again giving the medicine.

"Similiar treatment is given in lumpy jaw. The tumors and abcesses are opened freely, swabbed with tincture daily, or packed with oakum or cotton soaked in the tincture, and the iodine of potash is given internal ly as in treating wooden tongue. Tincture of iodine and the ointment of iodine are of great value in the reduction of all chronic swellings. Use them on puffs, such as windgalls and bog spavin on curbs, on enlarged tendons, on forming spavins, splints and ringbones. The tincture also should be used on or in wounds that are tardy in healing, and is very useful for injection, now and then, into the fistulae of the withers and poll. It likewise is eective in the treatment of canker of the mouth, and in snout disease(bull-nose or snuffles) of swine."

The Farmer a Great Help.

Sheffield Mills, N. S., Nov. 11, 1913.
Editor Maritime Farmer.

Sir:—

Enclosed please find 75c. for two paper has been coming to us insertions of the enclosed advertisement in the 1c. per word column of your paper. I may say that your your paper has been coming to us for quite a few years and that it is a great help as it is nearer home and understands our conditions better than any other farm papers we have.

Do you take in any ads. for one or two insertions on last page such as "Cobequid Farm's" adv. and if so at what rate? I remain,

Yours truly,
W. C. ELLS.

Propagation of Plants from Cuttings.

A knowledge of the propagation of plants is of great importance, especially horticulturists and farmers Since by doing their own propagating they can obtain plants better acclimated at a lower price and avoid the introduction of dangerous pests.

Plants are propagated by natural and artificial means, the latter method will be discussed in regard to their reproduction by cuttings.

A cutting is a detached portion of a plant that will take root and reproduce its kind if set in the soil. They may be divided conveniently into three classes, viz., root and tuber cuttings; greenwood, herbaceous or soft wood cuttings, and ripened or hardwood cuttings.

ROOT AND TUBER CUTTINGS.

Tubers and thickened portions of roots and stems. The Irish potato is a good illustration of a tuber. Generally roots do not arise from the tubers themselves, but from the sprouts. At least one eye should be left in an Irish potato cutting, but in the case of the sweet potato no sprouts are present and all that is necessary for growth is a piece of the "skin" or apidermis with each cutting. Root cuttings are commonly made from plants that show a tendency to "suck er," such as plums, raspberries and blackberries. Most root cuttings possess no buds before planting, the buds developing later. Cuttings, one to three inches long, are made from the roots and planted horizontally in the soil. Cannas, paeonies and rhubarb are also propagated from root cuttings. Canna cuttings can be planted in the open field, but more certain results will follow is started in the house. Paeonia cuttings are planted in the spring about two inches below the surface of the soil. Rhubarb is very easily grown from cuttings of the roots in spring. Horse radish is propagated by simply cutting the roots into four to six-inch lengths. All root cuttings come true to name.

SOFT WOOD CUTTINGS.

Many greenhouse plants, including roses, geraniums, begonias, chrysanthemums and carnations are propagated from soft wood. Many deciduous. ornamental shrubs and trees can also be started in this way. Herbaceous cuttings can be made from the leaf or stem. Commonly plants with fleshy leaves, such as the begonia, are multiplied by leaf cuttings. These cuttings will strike root in moist sand after which they should be trans ferred to pots containing a light soil and an admixture of leaf mould.

Stem cuttings are made from the tips of branches. Some prefer to make them long; other, short. The tip and bottom leaves of the cuttings are removed to prevent to rapid transpiration of moisture. On hot, sunny days, unless protected from the direct rays of the hot sun, transpiration takes place so rapidly that the leaves wilt, as the cells do not hold enough water to keep them distended. A wilted soft-wood cutting is almost certain to die. A few leaves should be left on a green wood cutting, since they are as essential to its growth as lungs are to the life of a man. Cuttings from ornamental shrubs, as spireas, hydrangeas, honeysuckles, roses, gooseberries, etc., can be made from the tips of growing branches the early part of July. Hardy Perpetual rose cuttings are made about one and one-half inches long from wood grown in the greenhouse. Other cuttings are best when made five to eight inches long. They are then set three to four inches deep in sand benches six inches deep in the greenhouse. Sand sifted through a quarter-inch mesh sieve is best, as most soft wood cuttings require coarse sand. After set out in the bench, a heavy stream of water from the hose is given to wash the sand around the cuttings. They are left in the benches for about ten days, or until they have calloused, and then set into two-inch pots. Later the cuttings are transferred to flats. Late in the fall the flats are put into a cool cellar for the winter. In the spring the plants are transplanted into nursery rows.

HARD WOOD CUTTINGS.

Hardwood cuttings are made from ripened wood of the present or previous season's growth. They are generally made in the fall, tied in bundles of twenty-five or fifty and wintere in the cellar in moist sand. In the spring they are planted out in the field in a slanting position. Currants, grapes, willows, poplars and dogwood are commonly propagated in this way. The length of hardwood cuttings vary from six to ten inches. Grape cuttings are cut so as to have three buds. A currant cutting the same length has ten to fifteen buds.

—E. L. Peterson.

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THEY COVER CANADA FROM HALIFAX TO VANCOUVER - A HAPPY, CONTENTED, PROSPEROUS PEOPLE "PEDLARIZED"
THE "GEORGE" (24"X24") & THE "OSHAWA" (16"X 20") ARE CANADA'S FAVORITES.
SEND FOR PARTICULARS.
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Carried in stock at Montreal, Ottawa, London, Toronto, Winnipeg, Quebec, Calgary, Vancouver, Chatham, Halifax St John, Sydney.
Get our prices on Siding, Corrugated Iron, Vents, Eavestrough, Conductor Pipes, Finials and Ornaments.

SISTER: READ MY FREE OFFER.

I am a woman.
I know a woman's trials,
I know her need of sympathy and help.

If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understand women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back,** or **bowels, feeling of weight** and **dragging down sensations, falling or displacement of internal organs, bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete **ten days' treatment** entirely **free and postpaid,** to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escaping the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured,** my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatment is for all,—**young or old.** To **Mothers** of **Daughters,** I will explain a simple home treatment which speedily and effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, **write for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask** for the **free treatment to-day,** as you may not see this offer again. Address:

MRS. M. SUMMERS, Box 309, WINDSOR, ONTARIO.

Nerves Were Unstrung.

WOULD ALMOST GO OUT OF HER MIND.

Many women become run down and worn out by household cares, and duties never ending, and sooner or later find themselves with shattered nerves and weak hearts.

On the first sign of any weakness of the heart or nerves you should avail yourself of a perfect cure by using Milburn's Heart and Nerve Pills.

Mrs. Archie Goodine, Tilley, N.B., writes:—"When I was troubled with my heart, two years ago, I was very bad. My nerves were so unstrung, sometimes I would almost be out of my mind. I doctored myself with everything I could get, until at last I got four boxes of Milburn's Heart and Nerve Pills, and they have cured me. I cannot speak too highly of this wonderful remedy, and will recommend it to all sufferers."

Milburn's Heart and Nerve Pills are 50c. per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

LET'S GET ACQUAINTED!

You have the

RAW FURS

We have the MARKET for them and the MONEY to buy them.

Why not exchange YOUR FURS for OUR MONEY. It means MORE MONEY for you. A trial shipment will prove it. Think it over.

A postcard from you will bring you our latest price list and shipping tags. References furnished. Goods held separate on repuest.

Hiram Johnson, Limited

494 St. Paul St., Montreal

Mail Dept. "F" The Raw Fur Dealers

There is an increase of sixty per cent. in the attendance at

FREDERICTON BUSINESS COLLEGE

for the Fall Term of this year as compared with last year.

Our

NEXT TERM

opens on Monday, January Fifth.

Send for catalogue. Address

W. J. OSBORNE

PRINCIPAL

Fredericton, N. B.

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.

Direct Parchment Importers, Sussex, N. B.

FARMER ADS. BRING RESULTS.

Some New Quirks in Farming.

(Continued from page 237)

We would rather slide into a hornet's nest on a pair of linen pants than try to pail an irascible milch cow on the wrong side. The man who doesn't know which side of a cow to milk on had better move back to town and hire out to the street commissioner. Poets like to sing about "the mild-faced Jersey standing knee deep in June," et cetery, but if you ever snuggle up to a Jersey on the off side and try to induce her to come across, she will land on you with so much emphasis that you will have to be put together by a plumber.

What has become of the old-fashioned farm wife and mother who used to get up at 5 o'clock Sunday morning, get the work out of the way, dress herself and the children and pack the whole family six miles to church, rain or shine? Well, she is with us yet, but now the family goes in an auto and doesn't have to leave home until the first bell has rung. We remember a faithful old family in Israel who used to drive in from the farm with her little brood every Sunday morning and evening, sometimes over roads that it seemed as if nobody could get over except a sand hill crane. Meanwhile, a lot of the members who lived within two blocks of the church never could get there when it rained for fear they would get their feet wet. If the recording angel keeps track of the faithful farm people who are loyal to the little church in the settlement, in sunshine and storm, they will have a seat mignty close up to the throne.

There are only two ways to make profitable use of skim-milk. One is to feed it to near-sighted pigs who are not particular about their diet, and the other is to sell it to some neighbor, who doesn't keep a cow. Some people drink skim-milk and try to look as if they liked it, but that only shows that they never lead their appetite up to a bowl of the real article from a three-quarter Jersey three weeks on grass.

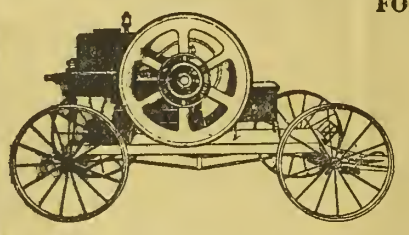
Benjamin Franklin once said: "You can drive a horse to water but you can't make him gargle his throat," or words to that effect. The same is true of humans. A man or woman can't work 14 hours a day for 365 days in a year without growing gray hair, wrinkles and crowsfeet faster than Yellow Dent corn. If farm folks, and town folks, too, would take their noses off the grindstone oftener, they would live longer and their tempers would be sweeter. All work and no play makes Jark a dull boy and a sour boy and a grouchy boy.

An incubator advertisement says that the old "setting" hen is going out of business and will soon be replaced by the blue-flame brooder. We don't know about that. It will be some time before the "setting" hen will be retired from circulation. The incubator is all right, but nobody would ever mistake it for a mother. The incubator can't gather its offspring under its wings and fight a chicken hawk to the ropes, and it can't turn up a fat, juicy worm and feed it to one of the children. We have an idea that the "setting" hen will be in our midst for some time yet.

The best remedy for a hired man who oversleeps in the morning is to tie one of those self-tripping alarm clocks to his right ear. If this fails to wake him up, set fire to the bed. Sometimes the hired man will have a snore which would drown out any alarm clock ever invented, and in that case it is better to replace him with one whose slumber doesn't sound like a motorcycle race at the county fair.—Kimball's Dairy Farmer

FOR YOUR FARM, YOUR HOME, YOUR FACTORY

FOR EVERY POWER PURPOSE, A



GILSON

"GOES-LIKE-SIXTY"

ENGINE

MORE VALUE, MORE POWER, MORE SERVICE, MORE SATISFACTION

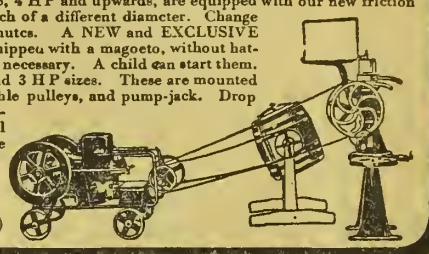
Does satisfaction mean anything to you? Does money saved in fuel, in time, in repairs and expense bills appeal to you? Get Gilson Facts, and find out how the Gilson 60-SPEED engine does the greatest variety of work—how it gives the maximum satisfaction—saves money in equipment, and yields 100% service at lowest cost. Every engine covered by a cast-iron guarantee.

NEW FEATURES AND LATEST IMPROVEMENTS

The new Gilson 100% SERVICE ENGINES, 4 HP and upwards, are equipped with our new friction clutch pulley with five interchangeable rims, each of a different diamcter. Change to the proper speed for every job in a few minutes. A NEW and EXCLUSIVE GILSON FEATURE. These engines are also equipped with a magneto, without batteries or coil, with spark retarder,—no cranking necessary. A child can start them.

We also make 60-SPEED engines in 1½ and 3 H P sizes. These are mounted on truck, with line shaft and five interchangeable pulleys, and pump-jack. Drop us a card to-day, and we will send you full descriptive literature. We are making special prices to the first purchaser of one of these engines in every locality. Write NOW.

Agents wanted.



GILSON MFG. CO., LTD.

1607 YORK ST., GUELPH, ONT. (975)

Make Your Stock and Poultry Pay Better with

Royal Purple

STOCK AND POULTRY SPECIFICS

At a cost of less than a cent a day per head of stock, it will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases. Tones up run-down animals so that they quickly gain weight and vigor. Increases the yield of milch cows three to five pounds a day, besides enriching the quality of the milk.

ROYAL PURPLE is not a food. It is a conditioner—the best ever sold. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not pamper them with soft predigested mush so that after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do.

ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared foods."

Try It On a Poor-Conditioned Animal

If there is a run-down, poorly nourished beast on your farm, see what **ROYAL PURPLE SPECIFIC** will do for it. A 50-cent package lasts a cow or horse 70 days. The cost is so trifling that no farmer in Canada has any excuse for having out-of-health stock around his place. Try it on the poorest-conditioned animal you have and we know you'll be surprised at the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of $1.50. Steers treated in the same way cost no more than $1.00 each to put in prime state for market. **ROYAL PURPLE SPECIFIC** fattens and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 50c, and air-tight tins, $1.50.

Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens

Do you know that **ROYAL PURPLE POULTRY SPECIFIC** makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If **ROYAL PURPLE** does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give **ROYAL PURPLE POULTRY SPECIFIC** a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and $1.50 air-tight tins.

WE ALSO SELL

Royal Purple Cough Specific for cough and distemper. (Will cure any ordinary cough in four days). 50c, by mail 60c.

Royal Purple Sweat Liniment for lameness, rheumatism, sprained tendons, etc. 50c, by mail 60c.

Royal Purple Worm Specific for animals; removes the worms, also their larvae. 25c, by mail 30c.

Royal Purple Disinfectant, in 25c, 50c and $1.00 tins.

Royal Purple Lice Killer for poultry and animals. 25c and 50c, by mail 30c and 60c.

Royal Purple Gall Cure for scratches, harness scalds, open sores, etc. 25c and 50c, by mail 30c and 60c.

Royal Purple Roup Specific for roup, pip, diphtheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry. 25c, by mail 30c.

Free

TO STOCK AND POULTRY RAISERS

We will mail for the asking our new revised 80-page book on common ailments of stock and poultry. Tells how to feed light and heavy horses, colts, mares, cows, calves, steers, hogs; also how to feed and keep poultry so that they lay winter and summer. Cover lithographed in six colors, showing farm utility birds in their natural colors. This is a book that should be in every farmer's possession. IT'S FREE. Write for your copy today.

31

W. A. Jenkins Mfg. Co. London, Canada

Persons troubled with partial paralysis are often very much benefited by massaging the affected parts thoroughly when applying Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all dealers.

EATON'S

SEND US YOUR NAME AND ADDRESS SO THAT YOU MAY GET A COPY OF THIS BOOK OF BARGAINS
THE T. EATON CO. LIMITED

JANUARY

FEBRUARY

SEMI-ANNUAL SALE

SUPPLEMENT TO OUR
FALL AND WINTER CATALOGUE, No. 108

FIFTY SIX BARGAIN DAYS FOR YOU

COMMENCING DEC. 26th, ENDING FEB. 28th

WHAT AN OPPORTUNITY!

YOU TAKE NO RISK
THE EATON GUARANTEE PROTECTS YOU

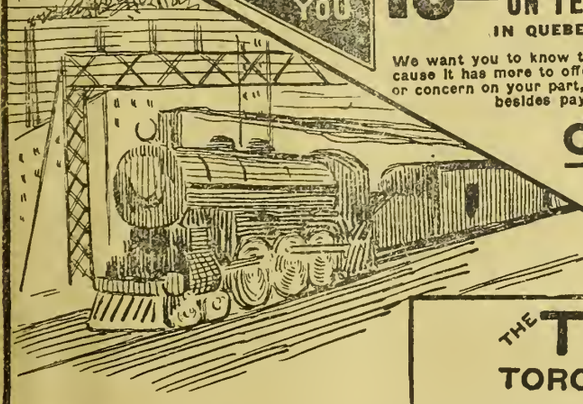
"SAVE AS YOU SPEND" is the keynote of this Catalogue. From cover to cover we list a choice of articles of interest to all the family. Every page tells of buying possibilities for all that can only be best appreciated when taken advantage of. New merchandise for this Sale only, that has been bought in voluminous quantities, whereby we secured big price concessions, which we, in turn, pass on to you.

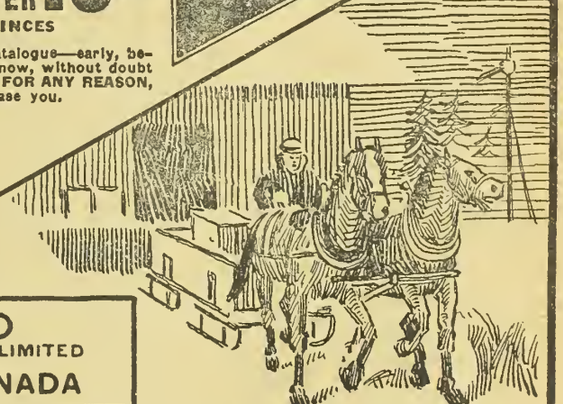
SATISFACTION TO YOU OR YOUR MONEY BACK

10.00 WE PREPAY SHIPPING CHARGES 10.00
ON TEN-DOLLAR ORDERS AND OVER
IN QUEBEC, ONTARIO AND MARITIME PROVINCES

We want you to know the buying power of money through this Catalogue—early, because it has more to offer you than heretofore. Make your choice now, without doubt or concern on your part, because we will refund your money in full FOR ANY REASON, besides paying all shipping charges, if we fail to please you.

ORDER EARLY AND OFTEN





1914

THE T. EATON CO LIMITED
TORONTO CANADA

KENDALLS
SPAVIN
CURE
To Bring Him Back to the "High-Stepping" Class
THE REMEDY USED ALL OVER THE WORLD
For Spavin, Curb, Splint, Ringbone, Soft Bunches, All Lameness

Horse dealers have made thousands of dollars by buying Lame, Spavined Horses, curing them with Kendall's Spavin Cure, and then selling the sound animals at a handsome profit.

You can do the same with your own horses. Here is one man who saved his horse and his money by using **Kendall's.**

Oak Bay Mills, Que., Dec. 15th, 1909
"I wish to inform you that I have used Kendall's Spavin Cure with good success, on my horse. I found that it cures quickly and well". Yours truly, ROY HARPER.

$1. a bottle—6 for $5. A copy of our book—"A Treatise On The Horse"—free at dealers or from us. 48

Dr. B. J. Kendall Co. - - Enosburg Falls, Vt.

Dry Rot of Horses Feet.

W. C. D.: Will you kindly tell me through the columns of the Maritime Farmer what may be the matter with my horse's hoof and what should I do to effect a cure. She has heen very lame since last spring, so lame that it was impossible to use her at all. The under part of her hoof is very hard and if you tap it it sounds as if it were hollow inside. I bring her to the blacksmith now and again and he tells me that the inside of her hoof is affected with a dry rot. I showed her to a veterinary surgeon but he did not seem to know what ailed ker. He told me to blister her around the hoof and poultice her under the hoof. Trusting to get your answer soon and thanking you in advance.

I have read your letter very carefully and am of the opinion that you have a condition termed "canker" which is sometimes known as "dry rot," the term applied by your blacksmith. This is a disease of the horny portion of the sole of the foot and is very often the result of some acute or chronic inflammation in the structures above it. It is necessary to go into a little discussion regarding the anatomy of the foot in order to explain my meaning.

The insensitive or horny portion of the foot of the horse is called the sole. This sole structure is a separate growth to the wall, or that part of the foot seen when the foot is on the ground. The sole grows from a horn secreting tissue which is very sensitive and richly supplied with your mare has navicular disease (cofblood vessels. In all probability fin joint lameness) which is an inammation of the ligaments and tendons comprising the jo nt in the heel of the foot. The inflammation in thise structures would affect the bload circulation of the vascular surfaces below it. Hence, as you will see, the function responsible for the elaboration of the sole would be serious,y impaired by these changes taking place, and as a result a portion ot the sole would die.

I would invite vterinary assistance because there are two conditic s to he looked into: the first to find out whether navicular disease is present, second to treat the condition which does exist. The operation necessary in treatment of canker of the sole is rather formidahle and cal,s for complete extirpation of the diseased portion of the sole, a procedure which in all reason should not he performed without a local anaesthetic.

As the owner of the animal desiring best results, let me suggest to you that you should refuse all professional operators unless they use the local anaesthesia, because the part is as sensitive as the quick of the human finger nail and to perform a good operation the operator must have quietude and freedom from unnecessary struggling. Whatever condition exists, if the hollow sounding portion of the sole is dead, it must be cut away before the new sole will grow.—VET.

Bots in Horses.

Contrary to the prevailing opinion among farmers, the bot which infests the stomach of the horse is often harmful to both young and old animals. By their parasitic tendencies a large number of hots feed on the stomach wall of the horse. They often injure the interior of that organ, prevent proper digestive action, and consequently result in a very thin condition of the animal itself. One of the chief causes of thin horses during the winter is bots, when it is commonly taken for worms or other trouhles.

The botfly reproduces hy depositing ligt, yellow, oval eggs, which are attached by the adult female to the hair of the legs, breast and neck. These may be plainly seen during the summer months on horses that are out of doors. The eggs hatch, and as the horse bites itself some of the small larvae are taken through the mouth into the stomach, where they attach themselves to their lining.

A very effective treatment which will remove bots withing 24 to 48 hours is as follows: The day preceding the treatment a small amount of hay and a moderate amount of oats is given in the morning; in the evening food is withheld and a purgative given—Barbados aloes, 1 ounce; or raw linseed oil, 1 pint. The day of the treatment, at six o'clock in the morning, give 3 deams of carhon hisulphide in a gelatin capsule; at seven o'clock repeat the dose in the same manner; and at eight o'clock give the third and last dose, making in all 9 drams of carhon bisulphide in three gelatin capsules.

The above treatment is for the adult horse. For a yearling colt half the quantity of carbon sulphide used for a mature horse will give the desired results. If properly administered, the gelatin capsules reaches the stomach intact, hut soon dissolves, and the carhon hisulphide rapidly evaporates, suffocating all bot larpae and other parasites with which it comes in contact, but not injuring the horse. Worms are quite often dispelled as well.

A Vicious Practice.

The overstocking of cows has become a fairly common practice at the show and sale rings, but one must search in vain for any valid excuse for the growth and continuance of such an ahsurd and harmful practice. It has heen condemned on a practical as well as a humane grounds and yet there are still exhihitors and sellers who follow the custom, and who, apparently, strive to influence the judge of the prospective purchaser hy means of a trick of the trade. If a cow is overstocked and undue distension of the udder results, the man who is responsible is guilty of cruelty to the animal. Moreover, he resorts to a mean and worthless practice with the obvious intention of, to put it mildly, hluffing someone who may have an interest in the animal, and this notwithstanding the fact that no practical man would be misled hy such subterfuge. The inexperienced buyer might possibly he deceived, but that is no reason why the custom should continue.

Saw Your Neighbors' Wood

IN that way you can make the Renfrew Standard gasoline engine pay for itself. You can readily get from $7.50 to $12.00 per day for your engine and your own services. Your expenses would not exceed $1.50 per day for gasoline and oil. That gives you a net $6.00 to $10.00 profit for a day's sawing. One of our customers made $350.00 in six weeks, and another customer, with a small-sized engine, made $175.00 in thirty days. You can do the same.

Renfrew Standard
It starts without cranking

The Renfrew Standard Portable Sawing Outfit shown above is the handiest, most efficient sawing outfit on the market. Besides being simply unequalled for sawing cord wood, fence posts, poles, etc., it can also be used for any other purpose that a regular portable engine can be used for.

Like all other Renfrew Standard engines it starts without cranking in cold or warm, rainy or snowy, weather. It can be regulated to any desired speed without stopping the engine. Has a governor of the fly-ball steam-engine type, a remarkably simple carburetor, and large bearings. Built throughout of the best materials and with absolute accuracy. No finer engine on the market—and none so simple or so easy to run.

Write for booklet giving complete description.

The Renfrew Machinery Co., Limited

Head Office and Works: RENFREW, ONT.

Branches at Sussex, N.B., Saskatoon, Sask., and Calgary, Alta.

Agencies Everywhere in Canada

115

THE LATE DR. GUSTAVE DE LAVAL

Inventor of the De Layal Cream Separator, the De Laval Steam Turbine and other Machines of Importance.

No doubt this vicious practice of overstocking is due to some extent to the tendency which is ever present in the show yard to produce the abnormal. Exhibitors of pedigree stock frequently complain that animals shown in lean natural condition in the feeding classes have little or no chance when forced to compete with pampered show stock; and in many cases there is a considerable amount of truth in the allegation. The remedy is in the hads of the judges, and one is glad to note that it is occasionally applied; but the fact remains that after several of the leading exhibitions the prize money goes to the animals which are shown in high condition.

The practice of overstocking evidently had its origin in the show and sale rings, but that the custom is not a local one is shown by the comments of an American writer who, in dealing with a recent dairy show in the states, says:—

"The idea behind the "stocking" habit is evident enough. A cow that overstocking did exist it was time that it ceased, and people must find some other means of judging whether a cow was a good milker or not,—a remark which will be endorsed by most agriculturists. As a matter of fact, no farmer with any experience would allow himself to be influenced by the distended udder of a cow. The average dairyman knows too well that overstocking is liable to ruin the cow as a milker, and he looks for other indications of her worth.

Most farmers pride themselves on being able to form a fairly accurate opinion of the milking capacity of a cow from the escutcheon, milk veins, and other points, but after all the only real and satisfactory test is found in the actual yield. The udder should be examined when it is full, but not overstocked, and it is equally important that it shauld be judged when empty. In the show ring, indeed, it would be a distinct gain of cows were sometimes placed in order of merit after they had been "stripped dry." The move, perhaps, would be going to much in the other direction, but it would effectually direct attention to points which at present are passed over. Farmers should ever be on their guard against extremes in fashion and type, and judges at agricultural shows should remember that utility must be the watchword of the best in stock and is not to be sacrificed to mere "fancy" points.

Preventing Erosion.

One of our exchanges, the Southern Planter, points out a very important method of perserving the fertility and keeping the soil in place on the slope, which is not practiced by as many farmers as it should be, which is following the contour of the hill with rows of crops,r unning them on a level around the slope instead of up and down the slope. But the first and proper method, the ridges and furrows tend to hold moisture and to prevent erosion or washing down the hill of the fertile soil. Where the rows are run up and down hill, during heavy rains, the furrows up and down the slope become miniature water courses and the fine rich surface soil is washed to the bottom.

Another means for ckecking erosion says the writer, is deep plowing. Shallow plowing not only prepares but a small area to receive the rainfall, but if persisted in on clay subsoil, it develops a plowed hardpan, which prevents the passage of the water into the subsoil. The change from shallow to deep plowing should be gradual, turning up not more than an inch of raw sub-soil each year. Thousands of acres of Virginia hillside, says this authority, that now wash badly need only to be plowed deep in order to check erosion.

A Prize Winning Box of Poultry Dressed fo Export.

Motor Sleigh Patented.

John Chesney, Melita, Man., has had patented a motor propelled sleigh, and the object of the invention is to provide an easily controlland operated device of this class which can be driven over any roadway on which it is customary for a vehicle to travel, and it consists essentially in a main frame supported forwardly on pivoted runners and a rear-wardly of stationary runners, a set of drums swung from the frame at the rear, drive chains connecting the drum, means for operating the chains, a steering mechanism for controlling the front runner, and a suitable housing or body mounted on the frame.

A New Potato.

It is reported that a new variety of potato is now being grown at Newtonlees Farm, Scotland, which is the result of several year's experiments. The potato is of a beautiful shape, with rough skin of excellent quality, and the yield has been very heavy. One and a half acres were planted, and they have given a yield more than double other varieties planted alongside. One root and fifteen tubers attached to it, thirteen ware and two seed, the total weight being the surprising figure of 10 pounds 12 ounces. As many as twenty-two marketable potatoes have been taken from one root. This new variety is not, however, to be placed on the market for another year.—J. E. Raif, Trade Commissioner, Glascow.

N. S. Fruit Growers Association Jubilee Meeting to Open at Kentville on January 20th.

The Fiftieth Annual Meeting of the Nova Scotia Fruit Growers' Association will be held in the Pastime Hall, Kentville, on January the 20th, 21st and 22nd, 1914.

One first class fare will be issued to all members attending by the D. A. R. and H. & S. W. R. on the standard certificate plan.

The program, subject to necessary changes, will be as follows:

TUESDAY EVENING.

(7.30 O'clock)

Opening Prayer—
President's Address—
S. C. Parker, Berwick, N. S.
Address—Improvement of Home Surroundings,
Prof. Saxby Blair, Kentville, N. S.
Addresses—
Hon. G. H. Murray, Hon. O. T. Daniels, J. W. Margeson, M. P. P., Prin. Cummings and others.

WEDNESDAY MORNING

(9.30 O'clock)

Report of Officers—
Election of Officers—
Election of Delegates to Fourth Dominion Fruit Conference—
Report of Committees—
Resolutions—

WEDNESDAY AFTERNOON

(2 O-clock)

Address—Orchard Diseases, Black Spot, Canker, Fire Blight.
Prof. L. Caezar, Guelph, Ontario.
Discussion—
Local Results fram Spraying during the Last Season—
President Parker, A. C. Starr, F. W. Foster, L. Wiltshire, F. Schafheitlin, W. E. Saunders.

WEDNESDAY EVENING

(7.30 O'clock)

Report o fSpraying Experiments of the N. S. Horticultural Station in 1913—
J. M. Robinson,B. S. A., Kentville, N. S.
Co-operative Marketing—
A. E. Adams, Berwick, N. S.
The Strawberry and its Culture—
W. T. Macoun, Ottawa.

THURSDAY MORNING

(9.30 O'clock)

The Aphis, and How to Control it—
Prof. W- H. Britten, Truro, N. S.
Spraying Mixtures, and How to Apply Them—
Prof. L. Caesar, Guelph, Ont.

THURSDAY AFTERNOON

(2 O'clock)

Some New Varieties of Apples—
W. T. Macoun, Horticulturist, Central Farm, Ottawa.
The Work of the Dominion Department of Etymology in the Valley—
Inspector Geo. E. Saunders, Roundhill, N. S.

MANNING ELLS, Secretary.

The Nebraska Experiment Station finds that a combination of corn and alfalfa hay is one of the most economical and efficient rations for fattening hogs and feeding brood sows. The hay is feed in a self feeding rack, the hogs being the judges of the amount they desired to consume.

Montreal Markets.

BRAN.—The market for millfeed rules strong under a very fair demand from the city and outside points. The enquiry from the American markets shows an increase during the week, but as the supplies in millers' hands are limited, no large orders were booked. Sales of bran to the local and country trade are made on the basis of $20.00 to $21.00 per ton. Shorts and Middlings command fair sales at unchanged prices. We quote prices as follows. Bran $20.00 to $21.00. Shorts $22.00 to $23.00. Middlings $25.00 to $26.00 per ton.

The market for eggs continues exceedingly strong owing to the light stocks held in the market, and the small quantity of receipts coming to hand. Fresh eggs are more plentiful and prices rule easier at 48 cents to 50 cents per dozen.

Finest creamery .... 28c to 28½c
Fine creamery ....27c to 27½c
Seconds .... 25½c to 26½c
Dairy Butter ....22c to 22½c

Potatoes.—The potato market has shown no particular change during the week. Prices of Green Mountains continue easy at 85c per 90 pound bag on track Montreal. Quebec white potatoes are quoted at 80c track Montreal, but the trade prefer to buy Green Mountains at the higher price.

Poultry.—The demand for poultry during the week has been very limited. The better class of turkeys meet with ready sale, but the lighter birds are neglected. Sales of turkeys range between 20c to 21c. Geese are moving slowly at 15c to 16c per pound. There is very little inquiry for ducks at 16c to 17c per pound. Good chickens are worth 18c to 20c and fowls 11c to 13c.

Dressed Hogs.—The market rules firm, but without change, supplies are light, sales being made at $13.75 to $14.00 per 100 pounds for dressed hogs. Live hogs are firmer at $9.50 to $9.75 per hundred pounds for selected lots.

It appears that considerable hay has been bought by country dealers that is still in the hands of farmers, and expected to be delivered as soon as the market improves. There is no doubt that the reduction in the American tariff from $4.00 to $2.00 per ton, caused quite a flurry of speculation in different parts of the interior, as soon as American buyers appeared on the scene and commenced to buy. Prices at country points started a $13.00 to $13.50 and soon reached $14.00 to $14.50, and at some points $15.00 and over was paid. And in fact at one time higher prices were paid in the country than could be realized in this market. Then Americans began to find out they were getting too much Canadian hay for their respective markets, and gradually abandoned their operations on this side of the line. An isolated car here and there being all that is taken for export. Prices rose too rapidly and not a few built their hopes upon values attaining $17.00 to $18.00 at country points.

No. 1 timothy being quoted at $16.00 to $16.50 and fair to good No. 2 at $14.50 to $15.50.

Advices just received from Ontario points state thar considerable hay is being shipped to the United States.—Trade Bulletin, Montreal.

Have you talked with your neighbors about subscribing for Maritime Farmer? Why not do it now? Make up as large a club of subscribers as you can and send them in.

The 1911 census credits New Zealand with 633,733 daity cows; Canada is reported as having 3,000,000 cows.

A COLD Developed Into BRONCHITIS.

However slight a cold you have, you should never neglect it. In all possibility, if you do not treat it in time it will develop into bronchitis, pneumonia, or some other serious throat or lung trouble.

Dr. Wood's Norway Pine Syrup is particularly adapted for all colds, coughs, bronchitis, pneumonia, asthma, whooping cough and all troubles of the throat and lungs. Three points in favour of Dr. Wood's Norway Pine Syrup are: 1. Its action is prompt. 2. It invigorates as well as heals, and soothes the throat and lungs. 3. It is pleasant, harmless and agreeable in taste.

Mrs. Albert Vait, Brockville, Ont., writes:—"Just a line to let you know about Dr. Wood's Norway Pine Syrup. Our oldest little girl is now six years old. When she was four months old she got a cold which developed into Bronchitis, and we tried everything we could think of and had two doctors attending her, but it was no good. One day I read in your almanac about Dr. Wood's Norway Pine Syrup, so I tried it, and before she had finished one bottle of it, the dry hacking cough had nearly all gone. There is nothing equal to it, and we are never without it in the house."

See that you get "Dr. Wood's" when you ask for it, as there are numerous imitations on the market. The genuine is manufactured by The T. Milburn Co., Limited, Toronto, Ont.

Price, 25c.; family size, 50c.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

SNOW PLOWS

For Township Roads. For Sidewalks.

Stone and Stump Pullers, Bob Sleighs

A. LEMIRE, Prop., Wotton, Que.

When you want a reliable medicine for a cough or cold take Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

Importance to the Farmer of Growing His Own Seed Grain.

(Continued from page 221)

subsist on scanty rations, can overcome this and grow to the full size of the breed in one generation of good care and full feeding. Neither can the plant. The fact that seed removed from poorer to better conditions gives more satisfactory results than the reverse order is not an argument in favor of the poor conditions but leaves one free to assume that the continuance of the better conditions would favor still greater returns. If this were not true, what becomes of our theory of the adaptability of plants and animals to environment.

Can there ever be a reason for the bringing in of seed? It is possible. One can conceive of a climate or of soil of such a nature that it would not produce a good grade of seed of some certain crop or variety of crop and yet this crop or variety give reasonably good returns from the feeding standpoint. Such cases are rare with us if indeed they exist at all. It is usually a crop of doubtful value from any standpoint which will not give us a good quality of seed.

Wheat produced in the Maritime Provinces does not give as hard a grain as the same varieties grown in the West but is likely to give a relatively high yield. The oat grain weighs heavier per measured bushel than the same variety if produced in Quebec or Ontario. None of the grains transfer the food from the stock to the seed on maturing quite as completely in a moist as in a dry climate or perhaps it would be truer to say the stock continues to take up and manufacture food for a longer period. It is thus evident that the Maritime Provinces have both advantages and disadvantages as a grain producing country but it is also evident that we cannot hope to overcome the disadvantages by going outside for seed except when one wishes to try out some variety not now grown. It also follows that the ahvantages which this country has will not be given a chance to get in their work if we continually go outside for our seed grain. Such procedure does not spell progress but stagnation on our part. I might go on illustrating this point with many examples of seed grain which have not given uniformly good results when first tried that have increased in value year by year. Marquis wheat is said to have given a more satisfactory crop in the Maritime Provinces this past season than it has before. Gold Rain oats recently brought from Sweden, are giving an increasingly good account of themselves to our light sandy soil at Truro. Probably many seed growers here will corroborate these and other experiences from results on their own farms and such discussion is bound to be much more valuable than a continued paper.—Paper read by Professor Landels of the N. S. A. C., at the Maritime Seed Growers' Meeting recently held at Amherst.

Mrs. A. T. Tabor, of Crider, Mo., had been troubled with sick headache for about five years, when she began taking Chamberlain's Tablets. She has taken two bottles of them and they have cured her. Sick headache is caused by a disordered stomach for which these tablets are especially intended. Try them, get well and stay well. Sold by all dealers.

Make your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosine Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the Interior of the dome of the "Great White Light" Burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oll itself, although bofh are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT** - it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely diffenent, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two besides one we furnish free by sending 35 cents for each additional one wanted.

FLORICULTURE.

Earlton, St.John, writes'—Please state in the Maritime Farmer if Calla Lilies raised from seed during the winter and at present nine inches high will flower in the garden next summer.

I have never grown Callas from seed so I am hardly in a position to state positively what they would do. As a general rule Callas require a period of rest during the summer. If they were mine I would dry them off about June in the pots in which they are grown and keep dry during July, August and September, repotting in fresh soil in October. They should then bloom (if good strong bulbs) in February. Of course a good deal depends on the size and strength of the bulbs. If not extra well developed they might not bloom until the following winter.

H. A., of Hampton, writes to know when Roman Hyacinths should be brought to the light.

They are usually ready by the first of December; we give them six weeks from the day they are potted.

Chinese Lilies do not require the hottest spot you can give them. A moderate temperature will produce a stockier, healthier growth with more blooms.

Don't let the Primrose get dried out now; it is their blooming period and they will take a lot of moisture and nourishment.

If anyone neglects to protect their hardy plants or shrubs, don't give it up and say it is to late. If covered as late as February it is all right. March and April are the worst months of the year for them and protection is most necessary then. Anytuing that is porous and will permit free circulation of air about the shrub is all right, but don't box them up tightly.

To anyone who has young plants of the Boston Ivy on his wall I would advise the cutting off of at least six inches from each tip and branch, if the growth is very sappy cut more. Leave no sappy wood but prune back to sound hard wood, this is a great prevention of winter killing, try it.

Amherst Correspondent:—Bulbs received are undoubtedly offshoots of the Chinese Sacred Lily and should hardly be expected to bloom. Possibly if grown out of doors next summer in the ground they might come to bloom next winter but that is very problematical. Better buy full sized bulbs another time, there is nothing saved by buying cheap stock.

Lakeside, Yarmouth, N. S., writes: Will you kindly give me some information as to the care of a Polystichum Fern, I have a young one that keeps filling the pot with new sprouts. I would like to grow it in one compact root as an old one I had did.

The Polystichum Fern has to be allowed to rest two months during the year by partially drying off. Your plant is ready for this now, as soon as it bigins to shrink usually, in March repot and start watering, then the strong new growth will appear. Old leaves may be removed and the results you desire will be attained. But never allow the plant to become dust dry at any time, just dry enough to drop a little for the two months.

If your children are subject to attacks of croup, watch for the first symptom, hoarseness. Give Chamberlain's Cough Remedy as soon as the child becomes hoarse and the attack may be warded off. For sale by all dealers.

This label, on every bag, identifies Canada Portland Cement.

MAKE certain of complete success in your concrete work by always using

CANADA Portland CEMENT

We are supplying Canadian farmers with the highest quality of Portland Cement it is possible for human skill to make.

We have reduced the price of Canada Portland Cement until it is within your reach for practically every purpose. It is the only building material that is not increasing in cost.

Be sure to ask for *Canada* Cement, in bags.

Canada Cement Company Limited, Montreal

If you have not received a free copy of "What the farmer can do with Concrete," write our Information Department and get one. It's a complete practical concrete encyclopedia.

WOOD CUTTERS

Made in Four Different Sizes

We are offering these machines to the public with the belief that they are the best wood cutting machines on the market for the money. The Frame is made of the best seasoned hardwood, and well bolted and braced. The Arbor is of the best turned steel, and runs in bearings made of the finest quality babbit. The Balance Wheel is a solid web and weighs 180 lbs. The Table is of heavy Plates and indestructable. Wood Cutters are shipped with 28 in. saws unless otherwise ordered.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn Bulls. WALTER EATON, Upper Canard, Kings Co., N. S.

POULTRY SHOW. Moncton, N. B., Jan. 13th to 16th 1914. Send to Box 485 for prize list etc

FOR SALE—Pure bred Percheron Stallion, 1 1-2 years old. LEO. A. MILLER, Linville, Car. Co., N. B.

FOR SALE.—Choice Barred Plymouth Rock Cockerels, one to three dollars. BOYD A. WETMORE, Bloomfield Station, N. B.

WOULD YOU MARRY IF SUITED? Best Matrimonial Paper Published. Mailed Free. THE CORRESPONDENT, Toledo, Ohio.

FOR SALE.—Clydesdale Stallion, Kings College, 10 years old, imported by N. B. Govt. J. & W. FOSHAY, Lower Jemseg, Queens Co., N. B.

FOR SALE—Five yearling Guernsey Bulls. Three sired by Imp Canada's Jethro Bass. Best milking stock. T. D. BLAIKIE, Great Village, N. S

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE OR EXCHANGE for pure bred stock or hay, one 6 H. P. Gasoline Engine in good running order. WALTER PAYNE, Lake Edward, N. B.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED—A position as manager of a farm in the Maritime provinces, by an experienced married man Best of references. Apply to FARM MANAGER, The Maritime Farmer, Sussex, N. B.

FOR SALE.—Twenty-five extra well bred grade pigs for sale, four and five weeks old at resonable prices. Also sow 18 months of age with or without her litter of pigs a few days old. L. M. ANDERSON, SACKVILLE, N. B.

AGENTS—MALE OR FEMALE—In every City, Town or Village in the Maritime Provinces to sell best line of Flavors, Perfumes, Powders, etc. Workers earn from $3.00 to $6.00 a day. No others need apply. Write C. C. RAND, 241 Oxford Avenue, Montreal.

600 000 FT BELTING all makes 100,000 rods Wire Fencing 60,000 lbs Barb Wire at 2c per lb Also 1000 other bargains at 1-3 to 1-2 less than regular value. Special price lists on request. IMPERIAL WASTE & METAL CO., 713 Queen St Montreal.

DON'T MISS THIS.—We are offering some choice Ayrshires hull calves from cows that are running in the record of performance test bidding fair to make good records. Sired by an extra good imp. bull. Also a few young females. Write or call. THOS. HAWKINS, Landor, Col. Co.

REGISTERED STOCK FOR SALE.—One Registered Chester White Boar, farrowed Aug. 9th. 1913, two Registered Chester White Sows, same age, $20 00 each. One Registered Holstein Cow "Lady Tensen Canary," born June 5th 1910 $225.00 Lady Tensen Canary's registered Holstein Bull Calf "Sir Tensen Faforit" born Aug. 26th., 1913, price $100 00. J. S. GIBBON, River side, Kings Co., N. B.

FOR SALE.

Pur Bred Ayrshire Bull 3½ years old in good condition and sure stock getter He is bred from one of the bes show cows in Maritime Provinces and is an ideal type of Ayrshire Apply to Secretary of 119 Agricultural Society Barnaby River N B.

500,000 ft. IRON PIPE

600,0 0 ft. Belting, all makes.
100,000 Rods Wire Fencing.
60,000 lbs. Barb Wire at 2c.

Also 1,000 other Bargains at 1-3 to 1-2 less than regular value.

Special price list on request.

IMP L WASTE & METAL CO.
21 Queen St., Montreal.

SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to
F. S. BLACK, Amherst, N. S.

HAY WANTED.

Duty reduced. Market good.

W. J. PHELPS,

Chamber of Commerce, Boston, Mass.
Reference Beacon Trust Company.

Barred Plymouth Rocks

Victors again at Maritime Winter Fair, 1st and 2nd Mating Pens. 1st Breeding Pen. 1st pair of Utility Cockerels; 1st and 4th Cock; 1st and 6th Pullet; 2nd, 3rd and 6th Cockerels; 3rd and 5th hen is Record for 1913. Lusty Cockerels and Cock birds for sale. Address

CRAIG BROS., Amherst, N. S.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association.

W. A. CLEMONS, St. George, Ont.

Mammoth Bronze Turkeys

Bell's Ontario Stock

Specially fine young Toms, $5.00 each, also a few two year old hens, $4.00 each.

D. S. Noble, Central Clarence, Anap. Co., N. S.

GUERNSEY BULLS

At a Bargain.

During the month of January we will sell Guernsey Bulls at 20 p. c. discount from regular prices. The dams of these bulls are large milk producers. The bulls are of good size and a good dairy type. They will be a credit to any Agricultural Society. Let us send you description and prices.

JOHN N. CHUTE,

Berwick, - N. S

DURHAM BULLS

Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale.

C. C. H. EATON,

Canard, - - Nova Scotia

SPECIAL SALE

1 Barred Rock Cockerel and 3 Hens $5.00.
1 " " Cock and 3 Hens $5.00.
10 " " Utility Pullets 75c. each.
3 Buff Wyandotte Cockerels $1.50 each.
1 Columbian Wyaddotte Cockerel $1.50.
2 White Wyandotte Pullets $1.50 each.

ORCHARD HILL FARM
Brown's Flats, - N. B.

FOR SALE

A fine Dairy Shorthorn Registered Bull Calf 3 months old.

E. W HEURTLEY,

P. O. Sutherland's River, N. S.

Milking Shorthorns

I have for sale 5 Registered Bulls ready for service. For fifteen years I have used bulls from the best milking families in Canada.

Write or telephone

Bliss M. Fawcett,

Sackville, N. B.

SHORTHORN AND JERSEY BULLS FOR SALE

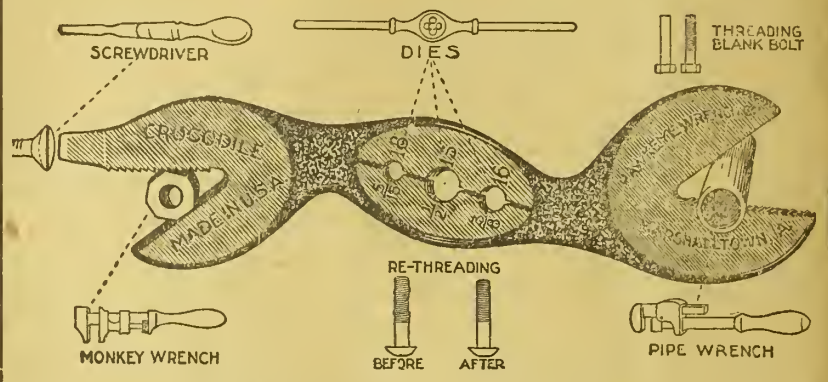
I have for sale five young pure bred and registered Shorhorn Bulls, 8 to 10 months old. These bulls will be suitable for service next spring and are from the best stock that can be imported.

Two pure bred Jersey bulls 1 1-2 and 3 years old respectively.

R. O'LEARY, - - RICHIBUCTO, N. B.

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wreuch, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of recipt, renewals from date of expiration of present subscriptions.

The Maritime Farmer, Sussex, N.B.

HOUDANS

The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

Jan. 1, 1914.

W. J. M. MacLeod,
Sussex, N. B.

Dear Sir:—The trio of Houdans I ordered from you arrived in good shape this morning. I am well pleased with them. I think they are very fine birds and am glad to know they are of such good stock.

D. McKAY, Pictou Co., N. S.

One Cockerel the progency of last years Boston and New York Winners, and one Pullet for sale.

$5.00 takes the pair.

W. J. M. MacLeod

SUSSEX, N. B.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and sena them in

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, JANUARY 27, 1914. Number 8.

The Philosophy of Feeding Dairy Cattle.

BALANCING THE RATION.

By J. H. Grisdale, B. Agr.

The maintenance of life in any animal means food consumption. The performance of work means proportionately so much more food required by the animal body, while the production of milk in large or considerable quantities means much more food consumed even relatively since not only must the elements entering into the composition of the milk be secured from some external source, food, but there is a further and very considerable demand for food to supply the energy required to elaborate milk from the material consumed. In brief, the good dairy cow is necessarily a large consumer of food. Food consumption is her business.

The food consumed should, and usually does, contain the elements found necessary to repair the body waste and elaborate that much-desired product, milk. The animal body consists of (1) water, from 80 to 65 per cent.; (2) ash or mineral matter, from 2 to 4 per cent; (3) fat, from 5 to 30 per cent; and (4) nitrogenous material or protein, from 11 to 20 pes cent. All these materials should be supplied living animals daily in order to keep them in good health.

WHAT WE FEED.

As might be expected, the foods commonly fed cattle and other farm animals contain in varying proportions those very elements found to be necessary to the life and exploitation of the dairy cow. Plants, or their parts, however, contain in considerable quantities a substance called 'carbohydrates' in addition to the protein, water, fat and mineral matters or ash.

Water.—All feed stuffs contain water. The proportion varies from 8 to 1 per cent. in grain, hay, etc., to 90 or even 25 per cent in certain varieties of roots or lush-growing peas and clover. The water in feeds is of no greater food value than common drinking water; but its presence may materially affect the palatability of a food.

Carbohydrates.—Carbohydrates may be said to be of two kinds: Nitrogen-free extract; as starch, sugar, gums, etc., and cellulose or fibre, the principal part of vegetable cell walls. These substances are converted by the animal into fat and so stored in the body and are used at once to produce heat or energy. Carbohydrates, constituting as they do the largest part of most feeding stuffs, are made the basis for ration calculation. Fat, it bas been determined, is worth about 2¼ times as much as carbohydrates pound for pound.

Protein.—Protein (or nitrogenous material) is that constituent of the plant containing nitrogen. It is sometimes called the 'flesh former.' It enters into the composition of most parts of tbe animal body and is a most important constituent of milk. No other substance can take its place. It is believed, however, that protein may take the place of, or can be converted into fat. It is thus evident tbat protein is an indispensable part of every ration.

Fat.—Fat is the part of a feeding stuff that may be dissolved from it by ether. Real fats, moreover, include wax and some other constituents of plants. Fat in the food may be stored in the body as fat, used to maintain the heat of the body or converted into the fat of milk. As already stated, one pound of fat is worth about 2¼ pounds of carbohydrates for heat production.

Asb.—Ash is what is left after the combustable part of a feeding stuff is burned away. It is used in the formation of bone and the elaboration of the digestive juices.

Water is the most common and tbe most important substance in the body. It serves as a solvent for most solids in the body and enters largely into the composition of every part of it as well as plays a most important part in all functions.

Mineral matter enters more or less into the composition of the muscles and otber soft tissues, but is used more largely in building up bone.

Fat is found in greater or less quantities in most tissues while protein enters into the composition of practically every part of the animal body or product. Milk, with the production of which we are especially concerned, has protein for about one-third of its dry matter content, and fat for another third thereof, while sugar, etc., make up the rest.

PROPORTIONS IN WHICH DIFFERENT FOOD CONSTITUENTS SHOULD BE FED TO DAIRY COWS.

A great deal of work has been done by investigators to determine just how much of each of these food constituents is needed by animals under given conditions. It is a general principle than an animal should have as much water as its body calls for, and sufficient asb seems to be fed in ordinary rations to meet all demands. It is evident, therefore, that if it be possible to determine just how much of each of the three remaining classes of nutrients—protein, carbohydrates, and fat—is needed, and if it be known how much of each the various feeding stuffs contain, it will not be a difficult matter to compute the ration.

MEANING OF 'RATION.'

By 'Ration' is meant (1) the total amount of foods of all kinds fed to an animal in each or any 24-hour or day-long period, and (2) in a general way, the mixture of feeds being fed and given herd or individual.

DIGESTIBLE CONSTITUENTS.

By the use of reagents, the chemist can determine the exact percentage of any given substance in a food. Tbe digestive organs of a cow, while able to utilize or digest certain proportions of the different substances, are seldom or never able to dissolve the whole of any food or of any particular constituent, as protein, carbohydrases or fat, contained in that food.

By careful experimental work it has been possible to determine just what percentage of any given substance in a food is digestible by cattle.

The quantity so digestible is called 'digestible protein,' 'digestible fat' or 'digestible carbohydrates,' as tbe case may be.

NUTRITIVE RATIO.

Tbe proportion exiseing between the digestible protein and the sum of the digestible carbohydrates and the fat multiplied by 2¼ in any particular feed or in any mixture of feeds, is known as the nutritive ratio of the feed or of the mixture. Thus in the case of wheat bran there is about 11.9 pounds digestible protein to 47.6 pounds of digestible carbohydrates plus fat x 2¼. If the number 47.6 is divided by 11.9 it will be found to go 4 times. It is then said that the nutritive ration of wheat bran is 1 to 4. This is usually written: N. R. 1:4.

A ration where the amount of carbohydrates and fat is large in proportion to the amount of protein is said to have a 'wide' nutritive ratio. A ration where the proportion was one of protein to 8 of carbohydrates and fat, written usually N. R. 1.8, would be called wide for a dairy cow in milk. 'N. R. 1:8' is read 'Nutritive Ratio 1 to 8.'

A ration with a large amount of protein in proportion to the carbohyd rates and fat, say 1 protein to 3.2 carbobydrates and fat, that is N. R. 1:3.2, would be called a narrow ration for a cow in milk.

A ration in which the proportion between tbe principal constituents, protein on tbe one side and carbohydrates and fat on the other is such that for the amount of feed the best possible results are obtained in the way of milk, in the case of the dairy cow, is said to be a 'balanced ration.' As given in the 'Wolff-Lehmann, Feeding Standard' below a balanced ration for a cow giving about 27.5 lbs. milk should show 1 protein to 4.5 carbonhydrates and fat that is N. R. 1:4.5.

FEEDING STANDARDS.

Investigations made into the amounts of protein, carbohydrates and fats required by animals, and the amounts each available in the various feeding stuffs, have resulted in the evolving of what are commonly called 'Feeding Standards,' indicating what experience and investigation have found to be the approximately proper amounts of each of these essential food constituents to include in a ration for the best results.

Some of the better known of these 'Standards,' so far as dairy cattle are concerned, are given below:—

In using this standard prepared by Professor Haecker at the Minnesota Station, it is necessary to change the amount of food indicated. 'For support of the 1,000 lb. cow' in proportion to the weight of the cow being considered, that is while a 1,000 lb. cow requires 0.700 lbs. crude protein and 7.225 lbs. carbohydrates plus fat x 2.25, a 1,200 lb. cow would requite 1,200 or sixth-fifths of these amounts, or 0.840 lbs. crude protein and 8.670 lbns. carbohydrates plus fat x 2.25.

Wolff-Lehmann Feeding Standard.
(German Investigations)

Milch cows when yielding.	Per day 1,000 lbs. live weight		Nutritive Ratio
	Digestible protein	Digestible Carbohydrates plus fat x 2 25	
11 lbs milk daily....	1·6	10·7	1:7·7
16·6 " "	2·0	11·9	1:6·0
22 " "	2·5	14·1	1:5·7
27·5 " "	3·3	14·8	1:4.5

WISCONSIN STANDARD

Pounds of dry matter, digestible matter and digestible protein to be furnished in rations for dairy cows.

Live Weight	Dry Cows	Production of Butter Fat per day in Pounds						
		Less than 0·5 lb.	0·5-0·75	0·75-1·0	1·0-1·25	1·25-1·5	1·5-1·75	1·75-2·0
Pounds Dry Matter to be furnished in Rations								
800	10·0	13·7	16·2	18·6	21·1	23·5	26·0	28·4
900	11·3	15·0	17·5	19·9	22·4	24·8	27·3	29·7
1,000	12·5	16·2	18·7	21·1	23·6	26·0	28.5	30·9
1,100	13·8	17·5	20.0	22·4	24·9	27·3	29·8	32·3
1,200	15·0	18·7	21·2	23·6	26·1	28·5	31·0	33·4
1,300	16·3	20·0	22·5	24·9	27·4	25·8	32·3	34·7
1,400	17.5	21.2	23·7	26·1	28·6	31·0	33·5	35·9
1,500	18·8	22·5	25·0	27·4	39·9	32·8	34·7	37·2
Pounds Digestible Matter to be furnished in Rations								
800	·57	1·04	1·35	1·66	1·97	2·29	2·60	2·91
900	·63	1·11	1·42	1·73	2·04	2·36	2·67	2·98
1,000	·70	1·18	1·49	1·80	2·11	2·43	2·74	3·05
1,100	·77	1·25	1·56	1·87	2·18	2·50	2·81	3·12
1,200	·94	1·32	1·63	1·64	2·25	2·57	2·88	3·19
1,300	·91	1·39	1·70	2·01	2·32	2·64	2·95	3·26
1,400	·98	1·46	1·77	2·08	2·39	2·71	3·02	3·33
1,500	1·05	1·53	1·84	2·15	2·46	2·78	3·09	3·40
Pounds Digestible Protein to be fnrnished in Rations								
800	6·3	9·0	10·7	12·5	14·2	16·0	17·7	19·5
900	7·1	9·8	11·5	13·3	15·0	16·8	18·5	20·3
1,000	7·9	10·6	12·3	14·1	15·8	17·6	19·3	21·1
1,100	8·7	11·4	13·1	14·9	16·6	18·4	20·1	21·8
1,200	9·5	12·2	13·9	15·7	17·4	19·2	20·9	21·9
1'300	10·3	13·0	14·7	16·5	18·2	20·0	21.7	23·5
1,400	11·1	13·8	15·5	17·3	19·0	20·8	22·5	24·3
1,500	11·9	14·6	16·3	18·1	19·8	21·6	23 3	25·1

The Haecker Feeding Standard.

(Minnesota, U. S. A.)

	Daily Allowance of Digestible Nutrients.		
	Crude Protein	Carbohydrates plus fat x2.25	Nutritive Ratio
	lbs.	lbs.	
For support of the 1,000 cow.....	0 700	7·00	-
To the allowance for support add: –			
For each lb. of 3·0 per cent milk	0.040	0·22	1:5·5
" lb. of 3·5 "	0.042	0·24	1:5·7
" lb. of 4·0 "	0.047	0·27	1:5·74
" lb. of 4·5 "	0.049	0·30	1:6·1
" lb. of 5·0 "	0.051	0·31	1:6·1
" lb. of 5·5 "	0.054	0·33	1:6·1
" lb. of 6·0 "	0.057	0·36	1:6·3
" lb. of 6·5 "	0.061	0·38	1:6·3
" lb. of 7·0 "	0.063	0·41	1:6 5

Kellner's Standard.

1,000 lb. Com

	Dry Matter	Digestible Protein
	lbs.	lbs.
Milch cow yielding 20 lbs. milk daily.....	25·29	1.6 to 1·9
" " 30 "	27·33	2·2 to 2·5
" " 40 "	27.34	2·8 to 3·2

Scandinavian Standard.

	Digestible Protein
	lbs.
Milch cow yielding 0 to 13 lbs. milk.....	1·10
" " 22 lbs. milk.....	1·65
" " 33 "	2·20
" " 44 "	2·75

A glance at the above Feeding Standards indicates the necessity of showing the composition of the feeding stuffs he is using. In the tables on page 116 and following, compiled from various sources, (Henry's Feeds and Feeding in most cases) will be found the quantity of dry matter, digestible protein and digestible carbohydrates, plus fat, (the latter multiplied by the co-efficient 2¼, that is 2.25) in hundred pounds of an average sample of each of the feeding stuffs mentioned. Not infrequently, feeds being fed differ materially in composition from the average as given in the tables just mentioned. This might be due to various causes, as weathering in the case of hay, or drought at filling time in the case of grain.

Among the feeds in the tables as mentioned above, will be found a number that, so far as composition is concerned, come very near fulfilling the requirements of the Feeding Standards. We know that it is impossible, however, witnout serious injury to the health of the cows and to the yield of milk, to feed them exclusively on any one feed, as roots or grain, or even on good corn ensilage alone,and that to ensure good results, these feeds must be mixed in certain more or less definite proportions, such as theory and practical agriculture have together worked out.

A study of the different kinds of foods available is, therefore, necessary so that the proper quantities of the substances in the foods, viz,—proteins, carbohydrates and fats, may be given to the animals and the best results thus attained.

Moreover, it is necessary, both for the sake of economy and for the health of the animal, to weigh for measure the amount of feed given to each. In order that a cow may digest her food to the best advantage she must have considerable volume of bulky food, part of which will necessarily be of low nutritive value. As a matter of fact, her total ration should include from 25 to 35 pounds or even more dry matter. It is evident, therefore, that a great deal of roughage has to be fed so that this quantity of dry matter may be supplied to the cow. Experience has shown that for a 1,000 pound animal a good roughage ration is 35 lbs. corn ensilage, 20 lbs. mangels, 5 lbs. clover hay and a little chaff.

The amount and character of the meal mixture or concentrate part of the ration will be affected by the amount of milk being produced.

If a cow responds freely to an increase of meal she should be fed all the more liberally up to that point where a further increase in the quantity of meal does not seem to produce a relative increase in milk flow.

One pound of meal for four pounds of milk is liberal feeding; one pound for three pounds of milk would be hardly economical unless dairy products were bringing relatively a very high price.

The quantity of composition of the meal ration is an important factor affecting the milk yield. As a rule, heavy milking cows can and will make better use of meal mixtures containing heavy meals such as corn, gluten meal, oil cake and cotton seed meal,, than will small producers.

Further, it is exceedingly important to remember that palatibility in the meal as well as in the roughage is an influence that is not infrequently underestimated. Variety in meals fed is advisable, but variety should mean a blending of meals not a substitution of one for another at frequent intervals. To illustrate, it is much better to feed a mixture of bran, oats, barley, oil meal, gluten, cotton seed meal, etc., than to feed any subsequently replaced by some other.

INDIVIDUALITY OF COWS.

Another point to be kept in mind is that a considerable difference may be observed in individual cows as to their feeding capacity and the returns they make for the food supplied them. These differences may in turn be ascribed to differences in the maintenance requirements of each. The maintenance requirement is the 'amount of food required to prevent the body consuming its own tissues.' In this maintenance requirement, considerable variation may be observed in individuals of the same breeds on similiar feeds and under like conditions. It seems probable that much of this variation is due to differences in the temperament of the animals. Obviously, the maintenance requirement of a quiet, placid animal will be considerably less than that of a restless one.

The individuality of cows, therefore, and especially in the matter of their responsiveness to feed, ought to be a matter of continual study to the dairyman.

HOW TO USE THE TABLES OF COMPOSITION AND THE FEEDING STANDARDS.

To show how to use the tables of feed composition as given on page 117 et seq., in such a way as to learn the probable value of a given ration, or to compound an entirely new ration, the feeds avaijable being known, the following problems and their solutions are given.

Problem I.—'To a thousand-pound cow, yielding 30 pounds of milk a day, there is being fed 35 lbs. corn ensilage, 10 lbs. cut oat straw, 5 lbs. clover hay, 3 lbs. bran and 2 lbs. crushed oats. Could this ration be improved upon, and, if so, how?'

Dicussion.—Reference to the Feeding tables shows the following to be the feeding value of the ration described:—

The following ration, according to any or all of the Feeding Standards given, is evidently much to wide, and

Feed.	Digestible Protein	Digestible Carbohydrates plus digestible fat x 2 1-4.	Nutritive Ratio.
	lbs.	lbs.	
35 lbs. corn ensilage.....	·490	5·530	
10 lbs. oat straw.....	·130	4·130	
5 lbs. clover hay.....	·355	2·095	
3 lbs. wheat bran.....	·357	1·423	
2 lbs. crushed oats.....	·176	1·178	
	1·508	14·361	1:9·55
Requirements of:—			
1. Wolff-Lehmann standard about	3·5	15·2	1:4·50
2. Wisconsin " "	2·11	15·8	
3. Haecker " "	2·00	14·5	
4. Kellner's " "	2·40		
5. Scandinavian " "	2·25		

to correct this condition it will be necessary to either substitute or add some feed rather rich in protein.

The diminution of the straw to 5 lbs. instead of 10, the increasing of the clover hay from 5 up to 10 lbs., the increasing of the bran to 6 lbs. and the addition of 2 lbs. of oil cake meal, would mean a much better ration for such a cow, and a ration that would probably result in a considerable increase in the flow of milk. Below is given the new ration, worked out in the same way as the old:—

Feed.	Digestible Protein	Digestible Carbohydrates plus digestible fat x 2 1-4.	Nutritive Ratio
	lbs.	lbs.	
35 lbs. corn ensllage	·490	5.530	
5 lbs. oat straw	·065	2·065	
10 lbs. clover hay	·710	4·190	
4 lbs. wheat bran	·476	1·901	
2 lbs. crushed oats	.176	1·178	
2 lbs. oil cake	.630	·822	
	2·547	15.689	1:6.2

This modified ration is apparently still to wide according to the Wolff-Lehmann; it is however quite as narrow as necessary according to the other standards given, which are probably the more nearly right. Further, as this ration is made up almost entirely from exceedingly palatable feeds, corn ensilage, clover hay, wheat bran, crushed oats and oil cake meal, is probable that it is as good a ration as could be fed such a cow and almost certainly more profitable than would be a ration complying more nearly with the requirements of the Wolff-Lehmann feeding standard, since to narrow the nutritive ratio dawn to 1: 4.5 would mean the addition of about 3 lbs. more oil cake or else the still further substitution of clover for straw or of clover in the place of part of the ensilage. Our experience here would seem to show that while the Wolff-Lehmann Standards are probably right where no attention is paid to the effect of feeds on palatability, they are apparently unnecessarily narrow when easily digestible, highly palatable feeds make the ration. In this, our experience seems to bear out the findings of the Wisconnsin and other investigators both American and European, whose standards, it will have been observed, are of much wilder nutritive ratio then the Wolff-Lehmann under similiar conditions.

Further, we have seldom found it profitable to feed more than one pound of meal mixture or concentrate to about four pounds of milk produced. Of course, if the cow was giving 30 lbs. of milk on the ration mentioned in the enquiry, she is practically certain to give considerably more, probably 35 to 40 lbs. on the new ration as suggested.

Problem II.—A farmer has at his disposition clover hay, mixed hay, wheat chaff, mangels and oat straw. He has also a small amount of oats and he can conveniently purchase gluten meal, bran and cotton seed meal. He is particularly anxious to produce a large quantity of milk. His cows are for the most part Holstein grades and not long calved. What would be good ration compounded from all or any of these feeds mentioned?

Sloution.—Nothing is said of the quantities of different feeds available hence it will have to be taken for granted that they are any and all, except oats, available in any quantities desired.

The Holstein grade being usually a large cow of 1,200 to 1,500 lbs., a ration must be compiled accordingly. As already indicated, variety is an excellent quality in a ration, so, although a suitable ration might be prepared from which some of the feeds could be left out, it will probably be found advisable to include them all in one proportion or another.

The ration given in the following table suggests itself:

Feed.	Amount	Dry Matter	Digestible Protein	Digestible Carbohydrates plus fat x 2 1-4	Nutritive Ratio.
	lbs.	lbs.	lbs.	lbs.	
Clover hay	8	6·776	0·568	3·352	
Mixed hay	5	4·355	0·295	2·180	
Wheat chaff	5	4·285	0·060	1.335	
Oat straw	8	7·272	0·104	3·304	
Mangels	50	4·550	0·550	2·950	
Oats	2	1·792	0·176	1·178	
Gluten meal	2	1·810	0·594	1·124	
Cotton seed	2	1·860	0·752	0·860	
Bran	5	4·405	0·595	2·380	
		37·105	3·694	18·663	
Wisconsin Standard, about		3·9	3·33		

Since the Wolff-Lehmann Standards do not go above 30 lbs. of milk per diem it will be necessary to compare this with the Wisconsin Standard as given on page 76. The Standard calls for 3.33 lbs. digestible protein, 35.9 lbs. dry matter and 24.3 lbs. digestible dry matter (digestible protein plus digestible fat x 2¼) for a 1,400 pound cow giving from 1.75 to 2.00 lbs. butter fat per diem, which is the maximum such cows might be expected to give when fresh.

The ration as suggested shows 37.105 lbs. dry matter, 3.694 lbs. digestible protein and 18.663 lbs. digestible carbohydrates and fat, approximately the same as in the Wisconsin Standard.

The ration as suggested might be fed as follows:

Morning.—25 lbs. mangels, 5 lbs. mixed hay, 5 lbs., oat straw; and half the meal mixture, since the best way to feed the 2 lbs. each gluten meal, oats and cottonseed meal and the 5 lbs. bran would be as a meal mixture made up in these proportions. Afternoon or evening, 25 lbs. mangels, 8 lbs. clover hay, 5 lbs. wheat chaff and half meal mixture.

It is probable that the wheat chaff would not be all eaten but what was left could be thrown back for litter under the cow.

If more concentrates were necessary, that is, if it were found advisable to give some heavy producing individuals more meal, an extra amount of the meal mixture described would probably be as good as anything that could be fed. Making the proportion of gluten or cotton seed meal 3 instead of 2 would probably be a slight improvement, although any increase of the heavier meals in a mixture must be made gradually and the effects carefully watched.

Nova Scotia Fruit Growers' in Annual Session.

THE OPENING EXERCISES

The fifty-first annual convention of the Nova Scotia Fruit Growers' Association was held in Palestime Hall, Kentville on the 20th, 21st and 22nd inst.

The opening session was on Tuesday evening, when the spacious hall was well filled with the foremost fruit growers of the famine Apple District and not a few others, more or less deeply interested in fruit growing.

Mr. S. C. Parker, President of the Association, occupied the chair, and with him on the platform were the various members of his able executive lieutenants and also Hon. Geo. H. Murray, Premier of the Province; Prof. M. Cumming, J. W. Margeson, M. P. P., for Lunenburg Co.; H. H. Wickwire, M. P. P. for Kings County, and Mr. J. W. Ryan, Mayor of the Town of Kentville.

After the Divine blessing had been invoked by Rev. Mr. Miller, President Parker read the following address:—

THE PRESIDENT'S ADDRESS

Members of the Nova Scotia Fruit Growers' Association, Ladies and Gentlemen:—

We are again gathered in annual session, our fifty-first annual gathering, and it again becomes my pleasant duty to say a few words to you in the way of a report.

The association is yearly growing in numbers and in influence. When a fruit grower is induced to attend one meeting, that person can usually be counted on as a regular supporter. There are men here to-day who have not missed a meeting in many years. Others, younger in years and experience, are coming into the ranks to take the places of those who, from time to time, fall by the wayside. Mr. R. W. Starr, who is with us to-night, has not missed a single annual meeting of the association, since its inception fifty-one years ago.

We are gathered here today to review the successes and failures of the past year, to look into the present situation, and to consider what can be done in the future to place our business on a better basis. The results of the past year have been far from satisfactory. We had our chance and failed to take advantage of it. On the first day of May, 1913, this Valley had a chance to make good. We had a good show of blossoms, with a prospect of, at least, a fair crop of very poor apples. Nineteen hundred and thirteen was a year, when to make good in apples meant a lot of money and much free advertising of our orchards and their products. The markets of the world were open to us—no apple growing section on this continent had a full crop.

The markets were ready to absorb all good fruit available at a good price. We have not made good; and, in my opinion, this failure is the fault of the fruit growers rather than of Providence, upon whom too many of us are inclined to put all blame. I know there are hundreds of fruit growers in this Valley, and doubtless some here today, who will hasten to dispute this statement to the limit. Show me any orchard in the Valley that in the season of 1913 grew a few measly barrels of scabby apples, and I will guarantee to find within five miles of this orchard a farmer who under practically the same conditions with the same environment, had a fair good crop of comparatively clean apples. I will make another assertion that some may rise to dispute. Thorough spraying will not only make apples grow clean, but it will make apples grow where otherwise there would be none. I can give you concrete proof, and much evidence to this end will be offered before the meeting is closed. And, just now, all will concede that there was not a crop of clean apples in any orchard this season that was not sprayed in the most thorough manner.

There is only one salvation for apple growing in this Annapolis Valley, and that is in the gospel of good spraying. We must grow clean apples—nothing else counts. The grower of spotted apples is certain to grow poor, and the more apples he grows the poorer he will become. Scabby apples will not be worth anything in the near future and the man who grows them will not earn his board.

Apples can be kept clean even in the worst season for we have men here to-day who have succeeded in doing so; and what one has done others may do.

The world's crop of apples for the year 1913 was small. Ontario had a small crop, and patchy both in quantity and quality. Ontario, of course, is a large province and the apple areas are widely distributed. Some sections had good quality and others very spotted; New York and New England had an off year. The cop of the Middle West was comparatively light; British Columbia had the most apples she has ever had. The Western States had about half of last year's crop. It is from the Western States that the shadow of over-production looms large. New York and New England had an off year. The crop of better care, and improving rapidly in quantity and quality; but the enormous population in the East will take care of an increasingly large quantity of apples. Ontario this year shipped nearly 400,000 barrels to Western Canada and that growing country will consume any Ontario surplus. If she can hold the market. The four states of Oregon, Montana, Utah and Washington produced in 1911, £18,000 carloads. The year, with an off crop 10,000 car loads.

(Continued on page 257.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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JANUARY 27, 1914.

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February 10-24
March 10-24

FARMING WITH BRAINS.

It was written of a great painter that, in response to the query of a jealous imitator as to what his paints were mixed with to produce such marvelous colors, he replied: "With brains, sir."

Now, when we see two farms alike in acreage, in quality of soil, in the number of stock kept, and in facilities for marketing the crop, one a picture of prosperity, and the other, its near neighbor, perhaps, run down, with poor stand of crops, scrub stock, and delapitated buildings, we are pretty apt to inquire as to the cause of this difference.

The owner of the poorer farm is apt to have a variety of reasons for his non-success, rains, poor seed, scarcity of help, and the all-including term "bad luck." There may be, and doubtless is, much truth in the causes advanced.

But when all allowances are made, and all causes for non-success figured up, may we not in the great majority of cases, with fairness attribute much of the splendid result achieved in the one case to the fact that this farmer like the painter of old did his work with brains.

There is no class of people in this country of a higher average of intelligence to-day than the farmers. No man can produce more from the soil, no man has a better working knowledge of cropping and cultivation than the farmer of this section, but he is far too often contented to get into a rut to fail to take advantage of improved methods, of new and larger opportunities, and above all to study his individual problem, and make the most of the common materials at hand.

In other words he is contented to let "worn out" fields remain worn out, instead of studying their composition and nature with a view to bringing them back to fertility by suitable cultivation.

He is willing to accept the difficulties entailed by the scarcity of labor without seaching for a method of overcoming them by the use of labor saving machinery, and by a systematizing of the work of the farm which makes for the economy in labor.

...

There is no place where brain work counts more than on the farm. The great captain of industry has fewer details with which to burden his mind than the man who cultivates a fairly large farm. To be a successful farmer in these days he must study detail; he must make his own and his hands' labor count to the fullest extent; he must avoid misdirected effort, and must above all realize that in these days hand labor is expensive labor wherever horse power may be employed, and horse power is expensive power wherever the steam or gasoline engine may be made to do the work.

Setting aside the lack of funds, which has been heretofore a serious handicap to most farmers the chief difference between the successful and unsuccesful farmer lies in the fact that the former has awakened to new conditions, and has, to use a homely phrase, learned to let his brain save his hands.

The scarcity of labor is no new problem, It is a condition which has existed in the great grain producing states of the West for a quarter of a century, but the farmers of the Maritime Provinces, adapt themselves to this condition, and are becoming prosperous. The adoption of every improved labor saving device is proving their salvation.

Discouraging market conditions can often be overcome by seizing the opportunity to enter a new market. So called "worn out fields" can be restored by diversified farming, careful study and equally careful cultivation, often assisted by experiments in stock raising.

The farmer of the East is the mental equal of his western brother. He should adopt his methods, study conditions and market reports, keep touch with experiment stations, and become a student of his farm paper. With a soil and a climate that permits the raising of every crop for which there is a market his opportunity is practically unlimited. Brain farming pays.

THE FIRE DRILL ON THE FARM.

Precautions which may aid in saving life and property ought never to be neglected. This is especially true of rural communities, where houses are far apart and fire department practically unknown. Every well-regulated farm should have its hose, ladders and axes and fire extinguishers. But the fire drill is, perhaps, even more important. It has been universally adopted in schools, factories and office buildings. Why not try it with horses and cows in the stable. Animals are only creatures of habit, and we know that they can be trained to do our bidding.

It is common superstition that horses are panic-striken in a fire and will not leave their stalls. But they can be managed, just as frightened children can, by a cool head. The major portion of animals burned to death occurs at night. This is due more to habit than fear. The average horse is rarely taken out after dark. But if he were led into the open in the evening, when he was least expecting it, several times, this habit would be broken. At first they may be slow in responding to nocturnal calls. Let them discover that being led out of the stable after dark means a bit of salt or a lump of sugar, and they will take to the dicipline without the slightest trouble. Of course sometimes it is necessary, in case of fire, to blindfold a horse's eyes and whip him on the forelegs. However, if he is accustomed to being led from his stall after dark he will not be so easily frightened.

There are many little things about the farm that can be done or left undone that will aid materially in saving life and property in case of a conflagration. Boxes, wagon seats, etc., should never be dumped in front of wagons and machinery not in use. Where possible, a hydrant should be installed in the stable, and no smoking permitted among the hands. Rusty locks should be kept oiled and in working order, and floors free from gasoline and other combustibles. Worn-out shingles might be replaced with tin. These are little things but they compensate for their trouble in the long run.

TRUTH SHALL MAKE YOU FREE.

Yes, indeed, over and over again it has been demonstrated that the surest, if not the only, way to escape from the drudgery and slavery of unprofitable dairying is to forsake the old ways of tradition and habit, and accept and follow the new truths which investigation, study, science and experiment have discovered and established. Such are the truths that shall liberate and lift up the depressed dairyman; such the truths that the Maritime Farmer is setting forth from week to week.

We have no occasion to be dissatisfied with the reputation and circulation which have come to the paper. In both respects the results have far surpassed the wildest expectations we have ever indulged, but as the letters come to us, expressing gratitude for what the Maritime Farmer has done for the writers, we do sometimes regret that there are so many people, who could be benefited by reading it, that neglect to become subscribers. It cannot be the matter of mere cost, for there are none who would seriously miss the eighty cents required for a year's subscription.

To meet such cases, we have arranged to send out sample copies of this issue to a considerable number of people whose names have been sent to us by their friends. May we not ask that each recipient will read the paper with care, note the wide field from which its correspondence and inquiries come, the attempts made to give helpful answers, and then candidly consider whether it may not be to his profit, also, to have the paper regularly every week.

"POWDERY SCAB."

In sections of New Brunswick where "Powdery Scab" has been located by the Department of Agricultures' inspectors, they have had no difficulty in tracing the origin of the infection to imported seed. One farmer in a neighborhood unknowingly used infected imported seed in his potato planter. The planter was subsequently used by a half dozen or more of his neighbors and their crops too, although grown from home-grown seed became infested.

There are several morals that may be learned from this experience:

The first is that it is advisable to grow, select and use home grown seed. It proves best under all circumstances, and one is not so apt to get his fields infested with undesirable fungus and insect pests.

The second moral is that in cases where machinery is co-jointly owned by several farmers, that the wise farmer will disinfect said machinery before using. The threshing machine is credited with spreading noxious weeds in cases where the operator is not careful to give the machine a thorough cleaning before moving to the next farm.

That the potato planter may be guilty of a similar offence is proved by the findings af the "Powdery Scab" inspectors. A word to the wise is sufficient.

THE. N. S. A. C. SHORT COURSE.

The 1914 Short Courses at the N. S. A. C. Truro, are now completed. We had the pleasure of spending a day at the college while the Short Courses were in session and it did us good to see the large enthusiastic classes of of young men and young women.

Prince Edward Island holding short courses of her own did not contribute tothis year's Short Courses at Truro and in anticipation of Short Courses being held by the New Brunswick Department of Agriculture the attendance from New Brunswick was rather limited so that it may be said that this year's N. S. A. C. classes were almost entirely Nova Scotian in character.

The programme was all that could be desired. The lecturers and instructors in the different topics were the best available. Interest in the respective lectures was maintained until the end of the Courses and it was with a feeling of reluctance that the various students turned their backs to the institution on the hill to wend their respective ways homeward, where they will put in practice, so far as they can, the precepts gleaned during their courses of study at the college.

BOOK FARMING.

Book farming should begin on every farm with the new year—one acre or one thousand, all need it. Not the "book farming" that the old-fashioned farmer derided, but the book farming that keeps account of income and outgo. A stub pencil liberally used on scrap paper, and an account book may show facts never dreamed of about the finances of the farm. A larger balance at the bank than a year ago doesn't necessarily mean that you've made money.

The first of the year is an excellent time to begin the keeping of accounts. Make an invoice of your belongings; keep account of your receipts, crediting each to its proper source. Record your expenditures and learn later if they were wisely made. Get the figuring habit. Farm bookkeeping doesn't need to be complicated to be effective. Its the only sure way to know what you are really doing with your farm business.

Nova Scotia Fruit Growers' in Annual Session.

(Continued from page 255.)

Next year they expect to produce 25,000 carloads. This tier of Western States is said to have 200,000 acres of orchard just coming into bearing. At 100 barrels per acre, or 300 boxes as they count them there, we are to face 20,000,000 barrels of apples added to the world's production. That is the problem we are facing, and that is the way I say it is useless for us to face that tremendous flood of big red and yellow apples with a few thousand barrels of miserable spotted trash that is scarcely worthy a place in the cider mill. Many of you who keep in touch with the foreign markets, know that two years ago thousands of boxes of Oregon, Newtown's, the highest priced apple in the world, were selling at Liverpool and London at four shillings per box. This is what increased production may mean; and that is the reason this Association is calling on all interested to get busy and grow clean apples, and only clean apples in competition for the world's market.

The next step in the fight for supremacy in the struggle is

GOOD ORGANIZATION IN MARKETING.

The United Fruit Companies have taken a prominent place in the great selling factors of this country. For an organization in the first year of its history to handle nearly one-half of the output of apples of this Province, is certainly a remarkable record- If there had been no Central Organization to manage the output, I am convinced there would have been a far different record, both last year and this. The flood of scabby apples poured on the London market, as without the guiding hand of the Central organization would have been the case, must have resulted disastrously to all fruit interests.

I am convinced that one organization, controlling all the export apples of this Province, is essential to the best interests of all growers. The United Fruit Company may well feel proud of its record and its work, and this Association may certainly be proud of the part it had in effecting the organization.

The British Columbia Government sent their Secretary for Agriculture to the head office at Berwick to inquire into the methods of organizing tion. British Columbia is orgahiz-Co-operative Companies with government capital. The United Fruit Companies has its present standing without government grants or government assistance of any kind. In fact, more than once, the organization has been effected in spite of Legislative indifference, if not active opposition.

Your President was invited by the Ontario Fruit Growers' Assoriation, to visit their annual meeting in November and address them on "Co-operative Marketing in Nova Scotia". I had the honor of giving that Association a brief history of the organization of the United Fruit Companies in the presence of the Minister of Agriculture and Dr. C. C. James, adviser to the Minister, both of whom expressed a great interest in the work being done in this Province. In listening for two or three days to the discussion of the Ontario fruit men, I found their problems much the same as ours. Transporation is a big question with them owing to their long rail haul and enormous output of soft fruit. Their troubles cause ours to shrink into insignificance. They have a permanent transportation committee with a paid secretary. This committee is kept busy in looking after matters in this connection.

Second, only, to the importance of growing clean apples is the importance of standing close by the Co-operative organizations; the next five years means five years of struggle to maintain our ground. We have many advantages that none of our competitors can ever have. The fittest, only will survive and it is up to us to make good.

In the death of Alexander McNeill, for many years Chief of the Federal Fruit Division, this Association and the great fruit interests of Canada have lost a tried and proved friend. Mr. McNeill was a familiar figure in these meetings. He came to us many times at much personal sacrifice. He was always ready to assist when needed; to speak the cheering word and work for the advancement of the fruit interests of Canada. Personally, and I am sure I speak for every member, we deplore the death of our late chief and feel the loss of a friend and co-worker, who was always ready to work for the advancement of a true Christian nationality. At another time in this Convention, it will be in order to place on our records resolutions, expressing our appreciation of the life and work of our departed friend.

While the Fruit Division is without a head seems an opportune time to press on the Government the growing importance of the fruit interests, and to urge the Minister of Agriculture to establish Horticulture as an independent Department under a Commissioner, rather than remaining subsidary to some other department. This matter has been brought to the attention of the Government in the past, and a resolution along these lines may also be in order.

The Experimental Fruit Station is showing rapid development and never was more needed than now. By undertaking a series of experiments in spraying, cultivation and fertilization in different sections of the Valley, Professor Blair is making an effort to solve some of the troubles that are ever present with us. From per sonal observation, I am convinced that the work carried on, even in this first season, is of great value to the fruit growers. We will be given a summary of this work at this meeting.

It seems very fitting that this session should be held in this central town of Kentville. We have plenty of material here for a splendid meeting, and I am sure all will combine in making it a grand success.

THE JOINT ADDRESS OF WELCOME.

of the citizens and Board of Trade of Kentville was read by His Worship Mayor Ryan, who among other things made reference to the prominent part the fruit growers had taken in getting the Experimental Fruit Station established near his town and to the possibility of holding a large, successful show at Kentville in the fall of 1914. He advocated that a Short Course in apple packing be conducted in Kentville at a date in the near future.

THE REPLY TO THE ADDRESS OF WELCOME

was fittingly made by Mr. W. H. Woodworth, of Berwick, who expressed strong sentiments in favor of the Short Courses in Apple Packing referred to in the Address of Welcome.

THE MUSICAL PROGRAMME

consisted of the following well rendered numbers:

Piano Duet—By Mrs. B. U. Parker and Miss Ida Randf

Vocal Solos—By Herbert Oyler.

Vocal Duet—By Mrs. F. B. Newcombe and Mr. A. H. Morash.

Vocal Duet—By Mrs. Arthur Tully.

Quartette—By Mrs. Newcombe, Mrs. Tully, Rev. T. C. Mellor and Mr. Morash.

HON. G. H. MURRAY

delivered an interesting, non-partisan address on "The Most Serious Problem Confronting Public Men of Nova Scotia—Money."

He outlined the resources from which Nova Scotia derives her revenue—Federal Subsidy, Royalty Duties and Succession Duties. The avenues for expenditure were many, the most important ones were :—Education, Roads and Bridges, and Humane Institutions. At a recent conference of Provincial Premiers, from each province of the Dominion; the unaminous concensus of opinion was that the Federal grants to the respective provinces should be increreased. Premier Murray also spoke of the need for cheaper money for the farmer. This and other social problems require the early attention of our public men. The foundations for a greater Nova Scotia had been well laid. The Agricultural College, The Technical College and the managing principles of the Humane Institutions were along right lines.

There were three avenues whereby cheaper money could be procured for the farmer.

1. Direct loans by the Government. 2. Loans by a Financial Institution, whose bonds would be guaranteed by the Government. 3. Co-operation among the farmers themselves. Avenue number two was in his opinion the most feasable way.

Nova Scotia has the best apples, fish, coal and steel and to keep her in the fore-front he asked his audience to think wisely and well on public questions, particularly those affecting their own province.

J. W. MARGESON, M. P. P.

for Lunenburg Co., spoke on the value of organization and co-operation. He strongly advocated more vocational training for our farm boys and girls. He expressed the views that the very best immigration work that is necessary in Nova Scotia is wrapped up in keeping our own farm boys and girls at home. To accomplish this it was necessary to make the home life on the farm as sweet to the young people as it should be. Five of our own industrious good young citizens were of more value to our country than five hundred undesirable immigrants. He set up a plea for more faith in our own country and the necessity of letting the world know of that faith by singing the praises of our heritages whereever and whenever the opportunity offered.

PROF. M. CUMMING

was present and outlined the work that is being done to advance agriculture in Nova Scotia. The Short Courses recently held in Truro had been a record-breaker in the annals of Canadian Agricultural College Short Courses.

He referred to the serious fungus and insect pests with which the fruit growers had to contend. A new Entomologist in the person of Prof. Britain had been recently appointed, and the work of fighting these pests would not lag. He submitted to the fruit growers for their consideration at a future meeting the advisability of also appointing a specialist on plant diseases.

Mr. H. H. Wickwire, M. P. P., for Kings County was present and in the closing remarks referred to the fine agricultural possibilities of his constituency.

THE WEDNESDAY MORNING SESSION.

was devoted to the transaction of routine business.

Secretary Ells read the following report which was adopted:—

SECRETARY'S REPORT

Our Association marked time in 1913 to the extent that no special meetings were held as in the previous year.

Apple trees started their leaves very early, and showed an abundant bloom, but until the blooms fell we had an almost constant succession of cold rainy days, and as a consequence fertilization was very imperfect, and a poor set resulted.

In almost every case where orchards were sprayed twice before the blossoms opened, and the work followed up afterwards, a good crop of clean apples resulted. In almost every case where no spraying was done before the blossoms opened the crop was a total failure.

We have on our program this afternoon the names of ten fruit growers, men living in all parts of the Valley, whose experience along this lin! I think will interest you, and as the discussion of this subject comes up later, I will not refer to it any further here.

The apple crop was a little more than half of that grown in 1912, and about one-third of the record-breaking one of 1911. In addition to this the quality was very poor, and a large proportion have to be marketed as No. 3's. It is humilitating to note year after year in English market reports Nova Scotia apples quoted from two to six shillings below those from New York, Maine and Ontario. Surely the difference in the size of the barrel is not responsible for all this difference in price.

That it pays to pack and market No. 3 in a year of crop failure such as this is probably true, but with new orchards coming into bearing, and a great increase in production expected within the next ten years in all apple growing parts of America, the question of whether we shall continue to produce No. '3 or not, becomes a vital one to the prosperity of this Valley.

In almost every community we find a few men who are following the instruction of the experts of our Agricultural Colleges, and Experiment Stations. These men by thinning spraying, etc. even in a year of bad climate conditions such as has just past, are getting a proportion of No. 1 fruit so far above the average that an onlooker from other walks of life cannot understand why more do not follow their example.

Believing this question of better fruit is one of the most important we have to deal with, we have arranged a program for this meeting dealing especially with the control of fungus diseases and other orchard pests. The address given by Prof. Wallace at one of our meetings some years ago at Windsor has been worth thousands of dollars to our fruit growers. The information by Dr. Stewart last year at Middleton on the use of commercial fertilizers, was timely and valuable in enabling us to purchase them more intelligently. We have Prof. Caesar with us today, and believe that with the knowledge he has for us, we will be able to handle this problem of better fruit to greater advantage.

THE TREASURER'S REPORT.

Last year's balance was $253.31 and receipts during the year had been $557.40. The expenditures had been $778.71 leaving a cash balance of $32.00.

THE ELECTION OF OFFICERS.

resulted as follows:—

President—F. W. Bishop, Paradise.

Vice President—A. E. McMahon, Aylesford.

County Vice President for:—

Annapolis Co.—G. C. Miller, Middleton.

(Continued on page 264)

LIVE STOCK.

Preparing of Animals for Slaughter.

Animals intended for slaughter should be kept off feed from twenty-four to thirty-six hours, if kept on full food, the system is gorged and the blood, loaded with assimilated nutrients, is driven to the extremities of the capillaries. In such a condition it is impossible to drain out the veins thoroughly when the animal is bled, and a reddish-colored, unattractive carcass will be the result. The blood is the most easily decayed substance in the animal carcass, and often causes trouble in the curing of meat. Food in the stomach decomposes very rapidly after slaughter, and, if the dressing is slow, the gases generated often flavor the meat.

Water should be given freely up to the time of slaughter, as it keeps the temperature normal and helps to wash the effete matter out of the system, resulting in a nicely-colored carcass.

It is important that the animals be not excited in any way sufficiently to raise the temperature of body previous to killing. Excitement prevents proper drainage of the blood-vessels; and, if extreme, will cause souring of the meat very soon after dressing. In no instance should an animal be killed immediately after a long drive or after a rapid run in the pasture. The flesh from animals overheated is usually pale in color, and often develops a sour or putrid odor within three or four days after being dressed The animals should not be chased or driven rapidly, nor should they be handled in such a way as to bruise the bodies. Bruises cause blood to stay in that portion of the body affected and often cause the loss of a considerable portion of the carcass. A thirty-six hour fast, plenty of water, careful handling, and rest before slaughter, are all important in securing meat in the best condition for use, either fresh or for curing purposes.

Animals with fine bones and soft, luxuriant hair, are more likely to yield a good quality of meat than those with coarse bones and wiry hair.

An animal should never be losing in flesh at the time of slaughter. If failing, the muscle-fibres are shrinking in form and contain small amounts of water. As a consequence, the meat is tough and dry. When the animal is gaining in flesh, the opposite condition obtains and better quality of meat results. A better meat-product will be obtained from an animal in only medium flesh, but gaining rapidly, than from an animal that is very fat but is not gaining in flesh.—Andrew Boss, University Farm

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The Foot and Mouth Disease May Spread.

In discussing the question of how the disease of foot-and-mouth may be spread from one country to another and from one farm or district to another, we other, we pointed out last week that the dribbling of saliva from the mouths and discharges from the vesicles on the feet of infected animals in and about the farm buildings and on fodder, etc., are very easily recognized causes of infection. In addition to these, however, there are other causes of infection which are perhaps not so well recognized, from their having a foreign source probably, and there is an interesting chapter on this subject in Mr. G. Sutherland Thomson's book on "British and Colonial Dairying," reviewed lately. Not to mention the traffic in foreign hides, eggs, etc., which is capable of being cootrolled so as to afford some protection to British stockowners, there is a prolific source of infection which is connected with the importation of foreign grains and foodstuffs to this country from abroad. One serious danger is that connected with the importation of maize from the east of Europe, where the cereal is cultivated to an enormous extent by small cultivators and is by the village populations, who bring to the maize fields during the season their families and entire live stock, comprising draught cattle, pigs and poultry. These are details connected with the harvesting of maize which make it an easy vehicle for the carriage of foot-and-mouth disease.

The infection of grain by vermin—e. g., field rats, mice and birds—which are numerous in maize fields and in granaries, points to another source of infection, and there is the probability that wind and dust storms and migratory birds may play a part in the transmission of the disease. Hares, foxes and even dogs also have been mentioned, and there is not a biped or a quadruped in existence which may not be, in certain circumstances, the innocent cause of an outbreak of this very infections and costly disease. It is suggested that a strong agricultural committee should be formed in England to confer with leading agricultural associations on the Continent, with the object of minimising the spread of the disease from one country to another.

Weighing Sheep.

Thete appears nothing like going about a bit among brother farmers in different counties to pick up wrinkles. In South Devon lately I was looking over some strong lambs. Something was said about the weight of them, and to my surprise there was an animal—a lamb or sheep, which ever it might be called—put on its back in a trice in a clothes basket which was on a common weighing-machine, and the weight taken in the time it takes to write it. The animal was as quickly returned to the flock. There need, however, have been in no hurry, for, to my astonishment, the animal never struggled in the basket. Several more were weighed in the same way, and the farmer said he so weighed his whole flock before sending it to market, and then he knew how to go on there. This somewhat primitive plan might suit anyone who wished to take the weight of lambs or light sheep. Of course, the weight of basket must be allowed for. I think a clothes basket will answer better than a box for the purpose. It is about the right size. As regards live and dead weight, it varies considerably, according to the breed of animal, its state of fatness, and whether fasted or not. I once weighed a cross-bred lamb—a Leicester-Shropshire— after fasted twelve hours. It was between three and four monthd old. Live weight was 70 lb., dead and dressed 40 lbs. The lamb was, as might be supposed, nice meat—ready for butcher. Big South Devons would not give quite so good a return dead according to live weight. An old South Devon ewe, moderately fed, would, I should say, slide off a bit more than half in weight in the killing and dressing when fasted for 12 hours. An eleven month old Devon lamb in fair condition would waste nearly half, I daresay. But many circumstances and conditions have to be reckoned in calculating what certain live animals would weigh dead.—Farm and Home, England.

The Future Meat Supply.

For weeks prior to the removal of the American tariff on cattle, speculators were busy gathering live stock in Canada and then, for some weeks after, quite a formidable procession crossed the border. This gathering process has resembled a clean-up, but it is exremely improbable that either Ontario or Quebec can supply the same number to American markets a year hence. In some districts nearly everything has been shipped away except dairy cows.

Another cause of the beef shortage is the vealing of so many calves, few more being kept than are really necessary to replenish the dairy herds. The beef industry in Canada should not be allowed to dwindle to the production of veal only. The heifers should be kept for the purpose of producing more calves, to utilize the rough feed on the farm and to make manure to maintain soil fertility. Vealing heifer calves, while it may give the farmer a quick return is destroying good beef making material and is too much like killing the goose that lays the golden eggs.—F. C. N.

Help Keep Cattle Clean.

At least twice a year the working cows in the dairy herd should have their hind quarters and udders clipped smooth. In the spring this is an aid to the natural shedding. In the fall or early winter it makes the job of keeping the cows clean during the winter much less arduous. If the clipping is delayed until after cold weather starts a warm week should be picked for it, for then there will be less chance of the cattle becoming chilled. A machine clipper requiring two men, one turning and the other operating the cutter, is relativey inexpensive and will cover a good many animals in a short time.

Fits in Pigs.

Fits in pigs are usually only of two kinds, apoplectic or epileptic.

APOLEPTIC FITS.

These are comparatively rare, but apoplexy is due to many causes, the principal of which are: Exposure to the sun's rays, over feeding, rupture of an artery, causing compression of the brain, blows on the head, growth of a tumour, fright, clots in the cerebral arteries, an accident placing the animal for a time in a position mechanically preventing the return of blood from the brain, venous congestion, and, in fact, any cause obstructing the functional activity of the brain.

SYMPTOMS.

The attack is sudden, the animal is unconscious, breathing loud, laboured, and slow, the tongue protruding and blackish, and there is partial paralysis with occasional twitches, from time to time, generally on one side of the body, the eyelids are closed, and the pupils frequently dilated and insenitive to light.

TREATMENT.

This combines removal to a dark quiet and cool place, cold applications and douches to the head; mustard or white oils rubbed in the back of neck, spine and extremities, and, if consciousness returns, administer four grains of calomel and twenty grains of jalap, or any domestic pill of any aperient character, doubling the human dose. The powder, or the crushed pill can be made into an electuary or paste with a little jam, and smeared on the tongue with the handle of a spoon, or mixed with two tablespoonfuls of milk, or, as the animal is not likely to struggle (being somewaht dazed), one or two ounces of castor oil may be given warmed. To administer these, elevate the head, make a pouch by pulling the cheek from the teeth, and slowly pour in without troubling to separate the teeth. The dose will then be slowly and easily swallowed. Or one may administer two ounces of Epsom salts, dissolved in five ounces of ale.

THE AFTER TREATMENT DEMANDS.

Isolation, quietude, darkness, laxative food, and once daily in water or food the following:— Iodine of potassium, five grains; nitrate of potash, thirty grains; for about a week. This line of treatment in many cases will prevent recurring attacks, and will remove many of the possible after effects.

WILL THE ANIMAL PAY FOR TREATMENT.

That depends on the value of the pig, the condition of the animal, fat or otherwise, the possibility of paralysis ensuing, whether the animal is barren or pregnant, and whether she was for a short or long time unconscious. All these factors must be considered, and perhaps the owner may determine to have the creature slaughtered at the earliest opportunity before any treatment is adopted. The flesh may usually be sold for human consumption, as, strictly speaking, it is not a disease, but in many cases due to an internal mechanical cause.

EPILEPTIC FITS.

These occur amongst all animals, but man, dog and pig are more frequently victims than equines or bovines or ovine, probably because of their larger and more complex brains, and higher mental developments.

GENERAL REMARKS.

This disease has peculiarly attracted the attention of mankind from the earliest periods; our most ancient literature containing scattered illusions to it. The suddenness of the attack, the unconsciousness, the struggling, the equally rapid return to normal condition have invested this discase with a mystery and a

You Can Cure CONSTIPATION By The Use Of MILBURN'S LAXA-LIVER PILLS.

A free motion of the bowels daily should be the rule of every one, for if the bowels do not move daily constipation is sure to follow and bring in its train many other troubles when the bowels become clogged up. You get Headaches, Jaundice, Piles, Heartburn, Floating Specks before the Eyes, Catarrh of the Stomach, and those tired weary feelings which follow the wrong action of the liver.

Mrs. Elijah A. Ayer, Fawcett Hill, N.B., writes:—"I was troubled with constipation for many years, and about three years ago my husband wanted me to try Milburn's Laxa-Liver Pills as they had cured him. I got a vial, and took them, and by the time I had taken three vials I was cured. I always keep them on hand, and when I need a mild laxative I take one."

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The New Century Hand Washer works quickly and easily. It gushes the water through the fabric, leaving it sweet and clean in a few minutes. It cannot injure the finest garment you possess.

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Here is a remedy that will cure cure your cold. Why waste time and money experimenting when you can get a preparation that has won a world-wide reputation by its cures of this disease and can always be depended upon? It is known everywhere as Chamberlain's Cough Remedy, and is a medicine of real merit. For sale by all dealers.

LIVE STOCK.

halo of superstition, so that the early Greeks spoke of it as the "sacred disease," and the treatment of it was considered to belong more to the priest than the physician. This continued even to the middle ages, and from the similiarity of symptoms in man and swine during the attack, it was believed to be transmissable from one to the other. The miracle of the man, possessed by devils (epilepsy) being freed therefrom and sent to occupy the bodies of swine, reflects the general idea of that time. At the present time we must confess, in spite of all the researches that have been made, we are still in ignorance of the essential cause of epilepsy. Consequently no really rational treatment had neen introduced. Hereditary tendencies are assumed, and that is true, but rhe answer still hides our ignorance. At any rate, do not knowingly breed from any animal known to have fits. Other assumed causes are (1) an undiscovered anto-toxin, specially acting on the nerves, issuing from the base of the brain or front of spinal cord. (2) A tuberculosis deposit in or on the brain, or some of the intermediate forms of trematode worms taking up their position there, and by their growth setting up pressure or irritation. (3) A reflex irritation produced by intestinal parasites, especially the small round worms. (4) Dentition: Previous to the eruption of the first or second teeth, the pressure of the jaw and gums sets up inflammation, and this communicated to the dental branches of the great nerve of the face, sympathetically excites a nerve storm. The fit itself is not the disease; only a culmination of unknown previous causes. (5) Indigestion: This is also a probable cause, and perhaps more frequently than any others. Fits may occur in suckling piglings, when the sow has been improperly fed.

SYMPTOMS.

The most constant feature is the sudden onset of absolute unconsciousness, the victim neither hears, feels nor sees, nor can be roused by any means at our command. The head is drawn on one side, and generally the patient falls on its side, and the frame is agitated with violent convulsions. The teeth are clenched, the tongue is often bitten, and the urine or faeces are passed involuntarily. There are remissions but often after a few moments the symptoms are renewed with violence. After a varying period of time they lessen in violence, consciousness returns, and the animal will resume the occupation it was engaged in prior to the fit, but usually it seeks quietude and darkness and sleep to restore the energy expended. There is for at least twenty-four hours a tendency to a recurrence of the fit. Many cases are far milder and of shorter duration. In feeding or playing, a young pig may suddenly stand still, or turn round in half circles, look dazed, stagger, and then quickly recover, the whole process not occupying more than five minutes.

TREATMENT.

During the attack nothing can be done except, possibly, removal from the vicinity of any hard body against which the animal might be bruised during the convu sive movements of the body. After recovery, a saline purgative should be given, in which thirty or forty grains of bromide of potassium have been added. The rest is a laxative diet, isolation, and quiet. If there is dentition trouble, search and distract supernumerary or crowded teeth. If the animal is effect tic fits, nothing has yielded so good ed with worms, give a vermifuge; if a result as the administration, twice in poor condition, better feeding and daily, of from ten to fifteen grains tonics. If piglings are attacked dur. (depending on size) of bromide of ing lactation with sow, feed her care- potassium, continued for at least a fully, give castor oil, and let her fortnight or three weeks. As it is have a run twice daily for a short rare to find any pathological changes time, weather permitting with her in the brain or other organs, the pigs. Of the medicine known, tend- animal may be slaughtered, and its ing to prevent a recurrence of epilep- flesh consumed safely.—Vet.

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—churning that is more of a pastime than a labor. That's the kind of churning a MAXWELL'S "FAVORITE" does. The mechanism is so perfect—so smooth. And it gives splendid results.

THE Maxwell "FAVORITE" CHURN WITH BOW LEVER

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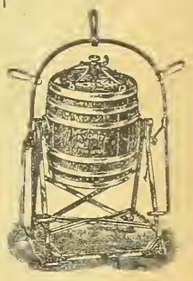

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DAIRYING.

Something About Milk Veins and the Udder.

A few years ago we thought we would see what percentage of the farmers believed that the large veins on the belly of the cow, which are called milk veins were really veins for conveying milk to the udder. So without expressing any opinion of own on the matter we simply asked the following question of one farmer after another: "Why are those veins called milk veins?" The answer from 90 out of the one hundred was in effect, like this: "Because they carry the milk to the udder." Of the remaining ten, five could not give any answer except to say that they did not know, while only five had the right idea, viz: that these veins are in reality great blood veins returning blood from the udder to the heart.

If we believe the truth as it really exists, that these veins return the blood to the heart it will teach us several valuable lessons:

1. It will show us the enormous circulation of blood that is required to produce milk in a good cow.

2. It will teach us that we must take good care of the udder, for with such a heavy inflow and outflow of blood, the organ is vry sensitive to abrupt changes of heat and cold. This is the reason that cows are very apt to have garget by lying on cold ground late in the fall. Also by lying on stone or cement floors.

3. It will teach us the folly of tying cows in the common stanchions whereby it is easy for a standing cow to step over onto the teats or udder of the cow that is lying down next her.

4. A knowledge of the true physiology of the udder will teach us the importance of careful and gentle usage of it in milking and the great importance of attending to any derangements at once.

We wish also to speak of the importance of the knowledge of the above facts to every farmer and dairyman in selecting a dairy cow.

Milk approaches the blood so closely in function and vitality, that it is in fact almost a part of the blood itself.

The milk glands and the blood system are so closely associated and a large milk yield is so absolutely depepdent upon a heavy blood supply that large milk veins in connection with a good big udder cgn be taken as proof that a cow is a first class milker.

Influencing the Richness of Milk.

Dr. Harold B. Wood states that the conditions which affect the richness of milk in butterfat are; "(1) Breed and individuality of cows;(2) Time during milking; (3) Manner of milking; (4) Length of time between milkings; (5) Period of lactation, care and feed of cow; (6) Environment."

Either of these conditions would make a rext for a much longer preachment than the doctor gives to them in an able article contributed to the Country Gentlemen. It would be an excellent thing if some of our best equipped experiment stations would take these six points for a thorough course of research and there by give us some conclusions based on a scientific attelbpt to know what are the laws that most fully govern them. There is another matter that most urgently needs patient investigation and that is whether there is anything in the construction of the udder as seen externally, that would fairly indicate whether the cow yields milk rich or deficient in butterfat. Several theories are floating about on this question based on the limited observation of individuals. For instance, a gentleman of large experience was in our herd the other day and stated that so far as he had been able to correlate facts, he believed that those cows which were of a more solid color, approaching a deep red, gave, as a rule, richer milk than those of a lighter shade, especially if much mixed with white. We are not aware that any attempt has been made to collect and classify facts bearing on this point other than in the case mentioned. There is a large domain yet unexplored concerning the dairy cow.

Will not some of the more enterprising breeders, in all breeds of dairy cattle, attempt something of this kind? Take any one of the points enumerated by Dr. Wood and subject it to a course of observation for the next twelve months and see what the conclusion is.—Hoard's Dairyman.

Dairy Strippings.

Did you know there is such a thing as drying a cow all up by being in too big a hurry when you milk her? It is so. Take your time to be gentle, tender and manly, even about milking a cow.

Have a name for every cow and call them by that name.

A man told me how careful he was about straining his milk the other day. He used so many thicknesses of good heavy cloth and all that; but he never said a word about the pains he took to keep the stuff out so that a strainer would not be needed. The fact is, you never can strain impurity out of milk. Set that down in big letters. You must keep it out, or it never will be out.

Some farmers have a way of keeping their cows in the barn all the time, summer and winter. That is no way to have good, healthy cows. Let them out! They need air and exercise as much as you and I do. It is little short of cruelty to animals to house a cow up the year round. And it brings disease to the folks that use the milk sometimes, in the bargain.

Get your milk out of the barn just as soon as you can after it is in the pail. There will always be some odor, do the best you can.

If your milk must stand a little while before it is strained or separated, put it into covered pails, so that no dust or other particles of matters from the air can get to it. The best way, though, is to take it away as soon as you can.

Mark it down for a fact that it is the cow you are kindest to that will do the best for you, everything else being equal.

Milk early those long days.

I have heard an old soldier tell what terrible stuff they had to drink in the line of water sometimes. My! It was awful. But the fact is, none of us like to drink bad water. The cows do not either. They will not do it, unless they are absolutely compelled to do it. There are few farms in this country on which a good supply of nice pure water may not be had by working for it. We ought to be ashamed of ourselves if we do not do it, too. Get good water or go out of the dairy business.

Some women are natural born butter makers. If your wife is one of that sort, praise her up. It will do her good and the butter will be a little better still. I will guarantee it.

Now, don't bring up your girls in ignorance of the way to make good butter. Let that be a part of their education, You are not fair to them if you do not.

It is a good plan for the man of the house to know how to step out and churn and take care of a mess of

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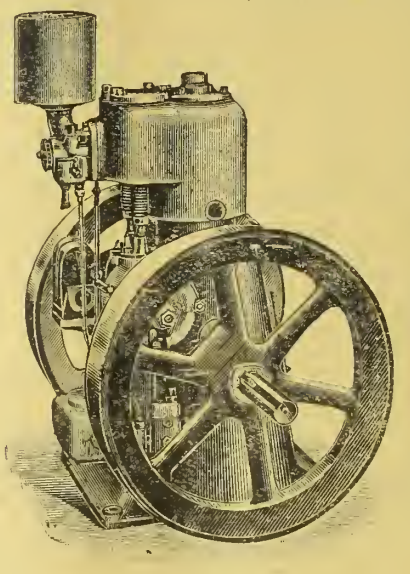

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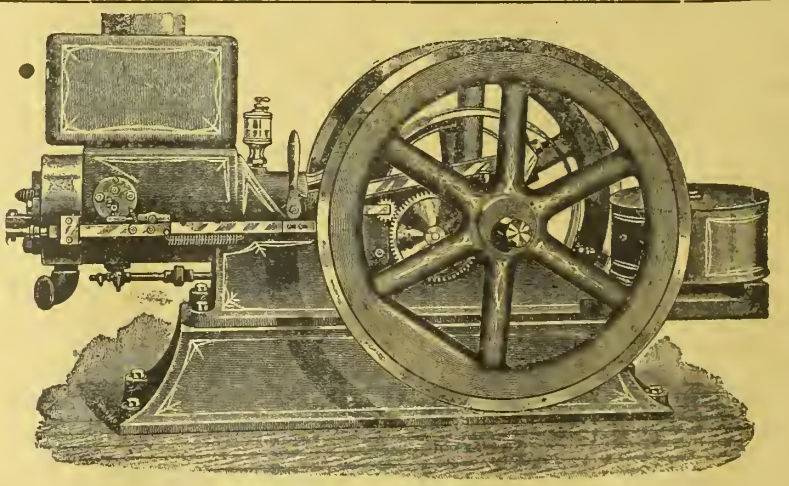

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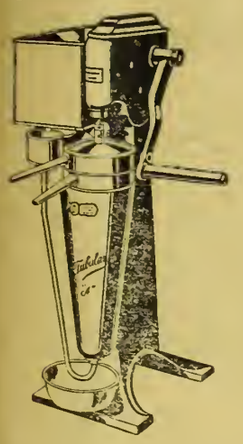

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butter. Ther? may be times when the wife cannot do it.

Most brindle cows are good ones; but don't stop and say, "I'll have all brindle cows or I will have none.-' It never. pays to bite your own nose off to spite your face. Doesn't look well either.

Our little shaver has a sheep he calls "Smiley." He imagines she is always smiling at him. Maybe that is because he always smiles when he sees her. Be gentle with your cows and they will look so much nicer to you.

Let's get over the notion that we can strain impurty out of milk. The milk strainer never was made that will do that. The only way to make milk pure is to keep it pure.

Don't fling the salt into a mess of butter by guess. Know how much butter you have and then measure or weigh out the salt accordingly.—E. L. Vincent.

Variations in the Fat Content in Milk.

As scientific knowledge becomes more generally distributed many facts that a few years ago were but little known are being given general recognition. One of these facts is that there is a very remarkable difference in the richness of different samples of milk. Numerous investigators have set forth the results of their own research work in regard to this matter. The results of investigations have, of course, been somewhat different. We have in the past published the conclusions reached by some persons; we now give below a statement recently made public by Mr. Fred Rasmussen, dairyman at the New Hampshire Experiment station. He says:—

Different conditions will cause a variation in per cent. of fat in cows' milk. In the early part of the lactation period, when the cow is giving a large quantity of milk, the test is lower than the latter part of the lactation period when the milk flow is decreasing. The variation may range from a half up to three per cent., depending on the breed and the individuality of the cow.

The percentage of fat may also be influenced by the time between milkings. In an experiment where cows were milked at six o'clock in the morning and three in the afternoon, the average test in the afternoon was 4.6 per cent., while in the morning it was 2.8 per cent. When the same cows were milked at 5.30 a. m. and 5 p. m. the fat content of the evening milk was 3.8 per cent. and af the morning milk 3.18 per cent

The first milk drawn from the cow is much thinner than the last. Investigations by de Vriezes show the following results: In the first streams ½ per cent. fat; after drwaing about ¼ the quantity of milk 2.1 per cent. fat; after drwaing ½ the quantity of milk 2.1 per cent. fat; after drawing about ¾ of the milk 5.2 per cent fat; in the last milk 7.1 per cent., and in the very last drop of milk drawn 10 per cent fat.

The relations between the nervous system of the cow and her powers of milk secretion is so intimate that any changes and abnormal conditions the cow experiences will have a direct influence on the quantity and quality of the milk.

Changes of food, of the time of feeding and drinking, restlessness in stable, changes in weather, etc., will tend to vary the quality and quantity of milk secreted. A cow tested by the writer under normal conditions gave milk testing about four per cent. Once, while in heat, she tested 12 per cent.

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ROYAL PURPLE is not a food. It is a conditioner—the best ever so'd. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not pamper them with soft predigested mush so tbat after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do.

ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared foods."

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If there is a run-down, poorly nourished beast on your farm, see what ROYAL PURPLE SPECIFIC will do for it. A 50-cent package lasts a cow or horse 70 days. The cost is so trifling that no farmer in Canada has any excuse for having out-of-health stock around his place. Try it on the poorest-conditioned animal you have and we know you'll be surprised at the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of $1.50. Steers treated in the same way cost no more than $1.00 each to put in prime state for market. ROYAL PURPLE SPECIFIC fattens and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 50c, and air-tight tins, $1.50.

Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens

Do you know that ROYAL PURPLE POULTRY SPECIFIC makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If ROYAL PURPLE does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give ROYAL PURPLE POULTRY SPECIFIC a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and $1.50 air-tight tins.

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POULTRY.

The Candling of Eggs.

As regards quality, an egg is one of the most difficult of food products to grade. Its external appearance gives but little indication as to its fitness for food and the contents cannot be sampled without destroying the fragile shell.

Fortunately an egg is semi-transparent when held before a light and permits, if carefully rotated, of even minor defects being seen. It is not necessary to use an extremely powerful light. An ordinary kerosene lamp, a gas jet, or a 16 candle power incandescent bulb are the sources of light most generally used in commercial work.

From time to time various appliances have been invented to facilitate the candling of eggs in quantities. These have proven serviceable for the simple detection of bad eggs, but have not been found satisfactory for the purpose of fine grading.

It is necessary therefore in commercial work as well as in private practice for each and every egg to be passed separately and with a quick turning movement before the light. in the large wholesale produce houses where large quantities of eggs are handled it is remarkable how expert some candlers become. They pick up rIgularly from two to three eggs in each hand and depending upon the season candle from 25 to 35 thirty-dozen cases per day.

The size of the air cell, the consistency of the albumen, the color and mobility of the yolk and the general transparency of the whole egg are the factors most generally recognized as determining the quality.

The contents of an egg, just laid, completely fill the shell, but as cooling takes place contraction occurs and an air space about the size of a five cent piece is formed. The yolk is only slightly perceptibly and should swing readily in the albumeo when the egg is turned around.

A stale or shrunken egg may be detected by the size of the air cell. The shell is porous and evaporation takes place whenever the egg is surrounded by a temperature above freezing point. Even in the low temperature of a cold storage house a certain amount of evaporation occurs. The higher the temperature and the more rapid the air circulation the greater is the evaporation. Accompanying the evaporation a staleness of flavor soon develops, and if the egg is held in the presence of moisture or packed in dirty fillers it is apt to become musty. As the egg grows staler the albumen tends to lose its consistency and often becomes quite watery. The yolk may also break down and in extreme cases mix with the albumen.

A bad egg or an egg which has been incubated may be readily detected fram the fact that the clear transparent part has become dark and opaque. Many other forms and degrees of decomposition occur, but the above are those most commonly seen.

Many simple devices and appliances have been devised for the candling of eggs. Probably the simplest method is to place the egg between the thumb and the first finger and hold it between the eye and the light, using the free hand to shut off as much of the surrounding light as possible. A better method is to hold the egg at the end of a long paper or metal tube. Another simple means is to take a piece of cardboard or folded sheet of newspaper, cut a hole in it about an inch in diameter before which the egg should be passed with a gentle turning motion, between the eye and the light.

Perhaps the most serviceable of home-made appliances may be constructed from an ordinary tin biscuit box which can be used in conjunction with a kerosene lamp or an electric bulb. The polished tin surface reflects the light and increases greatly the efficiency of the apparatus. A hole one and one-eighth inches in diameter should be cut in one side of the box, three and a half inches from the bottom. To obtain the best results this hole should be faced with thick paper or felt. When a lamp is used it is necessary to cut an additional hole in the bottom large enough to admit the burner and another in the lid through which the chimney may project.

It is possible for anyone with a little patience to tell at a glance the main points of difference between good and bad eggs. Any one of the forms of candling apparatus suggested above, or others equally as good, may be purchased at a small cost. Neither the small cost of the apparatus nor the amount of labor entailed in candling, presents any valid r eason why the public should be obliged to use or accept bad or incubated eggs. Storekeepers will find it to their advantage to acquire facility in candling and it is recommended that every housewife should provide herself with a simple candling appliance by the diligent use of which she may safeguard her family from any unpleasant occurrences at the breakfast table.—Zamphlet No. 3 by W. A. Brown, Live Stock Dept., Ottawa.

Three Guesses on Egg Market.

The price of eggs in early December advanced to unprecedented heights. Immediately many of the wise ones decided they knew just what was the matter with the market. Many city consumers declared for a boycott on eggs, believing they could bring the prices down to a lower level. Others sought refuge in a federal investigation into the high price of eggs, seek ing to throw the blame upon refrigerating concerns. Not being successful in any of these attempts they finally blamed the hen. The last guess comes closest to being right.

Of course eggs in storage at present are not as many as a year ago, but since early in the fall receipts at local markets the country have been small; thus the shipments to the large distributing centers were curtailed. The result was a gradual advance in the price. Even storage stock sold at wholesale at New York up to 31 cents per dozen and in Chicago at 27 to 28 cents. Strictly fresh eggs reached 80 cents at retail in some cities. Mid December found prices slightly lower, although there was still a big scarcity of eggs, Chicago quoting first at 32 cents and storage stock at 26 to 27 cents wholesale. At New York hennery eggs sold up to about 45 cents.

Exercise of Laying Hens.

To have your hens do their very best laying they must have plenty of exercise. The lazy, inactive hen puts on too much fat, and is usually a very poor layer. A mash wet down with skim milk may be fed early in the morning. A limited amount must be given, since, if the hen is allowed to become gorged early in the day, she will have no incentive to get out and forage.

Watering Rack for Hens.

The winter water of hens presents difficulties when the flock consists of over 100. The practice of placing drinking dishes on the floor is insanitary. A serviceable and efficient rack was built by making a frame 2 feet, nine inches wide by 5 feet long and from 3-inch stuff. A bottom was added and braces were nailed from the floor to the sides of the frame.

The frame, 2 feet from the floor, will not be too high for the heavier breeds to reach. A 9-inch piece was then nailed across the top of the frame, next to the wall.

A slat rack which fits on top of the frame is made 2 feet wide and 5 feet long from slats $\frac{3}{8}$ inch wide and $\frac{3}{4}$ inch high, nailed edgewise on a frame made from 2-inch stuff. Place slats $1\frac{1}{2}$ inches apart. Shelves are placed 7 inches above the rack on which the fountains rest. A rack of this size will accommodate 10 to 12 fowls at a time.—M. L. Cady, New Jersey.

Mate the Breeding Pen Early.

I mate up my breeding pens in January or Febuary, putting from 10 to 15 females with a male, or if I have a pen of 25 females, I mate them with two males, placing them with the hens alternately. In the morning they are fed liberally of wheat, oats, buckwheat and barley scattered in a deep litter of cut straw, which gives them plenty of exercise, which is very important to promote the health of fowls and to produce strong chicks.

At noon they are fed a mash consisting of wheat bran, hominy, gluten dairy feed and a little oil meal, mixed to a crumbly mass, or fed dry, in which case it is kept before them in hoppers all the time. To this mash is added a little salt and about three times a week a little cayenne pepper. Sometimes boiled vegetables are added to the mash, thus giving a variety.

After dinner they are fed their green food, which consists of cabbages, beets, clover, alfalfa hay, corn silage, or anything that I may have on hand in the vegetable line. At the same time they are given their green bone, about an ounce a day to each

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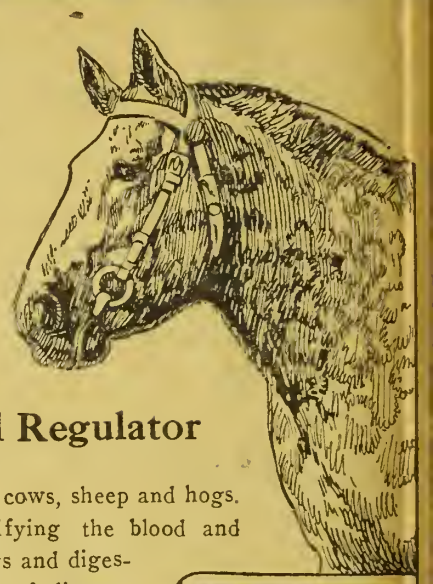

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puts new life and vigor into horses, cows, sheep and hogs. It is a mild digestive tonic, purifying the blood and gently regulating the bowels, kidneys and digestive organs. It is a preventative of disease, because it supplies just the necessary elements to keep the stock healthy and vigorous when closely confined or overworked.

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Skin diseases are invariably due to bad or impoverished blood, and while not usually attended with fatal results are nevertheless very distressing to the average person.

Among the most prevalent are: Salt Rheum, Eczema, Tetter, Rash, Boils, Pimples, and Itching Skin Eruptions.

Burdock Blood Bitters drives out all the humor from the blood, and makes it pure and rich.

Mrs Ellwood Nesbitt, Apsley, Ont., writes:—"I had Salt Rheum so bad I could scarcely do my work. I took two treatments of doctor's medicine, but they did me no good. A friend told me his wife had had Salt Rheum, and that Burdock Blood Bitters had cured her, so I got a bottle, and before I had it all taken my hand was better."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

fowl. When I do not have green bone a good beef scrap is given in the mash.

At 4 o'clock they are fed whole and cracked corn mixed, about all they will eat up clean. Grit, oyster shells charcoal and fresh water is kept before them at all times. By following this method feeding and caring for fowls during the breeding season I have always secured fertile eggs that hatch strong, healthy chicks.

Getting Ready for Spring Trade.

January 1st marks the beginning of the poultryman's preparations for the spring trade. If he is running incubators and brooders, he mates up his breeding pens and makes arrangements for early hatching. With quite a number the incubators are started some time during January, and those early birds are quickly grown into broilers.

The wise poultry man saves only from his March, April and May hatches for future breeding stock, turning everything else into table poultry.

Now is a good time to purchase new blood, for by waiting until spring opens there is a possibility of having poor stock to select from. The choicest go with the early orders.

All poultry houses should be so constructed that there is ample room in them for the fowls to exercise and keep busy during such weather as compels them to remain indoors. For this purpose there is no better plan for a house than the one constructed on the scratching shed order. These not only provide comfortable quarters but they admit such large quantities of fresh air, and yet shield the stock from the inclemency of the weather, that instead of suffering from the confinement they seem to profit by it.

"Getting ready," too, means extra care with the breeding stock. At this writing we are near the first of the year. It means considerable bad weather yet to come. We never feel safe until the "short but decisive" month of February has left us. Then we naturally look for "better days." Knowing that the birds must be more or less confined for a month or two longer, the practical man secures a lot of straw or hay, and this he uses freely in the houses, scattering grain among it, compelling the hens to work hard to secure their meals. This exercising promotes health, it keeps the stock happy and it produces eggs. It requires health and contentment in a hen to make eggs. They are ingredients as important as is lime for the formation of the shell.

Another factor is proper feeding. A man who overfeeds does more harm than good to his stock. Proper conditions means well fed and well cared for. A hen in good laying condition rarely, if ever, overfattens. It is the idle, "lazy crittur" that takes on layers after layers of fat. An overfat hen is not a healthy one.

On all the well-conducted poultry plants trap nests are used. These nests at this time of the year perform an important mission in picking out the January and early February layers. As the pullet goes on the nest she becomes trapped and when released, if she laid, a ring is placed on her leg. Each ring has a separate number. On some the large farms pullets that have not begun laying during January are at once discarded winter egg producers are of more worth than hens that wait until the warm suns of spring appear. There is only one way of finding out which is the cream of the flock and that is through the aid of a trap nest.

If each year the breeding is done only with the winter workers, it is reasonable to suppose that annually the stock will become more valuable for that purpose. The writer has trap nests installed in all his pens. These he starts on November 1st and keeps them going until June. For the following five months the traps are converted into open nests, no individual record being kept of the summer laying. What we want to know is which of our stock give us the most eggs during the season of the year when the prices are the highest. At the end af each year we pick out our best layers and breed only from such. Each year we sell off half of the previous year's breeders—of course, retaining the cream—and make up the other half with pullets hatched in the spring. We hold over during the month of January more pullets than we need, so that the pens will be made up of birds that are laying that month.

The breeding pen should now be arranged. We do not favor large flocks. Better results are always obtained from small families well managed. Our pens contain fourteen hens each, and for strong fertility we alternate male birds in the pens. This can be done in many ways. Some favor changing males in each pen once a week, others prefer twice a week, and still other daily. The idea of alternating is that it does not give either the males or females a chance to have favorites. It is a fact that male birds continually in a flock are very apt to pick out certain hens as their companions, and will ignore all others in the flock. On the other hand, females are apt to form a dislike for a certain male and will refuse his attentions. It is needless to say this will be the cause of a large number of infertile eggs. Now, by changing the males, those hens being previously neglected will at once take up with the new males, and, he being a stranger to the flock will be glad to at once form their acquaintance.

These are matters very important to the farmer who wants to get the best results from his flocks and we would like to impress upon him that he should be careful in selecting males, as the cock bird is fully two-thirds of the value of the family and he counted for or against the future his merits and demerits are sure to generation. It is economy to buy good blood, even though the price seems a little high.

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If ordered together we send both machines for only $13.90 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating, Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Five year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of $13.90 is for **both** Incubator and Brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time.

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by improving matters in the Kitchen—that Keynote of the Home.

A kitchen well equipped for systematic work means better results in the preparation of meals, hence less friction in the home and a happier outlook for the year.

THE ENTERPRISE MONARCH STEEL RANGE

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with latest improvements, will ensure meals on time with less labor, worry and fuel, than is possible with most other ranges which do not possess s the advantages of the MONARCH.

These advantages are many. They are explained clearly and briefly in our illustrated booklet which will be sent you on request.

If you are out this year for money and time saving, it will pay you to investigate the merits of the MONARCH, the range with the Guarantee.

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Value of Blood for Production.

In 1906, the West Virginia Experiment Station made a series of experiments that tell a tale worth remembering : Fifty White Leghorns were compared with 50 mongrels for one, as to cost of food and egg production, ardinary c[illegible]d attention beiog given them, such as they would dition to skim-milk used to moisten receive on the average farm. In addthe mash, the Leghorns consumed 61 pounds of food, [illegible] 4.3 cents and the mongrels consumed 66.8 pounds of the same materials, costing 92.1 cents. During the year the Leghorns averaged 116.5 eggs, worth $2.24 per hen and the mongrels 96.1 eggs, worth $1.78 per hen. The Leghorns gave a profit over the cost of food of $1.39 per head and the mongrels a profit of 86 cents. The Leghorns gained in weight one pound per head more than the mongrels. The highest prices for frsh eggs usually prevail during the months of November, December, January and February. During these four months the mongrels laid only 364 eggs and the Leghorns 1,020 or practically three iimes as many.

Nova Scotia Fruit Growers in Annual Session.

(Continued from page 257)

Antigonish Co.—F. R. Trotter, M. P. P., Antigonish.

Colchester Co.—Prof. Shaw, Truro.

Cumberland Co.— Sanford Perdy, West Chester.

Cape Breton Co.— Dr. Kendall, M. P. P., Sydney.

Digby Co.—H. M. Rice, Bear River.

Guysboro.—J. A. McMasters, Boyleston.

Hants Co.—Mrs. Wm. Sangster, Falmouth.

Halifax Co.—John McAloney.

Inverness Co.—Father McPherson, Glendale.

Kings Co.—F. Chute, Waterville.

Lunenburg Co.—J. W. Hebb, Lunenburg.

Pictou.—C. R. B. Bryan, Durham.

Queens Co.—Josiah Smith, Brookfield.

Richmond Co.—Donald Urquhart, West Bay.

Shelburne Co.—C' S. McGill,, Shelburne.

Yarmouth Co.—S. A. Porter, Yarmouth.

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Executive Board:—F. W. Bishop, A. E. McMahon, M. K. Ells, E. H. Johnson, Capt. F. A. Brown, Wm. O'Brien, S. B. Chute.

Publication committee:—F. W. Bishop, M. K. Ells, S. C. Parker.

Delegates to fourth Dominion Fruit Conference:—S. B. Chute, M. K. Ells, A. E. McMahon, W. W. Pineo, S. C. Parker.

Substitutes:—A. S. Banks, W. H. Woodworth, F. H. Johnson, F. W. Foster, John Donaldson.

F. W. Foster one of the Commissioners of the Provincial Exhibition, reported the difficulty of getting a creditable showing of fruit at so early a date as that on which the exhibition is usually held at Halifax. He recommended that the exhibition appropriative for the fruit department be not reduced but that fewer varieties and only those that show to good advantage, at the time of exhibition, be included in the list and that for these varieties more substantial prizes be offered. After some discussion a resolution, in accord with Mr. Foster's suggestions was passed. Several of the speakers to this resolution thought anything that tended to a weak showing of fruit should be dispersed with and efforts concentrated on holding an outstanding fruit show at a later date.

To assist Mr. Foster in making a selection of the varieties that should be included in the Halifax Exhibition prize list, the following committee was appointed:—Prof. W. S. Blair, A. C. Starr, Wm. O'Brien, Fred H. Johnson, and W. A. Hebb.

In regard to the 1914 Kentville Exhibition, Prof. Blair thought it advisable in following the lead of some of the large U. S. Fruit Shows in preparing the prize lists.

Prof. M. Cumming said that when the fruit growers of Nova Scotia decided to hold a Provincial Show devoted exclusively to exhibits of fruits it would be advisable to hold it in a consuming rather than in a producing locality.

Messrs. W. W. Hubbard, W. W. Baird and J. A. Clark of the three Maritime Experimental Farms were present and had words of cheer to offer re the progress that is being made in their respective provinces. A telegram conveying the greetings of the New Brunswick Fruit Growers' Association was read, enthusiastically received and a reciprocal message was exchanged.

ON WEDNESDAY AFTERNOON

Prof. L. Caesar, of the O. A. C., Guelph, Ont., gave one of the most instructive addresses ever delivered before a meeting of Nova Scotia Growers. He captivated his audience at the very start and the tense attention paid to every word he spoke showed that the fruit growers were at Kentville to receive all the information they could get on the question of combatting such orchard diseases as Black Spot, Canker, and Fire Blight, etc. The unanimous concensus of opinion was that the address was most timely and to the point. That Prof. Caesar had made a study of conditions in the Valley and governed his address accordingly was testified to by the expressions of practical experiences related by several of the prominent fruit growers who had practised methods as outlined by Prof. Caesar who had been successful in obtaining a high percentage of clean fruit in 1913, during the worst scab season ever experienced in the Valley. We will publish Prof. Caesar address in full in a later issue and we feel confident that it will benefit the delegates who were present from Kentville as well as the large army of fruit growers in all parts of the Maritime Canada who were not present, to read and digest its contents.

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CO-OPERATION

was the theme of a masterful paper by Mr. Adams, of the United Fruit Companies, Berwick, at Wednesday evening's session. We are very much mistaken if the broad views expressed by Mr. Adams re co-operation and the benefits derived therefrom did not make many friends for the movement at that meeting. We hope in a future issue to make extracts from Mr. Adams' address for the benefit of our readers.

Mr. Moore, Chief of the Markets Division, Ottawa, was present. He gave a description of the manner in which fruit sales are conducted in the various European marts.. One of the greatest necessities at the present time was cold storage facilities in the respective fruit houses so that the temperature of fruit could be lowered and kept low until the apples were placed on the market in sound condition. He exposed the view that there was little prospect to acquire fame in apple growing for any country producing too great a percentage of No. 3 apples.

STRAWBERRY CULTURE

Prof. Maconn, Dominion Horticulturist gave a talk on Strawberry Culture which lead to an interesting discussion, despite the lateness of the hour. Extracts from these discussions will appear later in these columns.

THE APHIS AND HOW TO CONTROL IT.

was the subject of a most instructive address by Prof. W. H. Britain, the newly appointed Entomologist for Nova Scotia. His masterful delivery, his thorough grasp of his subject and the readiness with which he replied to the questions that came thick and fast made an impression on the fruit growers that bide well for the co-operation he will receive in carrying on his work. It is generally conceded that Prof. Britain's father, the late Dr. Britain, has done more for the advancement of science in reference to plant life, in the Maritime Provinces than any other man and we have no hesitancy in predicting for our young friend, Prof. Britain, a most successful career in assisting the fruit growers of Nova Scotia in combatting their insect enemies.

Prof. Britain paid a high tribute to the good work that has been done in exterminating the San Jose scale in the Valley, by Mr. Geo. Saunders and his lieutenants. His talk on the "Aphis" will be published later.

SPRAY MIXTURES AND HOW TO APPLY THEM

was the theme of an address on Thursday by Prof. L. Caesar. The address was full of good things and we will be pleased to make full use of it in a future issue. Prof. L. Caesar was largely impressed with the business-like manner of the Valley fruit growers and the deep interest they took in the vital questions that affected their business. He predicted that there would be something radically wrong if, with such able leadership as the fruit growers now possess, they do not make the world sit up and take notice of their rapid advancement in matters horticultural during the course of the next decade.

J. M. Robinson, B. S. A., Assistant Horticulturist at the Kentville Experimental Station, outlined the results secured by the spraying experiments conducted at Berwick and Falmouth under the direction of the Station during the season of 1913. Extracts from this address will be published later. Mr. Robinson having been born and brought up in the Valley is thoroughly acquainted with local conditions and is thus able to do good work in assisting his fellow fruit growers.

"THE WORK OF THE DOMINION DEPARTMENT OF ENTOMOLOGY IN THE VALLEY

was outlined by Inspector Geo. E. Saunders, Round Hill. Mr. Saunders was the first man who discovered San Jose Scale in Nova Scotia and he has been first and foremost in the fight for its extermination, which has been so ably accomplished. The report showed that everything possible for human means to accomplish is being done by Federal and Local Governments to control the insect pests found in the Valley.

Following are the resolutions passed by the Fruit Growers:—

—RESOLUTIONS—

It is with sincere sorrow that we are called upon to chronicle the death of Alexander McNeil, Chief of the Fruit Division. A man whose qualities of mind and heart gave him the reputation of im-

(Continued on page 274)

Lump Jaw

The first remedy to cure Lump Jaw was

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and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

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This photo shows the BT Galvanized Steel Stalls as they are being furnished for thousands of dairy barns in every part of Canada, east and west.

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A prominent Canadian Dairyman has often remarked: "A clean, well-ventilated stable, with cement floors and walls, and equipped with Steel Stalls and Stanchions, pays best for any farmer, whether he is fattening stock or is going in for milkers, whether he has three cows or three hundred."

"For," he said, "a sanitary, steel-and-cement stable WILL PAY FOR ITSELF in a few years, but a wood-fitted stable, with wood stalls, NEVER WILL."

Cattle grow up stronger and healthier, in a steel-and-cement stable, because they are protected from disease, from the day they are born. There's not a single rotten, manure-soaked board to harbor germs. Deadly Tubercular germs die when they come in contact with the steel of the stalls. There are no dark corners for them to lurk in, because the open construction of the steel stalls lets the bright sunlight bathe every inch of the stable. Sunlight kills germs.

Cows are healthier. They give more milk and better milk. You get better prices for your stock and for your dairy products—you have fewer veterinary bills to pay. That's the certain result of putting BT Steel Stalls in your barn.

Labor is lessened in keeping the stable clean, for the surface of the stalls is smooth, and there are no cracks to catch the dirt.

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Your stable always looks as good as new when you put in BT Stall Equipment, because every Cow Stall, every Bull-Pen, Calf-Pen, Cow-Pen, every Water Bowl and Steel Supporting column is galvanized. The galvanizing material enters right into the pores of the metal, so the stalls are not affected by moisture.

Insist on having BT Galvanized Stable Eqipment in your barn, for it costs no more than painted stalls and it lasts twice as long.

Investigate all the facts about BT Equipment for yourself. There are many other advantages that mean a saving of money, time and labour in your barn.

Learn how the Aligning Device on BT Galvanized Stalls keeps the cattle-stand clean, the bedding clean, and prevents flanks and udders of the cows being soiled. Every long and short cow is lined up even with the gutter, so the manure falls right into the gutter. It is no longer necesary to scrub down the cows before milking

Read about the famous BT Swivel Cow Stanchion, that gives the cow as much comfort as when out in pasture, that can be opened and shut in a jiffy with the thumb and first finger. Stall Book No 21 tells all. Sent free if you'll fill out and mail the coupon.

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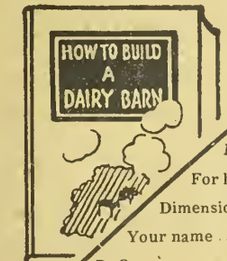

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Your name .....

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THE HORSE.

Horse with Sore Shoulders.

I shall be obliged if you can give me any information as to what I can do to prevent the shoulders of a horse swelling occasionally. The horse is a heavy, high-set, powerful animal about 18 hands; he works mostly in cart, drawing trees, sometimes in chains, dragging the trees to the roadway for loading. In my opinion the swelling proceeds from the state of the blood. It seems very painful, and looks as if it were inflamed; sometimes, if these swellings are pressed, yellowish blood flows. It is not caused by a badly fitting collar, nor change of work. He seems a "tender-skinned," or sensitive-skinned, sort.—K. M.

Answer- When you describe the animal as "seems a tender, thin-skinned or sensitive-skinned sort," you sum up the position as neatly and concisely as it is possible to express it. There are some horses that are so prone to sore shoulders and backs that they are only to be kept working by the exercise of the greatest care, and then by constantly giving trouble. For the horse of this kind, timber-clearing is most trying work; indeed, it is trying work for the shoulders of any horse, because the draught is neither easy nor steady, and in pulling at a tree that does not come, or in starting a log, the horse throws himself into his collar with a force that is considerable, and means more or less bruising. What you have to decide is whether it wil, pay you best to quit the horse and find another less tender-skinned, and, therefore, better suited for your arduous work, or endeavour to keep the gnimal at the work by hardening the skin. Our experience is that there are few horses that have worked for long in a timber tug or at wood clearing but what gave evidence of, at some time or other, having suffered from sore shoulders, and given an animal of the "sort" you describe, there is pretty sure to be constant trouble. We have known cases in which such horses worked better in the patent steel collars than any other, for if hard, they are always cool, dry, and easily kept clean, but we should not like to venture to say that this collar would be suitable for your animal. A useful tip in these cases is, on return lrom work, to remove the hames, lift the collar to let the air under, and teen allow it to remain on until the shoulders are quite dry. Then wet the skin freely with an astringest lotion. An example is:—Powdered alum, 1 oz.;sulphuric acid, 1 drachm; water, 1½ pints. A useful lotion when the shaulders are tender is:—Acetate of lead, ½ oz.; sulphate of zinc, ½ oz.; rain water, 1½ pints.—M. R. C. V. S.

Management of the Pregnant Mare.

The mare in foal should be worked lightly or abundantly exercised every day. Exercise is absolutely necessary She should occupy a roomy box stall. Here she will take some additional exercise and will not be afraid to lie down. She will be less likely to become "cast" and escape having "stocked" legs and dropsical swellings of the udder and abdomen. The bedding should be kept clean and dry.

Feed the mare sound, whole oats, bran and mixed or timothy hay. Avoid mouldy hay or silage, damaged grain, woody weathered fodder, dusty or rusty straw, or hay containing ergot. Provide them with plenty of clean, pure water. In working mares, avoid jerking, severe pdlling, wading through deep mud or manure piles; let the work be light, easy and steady. Keep the bowels active by feeding bran and a little flaxseed meal, carrots, or some sweet silage.

The mare goes forty-eight weeks, or about 340 days, with foal. As foaling time approaches decrease the grain ration and increase laxative foods to keep the bowels acting freely. Constipation is dangerous. When wax forms on the teats, place her in a prepared box stall where she can be watched until the foal is born.

Hints on Grooming Horses.

The practice of washing horses, as a rule, is injurious, because it removes the natural oil from the outer skin and predispose the animal to chill, writes a practical man in the Kentucky Stock Farm. The application of water to a horse's skin increases the heat conducting power of his coat, and lowers the temperature of the surface by evaporation, and also by conduction, in the event of the temperature of the water being colder than that of the skin. Although in hot climates, like that of India, and in many parts with us, the horse may be washed with impunity, provided that he is quickly dried, I do not think such a proceeding is safe in temperate or cold countries. Even in the tropics, washing a horse always takes the gloss off his coat, no matter how vigorously the subsequent grooming may be performed. This fact is certainly a strong argument against the practice in question. If it is imperative to wash, and there is not sufficient help to have the horse rubbed dry, without loss of time, we may after scraping and going over him with two ot three dry rubbers, take him out and exercise him at a brisk pace until he gets dry. We should then walk him about uutil his circulation regains its normal condition before taking him in. If we can not give this exercise, we may, after a good supply of warm clothing, scraping and drying him, put on him bandage his legs, and leave him thus to dry under his rugs, which he will do in an hour or less. He should after that be exercised and well rubbed down, so as to prevent his getting chilled. A good plan for getting a horse to dry quickly and safely under clothing, is to cover the animal's back and loins with straw before putting on a rug, so as to utilize the low heat conducting power of air and to give as little impediment as possible for the escape of moisture.

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Thier use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds

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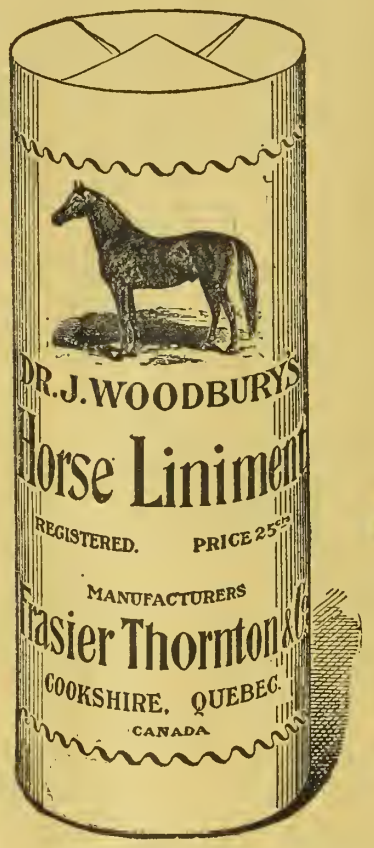

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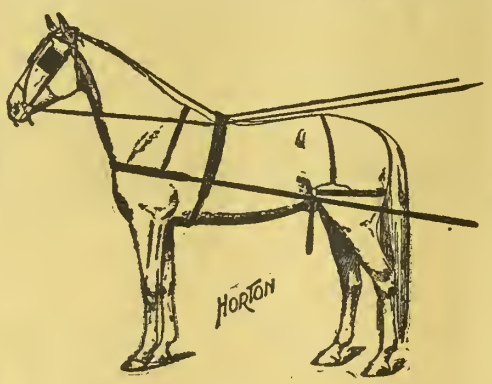

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Water has no power to remove the scales which the outer skin gives off in the form of dandruff, its cleansing effect being confined to sweat, mud, dust and other kinds of adventitious dirt. The practice of washing horses often gives rise to cracked heels and mud fever, which is a form of inflammation of the skin that extends more or less over the legs and sometimes over the lower surface of the abdomen.

We find from expeience that the external application of warm water, especially to the legs, is even more objectionable than cold water. This is chiefly due to the fact that warm water more readily removes the oil which keeps the skin soft and pliable; and is more efficient in loosening layers of scales which serve to protect the true skin from irritation by external influence than cold water.

The expression, "hand-rubbing," is employed as a rule only in connection with the legs of the horse. The extension of this practice to the body of the animal, would make a great improvement in our grooming. It has the special advantage of being in no way irritating to the skin, and consequently it is seldom resented by the horse. I am of the opinion that it is a better stimulant to the skin than any other form of grooming. It is certainly the best means lor putting a gloss on the coat. The hand-rubbing of the body is carried out as follows: In hand-rubbing above the knees and hocks the stroke should be commenced by bringing the flat of the hand—each hand to be used alternately—well under the belly, down the forearm, thigh or gaskin, or between the fore-legs, as the care may be, and it should then be drawn up with an even and firm pressure. As the hand is raised, the elbow should be turned out and the under part of the bared forearm should be brought into play against the grain of the coat. In doing this the weight of the body and the strength of the arm should be utilized. $

The usual method adopted in hand-rubbing the legs below the knees and hocks is to kneel down or sit on one's hams by the side of the leg which is to be manipulated, and make alternate strokes downward while grasping the leg between the fingers and thumb. When on the near side the left hand is naturally placed on the front of the leg, and the right on the back of the leg. On the off side the position of the hands is of course reversed. The pressure exerted by the hands should be firm, but by no means irritating. The skin at the back of the pasterns should be well rubbed, so as to render it as dry and pliable as possible.

Hand-rubbing the legs is a beneficial practice with the generality of stabled horses. It prevents stagnation of the blood in the legs and feet; by the pressure exerted, it promotes the aborption of any effusions that may be present about the back tendons and suspensory ligaments and it helps to guard the skin against cracked heels and mud fever. Although this ordinary hand-rubbing is sufficient for grooming purposes, it is not nearly so effeceive in cases of sprain as the method of rubbing from the fetlock upwards while the limb is held on the ground.

Hand-rubbing the body helps to keep the coat short, which desirable effect is increased by dampening the palms of the hands in water. If this is done when hand-rubbing the legs, or if the legs be wet when hand-rubbed, their appearance, in the case of well-bred horses, is apt to be spoiled by patches of hair being removed owing to the moisture loosening the hairs. Hence the hands should be kept dry when the legs are being hand-rubbed, unless we want to diminish the amount of hair.

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I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

As the Doctor turned his kind face with its smile of simplicity and gentleness' towards her, she dropped her head more. I noticed that Mr. Wickfield looked at her steadily.

"When I happened to say to that naughty thing, the other day," pursued her mother,, shaking her head and her fan at her playfully, "that there was a family circumstance she might mention to you—indeed, I think, was bound to mention— she said, that to mention it was to ask a favor; and that, as you were to generous, and as for her to ask was always to have, she wouldn't."

"Annie, my dear," said the Doctor. "That was wrong. It robbed me of a pleasure."

"Almost the very words I said to her!" exclaimed her mother. "Now really, another time, when I know what she would tell you but for this reason, and won't.

"I shall be glad if you will," returned the Doctor.

"Shall I?"

"Certainly."

"Well, then, I will!" said the Old Soldier. "Taht's a bargain." And having, I suppose, carried her point, she tapped the Doctor's hand several times with her fan (which she kissed first), and returned triumphantly to her former station.

Some more company coming in, among whom were the two masters and Adams, the talk became general; and it naturally turned on Mr. Jack Maldon, and his voyage, and the country he was going to, and his various plans and prospects. He was to leave that night, after supper, in a postchaise, for Gravesend; where the ship, in which he was to make the voyage, lay; and he was gone—unless he came home on leave, or for his health—I don't know how many years. I recollect it was settled by general consent that India was quite a misrepresented country, and had nothing objectionable in it, but a tiger or two, and a little heat in the warm part of the day. For my own part, I looked on Mr. Jack Maldon as a modern Sinbadl and pictured him the bosom friend of all the Rajahs in the East sitting under canopies, smoking curly golden pipes—a mile long, if they could be straightened out.

Mrs. Strong was a very pretty singer as I knew, who often heard her singing by herself. But, whether she was afraid of singing before people, or was out of voice that evening, it was certain that she couldn't sing at all. She tried a duet, once, with her cousin Maldon, but could not so much as begin; and afterwards, when she tried to sing by herself, although she began sweetly, her voice died away on a sudden, and left her quite distressed, with her head hanging down over the keys. The good Doctor said she was nervous, and, to relieve her, proposed a round game at cards; of which he knew as much of the art of playing the trombone. But I remarked that the Old Soldier took him into custody directly, for her partner; and instructed him, as the first preliminary of imitation, to give her all the silver he had in his pocket.

We had a merry game, not made the less merry by the Doctor's mistakes, of which he committed a innumerable quantity, in spite of the watchfulness of the butterflies, and to their gay aggravation. Mrs. Strong had declined to play, on the ground of not feeling very well; and her cousin Maldon had excused himself because he had some packing to do. When he had done it, however, he returned, and they sat together, talking, on the sofa. From time to time she came and looked over the Doctor's hand, and told him what to play. She was very pale, as she bent over him, and I thought her finger trembled as she pointed out the cards; but the Doctor was quite happy in her attention, and took no notice of this, if it were so.

At supper, we were hardly so gay. Every one appeared to feel that a parting of that sort was an awkward thing, and that the nearer it approached, the more awkward it was.

Mr. Jack Maldon tried to be very talkative, but was not at his ease, and made matters worse. And they were not improved, as it appeared to me, that the Old Soldier: who con tinually recalled passages of Mr. Jack Maldon's youth.

The Doctor, however, who felt, I am sure, that he was making everybody happy, was well pleased, and had no suspicion but that we were all at the utmost height of enjoyment.

"Annie, my dear," said he, looking at his watch, and filling his glass. "it is past your cousin Jack's time, and we must not detain him, since time and tide—both concerned in this case—wait for no man. Mr. Jack Maldon, you have a long voyage and a strange country, before you; but many men have had both, and many men will have both, to the end of time. The winds you are going to tempt, have wafted thousands upon thousands to fortnne, and brought thousands upon thousands happily back."

"It's an effecting thing," said Mrs. Markleham, 'however it's viewed, it's affecting, to see a fine young man one has known from an infant, going away to the other end of the world, leaving all he knows behind, and not knowing whats before him. A young man really well deserves constant support and patronage," looking at the Doctor, who makes such sacrifices."

"Time will go fast with you Mr. Jack Maldon," pursued the Doctor, "and fast with all of us. Some of us can hardly expect, perhaps, in the natural course of things, to greet you at your return. The next best thing is to hope to do it, and that's my case. I shall not weary you with good advice. You have long had a good model before you, in your cousin Annie. Imitate her virtues as nearly as you can."

Mrs. Markleham fanned herself, and shook her head.

"Farewell, Mr. Jack," said the Doctor, standing up; on which we all stood up. "A prosperous voyage out, a thriving career abroad, and a happy return home!"

We all drank the toast, and all shook hands with Mr. Jack Maldon; after which he hastily took leave of the ladies who were there, and hurried to the door, where he was received, as he got into the chaise, with a tremendous broadside of cheers discharged by our boys, who had assembled on the lawn for the purpose. Running in among them to swell the ranks, I was very near the chaise when it rolled away; and I had a lively impression made upon me, in the midst of the noise and dust, of having seen Mr. Jack Maldon rattle past with an agitated face, and some thing cheery-colored in his hand.

After another broadside for the Doctor, and another for the Doctor's wife, the boys dispersed, and I went back into the house, where I found the guests all standing in a group about the Doctor, discussing how Mr. Jack Maldon had gone away and how he had borne it, and how he had felt it, and all the rest of it. In the midst of these remarks, Mrs. Markleham cried: "Where's Annie.

No Annie was there; and when they called to her, no Annie replied. But all pressed out of the room, in a crowd, to see what was the matter, we found her lying on the hall floor. There was great alarm at first, until it was found that she was in a swoon, and that the swoon was yielding to the usual means of recovery; when the Doctor, who had lifted her head upon his knee, put her curls aside with his hand, and said, looking around:

"Poor Annie! She's so faithful and tender-hearted! It's the parting from her old playfellow and friend, her favorite cousin, that has done this. Ah! It's a pity! I am very sorry!"

When she opened her eyes, and saw where she was, and that we were all standing about her, she arose with assistance: turning her head, as she did so, to lay it on the Doctor's shoulder—or to hide it, I don't know which. We went into the drawing-room, to leave her with the Doctor and her mother; but she said, it seemed, that she was better than she had been since morning, and that she would rather be brought among us; so they brought her in, looking very white and weak, I thought, and sat her on a sofa.

"Annie, my dear," said her mother, doing something to her dress. "See here! You have lost a bow. Will anybody be so good as find a ribbon; a cherry-colored ribbon?"

It was the one she had worn at her bosom. We all looked for it; I myself looked every where, I am certain: but nobody could find it.

"Do you recollect where you had it last, Annie?" said her mother.

I wondered how I could have thought she looked white, or anything but burning red, when she answered that she had had it safe, a little while ago, she thought, but it was not worth looking for.

Nevertheless it was looked for again, and still not found. She entreated that there might be no more searching; but it was still sought for in a desultory way, until she was quite well, and the company took their departure.

We walked very slowly home, Mr. Wickfield, Agnes, and I; Agnes and I admiring the moonlight, and Mr. Wickfield scarcely raising his eyes from the ground. When we, at last, reached our own door, Agnes discovered that she had left her little reticule behind. Delighted to be of any service to her, I ran back to fetch it.

I went into the supper-room where it had been left, which was deserted and dark. But a door of communication between that and the Doctor's study, where there was a light, being open, I passed on there, to say what I wanted, and to get a candle.

The Doctor was sitting in his easy-chair by the fireside, and his young wife was on a stool at his feet. The Doctor, with a complacent smile, was reading aloud some manuscript explanation or statement of a theory out of that interminable Dictionary, and she was looking up at him. But, with such a face as I never saw. It was so beautiful in its form, it was so ashy pale, it was so fixed in its abstraction, it was so full of wild, sleep-walking, dreamy horror of I don't know what. The eyes were wide open, and her brown hair fell in two rich clusters on her shoulders, and on her white dress, disordered by the want of the last ribbon. Distinctly as I recollect her look, I cannot say of what it was expressive. I cannot even say of what it is expres-

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If you are troubled with weak, tired feelings, headache, backache, bearing down sensations, bladder weakness, constipation, catarrhal conditions, pain in the sides regularly or irregularly, bloating or unnatural enlargements, sense of falling or misplacement of internal organs, nervousness, desire to cry, palpitation, hot flashes, dark rings under the eyes, or a loss of interest in life, I invite you to write and ask for my simple method of home treatment, with ten days' trial entirely free and postpaid, also references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by this method. Write to-day. Address: Mrs. M. Summers, Box. . 309 Windsor, Ont.

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sive to me now, rising again before my older judgment. Penitence, humiliation, shame, pride, love and trustfulness, I see them all; and in them all, I see that horror of I don't know what.

My entrance, and my saying what I wanted, roused her. It disturbed her. It disturbed the Doctor too, for when I went back to replace the candle I had taken from the table, he was patting her head, in his fatherly way, and saying he was a merciless drone to let her tempt him into reading on; and he would have her go to bed.

But she asked him, in a rapid, urgent manner, to let her stay. To let her feel assured (I heard murmur some broken words to this effect) that she was in his confidence that night. And, as she turned again towards him, after glancing at me as I left the room and went out at the door, I saw her close her hands upon his knee, and look up at him with the same face, as he resumed his reading.

It made a great impression on me, and I remembered it a long time afterwards as I shall occasion to narrate when the time comes.

CHAPTER XVII.

Somebody Turns up.

It has not occurred to me to mention Peggotty since I ran away; but of course, I wrote her a letter almost as soon as I was housed at Dover, and another and a longer letter, containing all particulars fully related, when my aunt took me formally under her protection. On my being settled at Doctor Srrong's I wrote to her again, detailing my happy condition and prospects. I never could have derived anything like the pleasure from spending the money, Mr. Dick had given me, that I felt in sending a gold half-guinea to Peggotty, per post, inclosed in this last letter, to discharge the sum I had borrowed of her: in which epistle, not before, I mentioned about the young man with the donkey-cart.

To these communications Peggotty replied as promptly, if not as concisely, as a merchants clerk. Her utmost powers of expression (which were certainly not great in ink) were exhausted in the attempt to write what she felt on the subject of my journey. Four sides of incoherent and interjectional beginnings of sentences that had no end, except blots, were in adequate to afford her any relief. But the blots were more expressive to me than the best composition; for they showed me that Peggotty had been crying all over the paper; and what could I have desired more?

I made out, without much difficulty that she would not take quite kindly just yet. The notice was too short after so long a prepossession the other way. We never new a person, she wrote; but to thimk that Miss Betsey should seem to be so different from what she had been thought to be, was a Moral! That was her word. She was evidently still afraid of Miss Betsey, for she sent her grateful dutv to her but timidly; and she was evidently afraid of me, too, and entertained the probablity of my running awav again soon:if I might judge from the repeated hints she threw out, that the coach-fare to Yarmouth was always to be had of her for the asking.

She gave me a piece of intelligence which affected me very much, namely, that there had been a sale of the furniture at our old home, and that away, and the house was shut up, to Mr. and Miss Murdstone were gone away, and the house was shut up, to be let or sold. God knows I had no part in it while they remained there, but it pained me to think of the dear place as altogether abandoned; of the weeds growing tall in the garden, and the fallen leaves lying thick and wet upon the paths. I imagined how the winds of winter would howl around it, how the cold-rain would beat upon the window-glass, how the moon would make ghosts on the wall of the empty rooms, watching their solitude at nights. I thought afresh of the grave in the churchyard, underneath the tree: and it seemed as if the house were dead too, now, and all connected with my father and mother were faded away.

There was no other news in Peggotty's letters. Mr. Barkis was an excellent husband, she said, though still a little near; but we all had our faults, and she had plenty (though I am sure I don't know what they were); and he sent his duty, and my little bedroom was always ready for me. Mr. Peggotty was well, and Ham was well, and Mrs. Gumbridge was but poorly, and little Em'ly wouldn't send her love, but said that Peggotty might send it, if she liked.

All this intelligence I dutifully imparted to my aunt, only reserving to myself the mention of little Em'ly, to whom I instinctively felt that she would not very tenderly incline. While I was yet new at Doctor Strong's, she made several excursions over to Canterbury to see me, and always at unreasonable hours: with the view, I suppose, of taking me by surprise. But, finding me well employed, and bearing a good character, and bearing on all hands that I rose fast in the school; she soon discontinued thses visits. I saw her on a Saturday, every third or fourth week, when I went over to Dover for

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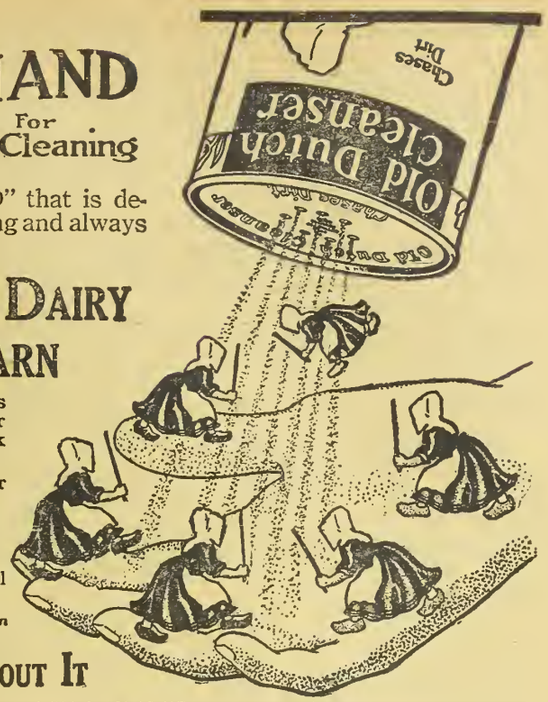

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a treat; and I saw Mr. Dick every alternate Wednesday, when he arrived by stage-coach at noon, to stay until next morning.

(Continued in next issue)

Weighing the Baby as a Health Precaution.

One of the best indicators of a baby's health progress is its increase in weight. A normal baby must not necessarily gain weight rapidly, but he should gain regularly. Stationaryy weight, or loss of weight for any length of time, is a danger signal, and means that there is a disturbance of nutrition, or some disease brewing. This in turn calls for immediate medical advice and attention, before the abnormal process is to far advanced.

A normal child at birth weighs on an average six and a half to seven or seven and a half, perhaps eight pounds. Nine and ten pound babies are occasionally born, but they are exceptional. The fifteen and twenty pound babies at birth, that so many take delight in talking about, are medical curiosities, or more frequently myths.

The tendency of modern medicine is to so modify and regulate the mother's diet during pregancy that in so far as it is possible, a child only of moderate size is born. This is in line with the advanced thought of the maximum safety at birth for mother and child. I have said that a steady increase is necessary. Failure to so increase means improper feeding of disease.

In all matters relative to the baby's condition written information should be kept, more particular with reference to its weight. A mother's memory, because of her great anxiety to do the right thing, is apt to be imperfect and unreliable. Therefore, I never rely upon giving verbal instructions, nor in asking the mother to keep a history of the child's progress in her mind. Written information on the part of the doctor and the mother, nurse or attendant, is absolutely essential for the sake of the child.

IT'S PROGRESS THAT COUNTS.

I want to sound a note of warning against the mother judging her baby's progress by comparison of his weight with that of the baby of a neighbor, friend or relative. Remember, that even if your child appears to suffer by comparison, he may still be the healthy one. How often have I had a mother hurry to me, worried and excited, because Doctor So and So's book states that a child of a given age should weigh sixteen pounds, and to her great dismay she found that morning her child's weight to be only fifteen pounds and eight ounces. This mother forgets, as so many of you do, that it is not the weight alone at any period which must be considered, but the nature of its progression and its relation to the initial weight at birth. Let me illustrate by example:

The normal child at the end of its first year should weigh about nineteen to twenty pounds; that is, should about triple its weight at birth; and yet a child weighing five and a half pounds at birth and seventeen to twenty-eight pounds at the end of the first year, has progressed as well and better than a child who weighs nineteen to twenty pounds at the end of the first year, and weighed seven and a half or eight pounds at birth.

Make the individual progress of your own baby your concern, and avoid any and all comparisons. No two babies gain in weight exactly in the same way, whether they be bottled fed or breast-fed. As a rule

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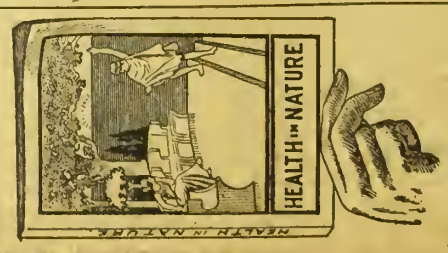

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breast-fed babies gain more rapidly, and the weekly increase is greater than with the bottle fed babies, but this is not always the case. Usually the increase in weight is most rapid during the first three months, and slowest from the sixth to the ninth.

A baby placed on carefully regulated and prepared bottle feeding will gain better than one on imperfect or insufficient breast feeding. When the weight of a breast-fed baby remains stationary or declines, it is a signal for the addition or substitution of artificial feeding. I say this because, while I am an ardent advocate of breast feeding, and never advise its discontinuance unless absolutely forced to no so—a rarity at best—I am not blind to the fact that occasionally it must be supplemented by artificial feeding.

You will not find that the same baby gains the same amount every week. There are all gradations, within normal limits, depending upon the nutrition of the mother, the season of the year, the inclination of the infant dentition, and the condition of the bowels and the nature of the movement.

And now, how much should the baby gain? The normal infant should gain on the average about one pound a month, three and three-quarters to four ounces weekly. During the first two or three days after birth some infants, not all, lose five to six ounces in weight, because the exhalations from the skin and lungs, the passage of urine and evacuation of the bowels exceed the small amount of nourishment taken. In breast feeding, little, if any nourishment is ready until the second or third day. By the end of the seventh or eighth day the orginal weight is usually regained. There may be weeks in which baby will gain only three to three and a half ounces, and other weeks where the gain may be six, seven or ten ounces. He should about double his initial birth weight at the sixth month, and about triple it at the end of the first year.

A small gain for a week or two—two or three ounces weekly—nced cause no alarm, but requires careful watching. I believe that if the weight is stationary for two weeks, something is wrong, either with the food or the child. In cases of difficult weaning, where the child often refused food for days at a time, a loss of a pound or more may be recorded. And after an attack of diarrhea or bronchitis I have seen a decline in weight to the extent of a pound and more.

When and how soould the baby be weighed? Unless some special indicator calls for it, weighing once a week is sufficient. Where difficulty in feeding is encountered, or if the child is feeble, twice weekly or more frequently may be necessary. The more delicate the child is at birth, the greater must be the frequency and analysis of the weighing. In order to establish the amount of breast feeding taken by the infant, sometimes weighing before and after nursing may have to be done.

Weighing must take place under the same conditions and at the same time of the day. The child should be naked and placed in the scales before the morning bath. If the child was weighed one week before the first daily evacuation of the bowels, it must not be weighed the week following after the bowel evacuation, as it is easily seen that this will make a difference of several ounces and produce false conclusions. The same applies to weighing before or after nursing, or the feeding. Nor must it be weighed after the bath one week and before the bath a week after. It is, of course, understood that the room is of the proper temperature. If it becomes necessary to keep same clothing on, its weight should be deducted.

To procure a reliable weight data, a satisfactory scale is necessary. The same scale properly adjusted must be used every week. To weigh a child in your scales today and in a neighbor's tomorrow, is borrowing trouble—and unreliability. Hand scales, used by some physicians at birth, are worse than useless and can be made to weigh almost as you like it, to say nothing of the disagrecable sight of the youngster dangling in the air. It must no be gathered, however, that expensive and elaborate scales are necessary. The ordinary bathroom scales, which are also used for older children, are parctical and reliable. In these the child can move and kick as it will without interfering with the reading. A napkin or pad should be placed in the scale and its weight deducted from the reading.

The weight having been noted it must be recorded temporarily on a sheet of paper at hand and then transcribed to the weight chart, baby book, or other record especially set aside for that purpose. The chart should be posted in the nursery over

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the place where the bath is given, a ready reminder to the mother and nurse to keep a written record of weight.

Recording the weekly weighing in columns by weeks may be used. I tell my patients that when the weight of the child is stationary or declines, to note the figures for that week in red ink. By this means I have often, as I entered the nursery, known the reason for the call. Likewise, on the chart I ask them to note these unfavorable changes in red ink.

You would call it unbusinesslike if you kept no account of your income and expenditures. There is no household consideration more important for you than the healt of your baby, and in the keeping of a systematic record of your child's weight progress you are noting whether it is adding progressively to its original weight capital—his health income—or whether because of faulty nutrition or disease processes his weight is on the decline—whether his health expenditures are reaching a point where you must call a halt.

Your Little Ones.

If your children are thin and scrawny and take cold easily, give them from a teaspoon to a tablespoon pure olive oil after each meal. Give them a pinch of salt as soon as they have swallowed the olive oil, and no taste of the oil will remain in the mouth. A tiny bit of pure sweet chocolate may also be given them as a reward for taking the oil. It has the advantage of being nutritious, and so supplements the work of the olive oil.

It is sometimes dangerous to use a hot water bag for children. Here is a good substitute: Make a strong bag linen or denim and fill with good, clean sand. Heat thoroughly in oven and then slip in another bag of flannel. This retains the heat a long time.—E. E. K., Mass.

Parched corn is an excellent remedy for dysentery, diarrhea and bowel complaints in children. Parch some corn, then grind in a fine coffee grinder. Boil in sweetened and salted milk and feed to the patient. It is a palatable and healthy food and generally relished by the children. Let them eat as much of it as they please.—B. E., Oregon.

FLORICULTURE.

Many inquiries are made as to the best treatment for frosted plants. Tender tropical and subtropical plants will seldom recover if frozen, but the more hardy classes of plants if prompt care is given them, may be saved, although the check given them often makes them feeble for a long time.

When you have plants frozen, plunge them at once in cold water and let them remain there until all frost is removed. Then place them in a dark, cool, frost-free position for at least two days, after which cut out all badly frosted wood, even back to the crown of the plant is necessary. Keep plant out of the sunlight but give strong light and keep on the dry side until new growth is coming when the plant can be treated as usual.

Early potted Dutch Hyacinths and Narcissus can now be brought to light for early forcing but should be kept cool as heat at this season with these classes of bulbs mean a weak flower stalk and poor color of bloom. Lily of the Valley crowns or pips on the other hand need 75 to 80 degrees to force well and frequent spraying as well. At this temperature they can be had in bloom in about thirty days

Do not feed any except heavily root bound plants at this season as the results would be sour soil and attenuated growth.

A pot of sweet peas started now will give you bloom in the early spring; but the foliage must be sprayed or the red spider will ruin it.

Look after any dormant plants that have been placed away to rest in winter. If from any cause you find a plant starting growth you had better bring it to light and let it grow; otherwise you may lose it. Water lightly any plants that will not bear wholly drying out.

If you wish early-blooming Gloxinias, you can start dormant tubers into growth by placing them in moist sand in a warm situation leaving the crown of the tuber just above the surface of the sand. When new roots and top growth appear, pot them in small pots in a rich light soil with through drainage. Water lightly until good root and top growth has been made then keep from drying out. Repot them as often as this ball of soil is filled with roots in one size larger pots. Tubrous Begonias can also be started in the same way.

Moncton Correspondent writes:—When should seeds of Pansies, Verbenas and Asters be planted for early plants for the garden? I have a large window in spare room that faced the south. While it never freezes in this room there is no means of heating it beyond an open door. Would it be a safe place for the young plants? I had some bulbs of Roman Hyacinths that were placed in the cellar to root during the cold spell in December. They look well but do not seem to grow, the green sprout seem just like the same size it was when it was first brought to the light. How should it be treated?

Regarding the time to sow the seeds of the annuals named I would think that the twentieth of February would be as early as the seeds could be safely planted in the house. The room spoken of would be an excellent place for young plants when transplanted but the seed boxes should have a place where an even temperature of say 50 degrees could be kept. Freezing is apt to be fatal to Roman Hyacinths bulbs. I am afraid that nothing can be done to save them now. The chances are that the bulbs are beginning to decay.

A Flower Lover, St. John, writes:—I have a large Azalia that was in bloom Easter last year. It grew nicely all summer and kept quite green during the fall and early winter although it has lost some of its leaves. It is now covered with buds and an occasional bloom comes out.

How should it be treated to bring all the flowers out at once? Could it be kept back until Easter and if so how?

Place the Azalia in a warm sunny window and spray or sprinkle the buds and foliage every fine day until they show color. Water the plant freely and see that the drainage is good. If the buds are beginning to develop it certainly could not be kept back until Easter.

Mrs. J. L. O., Sydney St., writes:—I have a fern commonly called the Australian Fern. The leaves look brown and shabby and on the main stalk in the centre of the leaf little fernlike growths are coming. If these leaves were planted would they grow?

I imagine from the above description that the fern is the Polysticiums Paoliferuma variety of fern that is easily grown and propagates itself from the midrib of the leaf. If the leaf is cut off and fastened firmly to the soil of a pot with a couple of common hair pins it will take root at each of the little knobs and after the roots are one and one-half inches long it can be cut into little separate plants and each potted. The soil used should at least be half clean, fresh water sand and be kept constantly moistened. A small wooden box is better than a pot for this purpose if it is carefully looked after.

R. P O., St. John, writes:—Please tell me how to repot a large Rubber Plant that is growing in a pot twelve inches in diameter. The plant reaches to the ceiling now and there is not room to lift it to take the old pot away. How should the soil be put in? I have part of a small cask prepared with handles on it. Should there be holes in the bottom also? What can I grow in soil to cover edges of tub that will not injure the Rubber Plant?

The tub or half cask should have at least eight half inch holes in the bottom to make good drainage. Cover the bottom of the tub with broken flower pots or something of the kind so the holes will be well covered. On these place an inch or two of good soil. Break the pot leaving the ball of roots exposed and undisturbed. By lifting the roots sideways the tub can be slipped under it. Then fill in around the ball with rich soil packing it in firmly and the plant is repotted. Water thoroughly when work is completed and more sparingly afterward.

The common Green Tradescantia sometimes called Wandering Jew will be as little liable to injure the Rubber plant as anything I know. It is easily grown and requires about the same moisture as the Rubber Plant.

Fredericton, N. B., writes:—I have two plants of Easter Lilies. They are about eighteen inches high and in bud. The foliage has been curled and spotted for sometime, but now the lower ones are drying up and I am afraid the plants are going to die. They have been well watered and kept in a warm place. What treatment should they be given to remedy the trouble?

The lilies are infected with the Bermuda Lily Disease and there is no known remedy. They will probably be of little value to you as you will find that it gets worse as the plant develops.

Ferns from Sydney, C. B.—No. 1 is Asparagus Spungerie. No. 4 is Polysticlum Vulgari. No. 5.—Secularum Secutarum. They are all good house plants. Asparagus Spungeri makes a pretty trailing plant for a hanging pot.

A. H. G., St. John, writes:—Small brown spots a little larger than a pin head are appearing on the leaves of my Palm. Can you please tell me the cause?

The spots are probably scale insects. Try washing the foliage on both upper and under sides with castile soap suds using a soft brush or sponge, a brush is preferable. Rub hard enough to remove the scales without injuring the film of the leaves. There is a sort of fungus growth that appears sometimes in a weak palm but the spots are on both sides of the leaf, whereas insects are generally on the under part of the leaves. If you have any doubt about this send me a specimen of the trouble to Sussex Green House, H. E. Goold, Sussex, N. B.

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Secretaries of Clubs and Institutes are invited to correspond with us to arrange suitable dates for Addresses.

The publications referred to above are:

"Artificial Fertiltzers, Their Nature and Use."

"The Potato Crop in Canada."

"Fertilizing Grain and Grasses."

"Fertilizing Orchard and Garden."

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Maritime Stock Breeders in Annual Session.

The annual meeting of the Maritime Stock Breeders' Association was held in the N. S. A. C., Truro, N. S., on Wednesday, 14th inst.

Col. H. Montgomery-Campbell, President of the Association, occupied the chair, and a representative number of the stock breeders of Nova Scotia, New Brunswick and Prince Edward Island were present.

After the confirming of the minutes of the previous annual meeting and meetings since held, Secretary Fuller read a statement of the receipts and expenditures in connection with the 1913 Maritime Horse Show and Maritime Winter Fair.

The question of an alleged attempt at fraud by one of the contestants in the recent Maritime Winter Fair dairy tests was brought up for discussion. The matter had been brought to the attention of the Canadian Ayrshire Breeders' Association who had returned the data for the final decision of the annual meeting of the Maritime Stock Breeders' Association after which the Ayrshire Breeders' Association will render their verdict.

The following resolution was carried unanimously:

Whereas, at the Maritime Winter Fair, recently held in Amherst it was alleged that dishonesty was practised by one of the exhibitors in the dairy test by attempting to milk one of his cows in a pail in which a small quantity of cream had been placed,

Therefore resolved that the directors of the Maritime Stock Breeders' Association make a fuller investigation before a full meeting of the board and submit their findings to the Canadian Ayrshire Breeders' Association.

Dr. Torrens, Vet. Director Gen. for Canada came before the stock breeders for a few minutes during which he gave a short, concise discourse on Bovine Tuberculosis which was well taken by his audience.

The following directors were elected for the current year:—

For New Brunswick—A. E. Trites, Salsbury; R. A. Snowball, Chatham; W. W. Hubbard, Fredericton and M. A. Scovil, Gagetown.

For Prince Edward Island—Hon. M. McKinnon, Charlottetown; W. M. Lea, Victoria; J. F. Roper, Charlottetown and J. M. Laird, Kelvin Grove.

For Nova Scotia—C. A. Archibald, Truro; W. W. Black, Amherst; S. A. Logan, Amherst Point and R. S. Starr, Port Wi,liams.

At a subsequent meeting of the Directors, Col. H. Montgomery-Campbell and F. L. Fuller were respectively reappointed president and secretary-treasurer of the Association.

It was decided to hold the 1914 Maritime Horse Show on April 1st, 2nd and 3rd.

The evening session of the Stock Breeders' meeting was held in the Assembly Hall of the N. S. A. C. when Dr. Torrens more fully discussed the Bovine Tuberculosis question before a large audience of stock breeders and the college students until nine o'clock when the citizens of the town of Truro showed their usual interest in their college by taking charge of the meeting. Refreshments were served and a social hour was enjoyed.

A Sliding Scale of Milk Prices.

Nature has decreed that cows shall put varying percentages of fat and non-fat solids into their milk, according to their breeds, their feeds, their ages, their lactation dates, their moods, their conditions and their environments. The natural range of butter fat is from 1.5 per cent. up to 10 per cent. The law makers of New York, through some unexplained and inexplicable becloudment of their intellectuals, have decreed that the cows when they put less than 3 per cent. of butter fat into their milk are law,breakers and "adulterate" their product. The same law makes the owner of the cow the adulterator if he offers their milk for sale just as they give it. To adulterate means to put in foreign substances. Nothing in that way is done by either the cow or her owner. Of course, if milk as the cows give it, with les than 3 per cent. of butter fat is adulterated by analogy, all milk with more than 3 per cent. of butter fat is adulterated. The "state standard" should work both ways, but in this case it does not. The standard has only forbearance, comfort, profit and legal safeguarding for middlemen, who, because of the standard, are at perfect liberty to insist that the milk producers shall hand over to them at 2 or 3 cents a quart, milk that contains from 4 to 6 per cent. of butter fat, which they, the middlemen, are permitted to standardize, that is to skim down to the standard of 3 per cent., and then sell it at 8to 12 cents a quart, while the removed butterfat is sold at cream prices. No "adulteration"- there of course. It is "adulteration" when the producer's cows give milk below the standard. It is not "adulteration" when the middleman skims out one to three per cent. of butterfat and sells the skim milk at full-milk prices. Was there ever a more monstrous absurdity than the "standard for milk?'j It robs the producer. It ignores nature. It outrages common sense. It protects the middleman in his exactions from the producer and his exortions from the consumer. The middleman can test a producer's milk, find it below the standard, accuse him of a crime and have him punished. The middleman can take milk above the standard and rob it down to the standard, and sell it as whole milk to the consumer, and neither the producer nor the consumer can have the middleman punished, because he keeps in line with the unjust and absurd standard which simply sets the limit of the middleman's wrongdoing and protects him in the injustice he practices daily. It would be interesting to see some expert attempt to justify the milk standard. The state can regulate the sale of milk on its percentage of fat and other solid contents. This method would mean a sliding scale of prices, such as a price for skim milk, other prices for 1 per cent. up to 6 per cent. fat., contents, of from 10 per cent. to 15 per cent. total solids in the milk. Then the consumer would get exactly what he wishes and would pay for what he gets. Then the producer would get the real market value of their milk. Then the middleman would have to deal honestly.—New York Farmer.

We pay highest Prices For RAW FURS And Remit Promptly

FREE

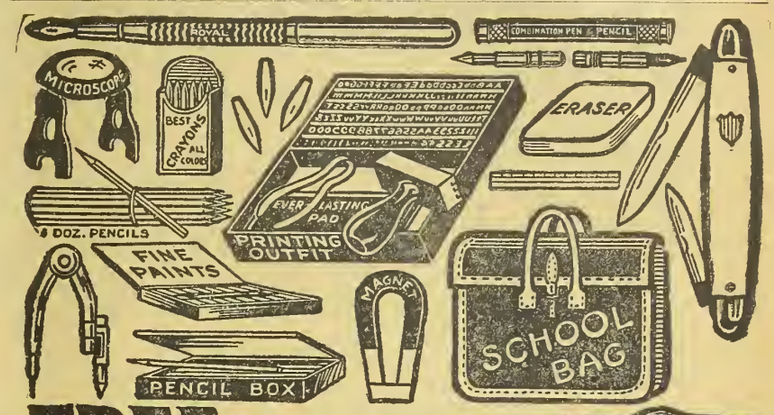
Sixty Thousand trappers send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada. Write to-day

HALLAM'S TRAPPERS GUIDE

French or English

A book of 96 pages, fully illustrated. Game Laws revised to date—tells you how, when and where to trap, bait and traps to use, and many other valuable facts concerning the Raw Fur Industry, also our "Up-to-the-minute" fur quotations, sent ABSOLUTELY FREE for the asking.

Address **JOHN HALLAM, LIMITED** Mail Dept. 437 111 Front St. East, **TORONTO**



FREE Grand 28-Piece Scholar's Outfit and a Dandy Big Camera

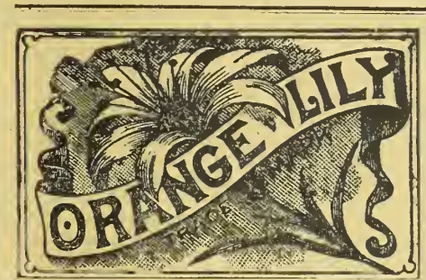
THE GREATEST PREMIUM IN CANADA—EASY TO GET

BOYS AND GIRLS—We want to give you, without a cent of cost, this magnificent scholar's outfit, so complete and handsome that you will be the pride of the school. **JUST READ WHAT EACH OUTFIT CONTAINS**—One high-grade largest size English school bag, one fine Royal fountain pen with three extra gold finished nibs, one all steel, silver finished pen knife, one combination safety pen and pencil, a big, complete printing outfit with six rows of type, one dozen (12) high-grade lead pencils, a fine pencil box with lock and key, a microscope or magnifying glass, one box of fine crayons, one tin box of fine paints containing 25 colors, one horseshoe magnet, one school compass, one 12-inch ruler, and last, but not least, a fine eraser. This is just simply the chance of your life to get the finest scholars' outfit that was ever offered, 28 big costly articles, as easy as can be.

Now if you want this wonderful outfit, and a fine big Ensign camera as well, write us today and get by return of mail, just 32 Hearts of Flowers, the great **PARISIAN PERFUME,** to sell among your friends at only 10 cents each. They go like hot cakes. Everybody wants this delightful new perfume — eight delicious odors, Beauty Rose, Lily of the Valley, Wood Violet, Carnation, etc., and our big ten-cent size will perfume more articles than a dollar's worth of ordinary perfume. It won't take you five minutes to sell them all. Then return our **$3.20** and the Complete Scholar's Outfit—every piece exactly as you see it above—will be sent to you complete. We want to introduce this great new perfume to every lady in the land, and are sparing no expense to do so. When you get your beautiful Scholar's Outfit show it to all your friends. Get only four of them to sell our grand perfumes and earn our premiums as you have done, and we will also give you this beautiful, big, genuine Ensign Camera as an extra present. We arrange to stand payment of all transportation charges.

Don't miss this chance. Write today. Be first. Address

THE REGAL MANUFACTURING CO. DEPT. O. 46 TORONTO, ONT.



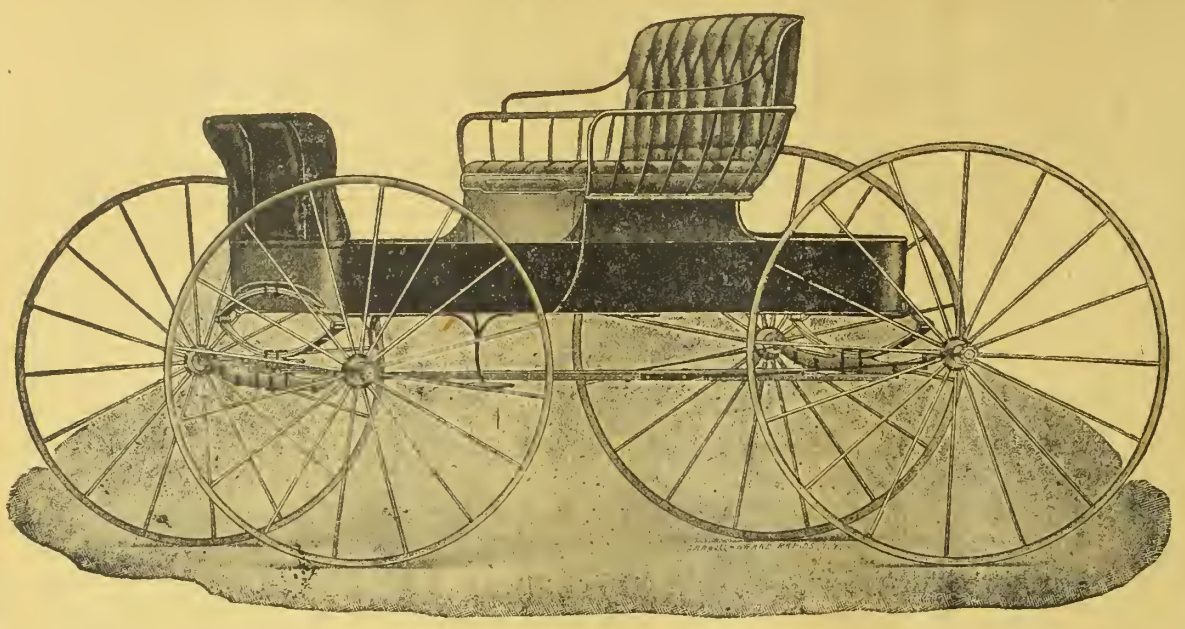
WOMEN CURED AT HOME

Women's disorders always yield from the very beginning of the treatment to the mild, but effective, action of Orange Lily. Within two or three days after commencing its use the improvement becomes noticeable, and this improvement continues until the patient is completely cured. Orange Lily is an applied or local treatment, and acts directly on the womanly organs, removing the congestion, toning and strengthening the nerves, and restoring perfect circulation in the diseased parts. In order to convince all suffering women of the value of this remedy, I will send a 35-cent box, enough for ten days' treatment, absolutely FREE to each lady sending me her address. MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale by Leading Druggists Everywhere.

1914 *Something New*

"NEW BRUNSWICK SPECIAL"



GEAR—Double Reach wrought iron circle.

AXLES—One-piece hammered steel, swedge bottom; steam bent, hand-fitted, hickory beds, perfectly smooth.

SPINDLES—Our own special design, 6½″ bearing; large, heavy, leather shoulder washer, combination washer in nut, "leather and brass." Easy running and noiseless.

SPRINGS—Special grade oil-tempered steel, 38″ long; soft; easy riding.

WHEELS—¾″ "A" grade, first-class second-growth hickory; screwed rims 39″ high in front, 43″ high in rear.

BODY—Full, round corners. 20″ wide, 56″ long. (See cut for full information.)

SEAT—Latest design stick seat, spring back and cushion, iron supports, full drop back.

TRIMMING—Best hand buffed leather, broadcloth or English whipcord; upholstered in hair, full length rubber mat in bottom, heavy cloth lined knee cover.

SHAFTS—XXX. hickory; patent heel brace, trimmed with 36″ leather, round tug whiffletree loops.

PAINTING—Gear, black, green or carmine, with fine gold or glazed stripe. Body, black. "Finish the Best"

"Body patented July 1912." No joints to open—made in two pieces double thickness in centre, neat, strong, durable—fully guaranteed. Send for descriptive folder.

Dominion Carriage Company, Limited, Toronto

Nova Scotia Fruit Growers in Annual Session.

(Continued from page 264)

partial adminstration, sincere friend and earnest advocate of all that meant the best and truest progress in the fruit interests of the Dominion of Canada, his loss is nation wide.

We the members of the N. S. F. G. A. desire to place on record our deep sense of this loss and take this opportunity of expressing our sympathy with his bereaved family.

* * *

Whereas our three Counties' Exhibitions has been held at a date which prevents many of our growers exhibiting on account of the press of work at that time.

And, whereas, the Ontario Fruit, Flower and Honey Show is held at a much later date after the rush of fall work has been ober, thus enabling the grower to exhibit. Therefore resolved that our said three counties' exhibition) be not held until a later date in the season.

* * *

Resolved that a committee be appointed to inquire into the reason why Nova Scotia apples sell, variety for variety and grade for grade, at an average price of nearly $1.00 per barrel lower than Ontario apples.

Committee.—Capt. C. O. Allen, F. Chute, Lester Wiltshire.

* * *

We the members of the N. S. F. G. A. to place on record our congratulations to our venerable member, Mr. R. W. Starr, on the fact that he has with this year made a record of fifty years continued attendance at our meetings and has been during that time of unestimable value to the wark and progress of the Association.

* * *

The foregoing resolution was spoken to by several fruit growers who expressed their appreciation of Mr. Starr's life long career in fruit growing.

Mr. Starr who was almost completely overcome with emotion, replied thanking the fruit growers for their thoughtful remembrance.

* * *

Resolved that Prof. L. Caesar, Prof. W. H. Britain, Prof. W. S. Blair and Mr. Geo. Saunders be made honorary members of the N. S. F. G. A.

* * *

Resalved that the Minister of Agriculture, the Hon. Martin Burrell, be asked by this Association to raise the Fruit Division, at Ottawa, to the rank of a Commission with a suitable head.

* * *

Resolved that the N. S. F. G. A. indorse the request of the National Fruit Growers' Executive to the Federal Government for an annual grant of $2,500.00 for the purposes of the National Fruit Growers' Association.

* * *

Whereas, the Department of Agriculture of the Government of Nova Scotia has taken a progressive step in the appointment of an Entomologist to carry on investigations upon and wage war against insects and already good results have been accomplished. And whereas, it is at least equally important that a similiar expert be appointed to investigate and give advice in regard to plant diseases.

Therefore resolved that we recommend the appointment of a Plant Pathologist for the Province of Nova Scotia.

* * *

Resolved that the Government be asked to define a No. 3 apple with the view of raising the present standard.

* * *

Whereas, the potato trade in Nova Scotia has suffered in the past on account of many shipments going abroad containing small and unmerchantable size potatoes unfit for table use.

Therefore resolved, that the N. S. F. G. A. request the Department at Ottawa to define a legal minimum size of potatoes for export and appoint an inspector to perform similiar duties to the inspection at present carried on under the Fruit Marks Act.

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

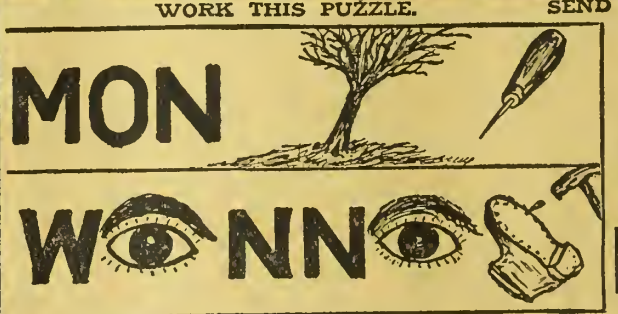
Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, write us at once enclosing 2-cent stamp for our reply. DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDECINE CO., Dept. 81 MONTREAL, QUE.

Bickmore's Gall Cure

The old-time remedy for keeping horses free from sores. Don't lose the services of your high-priced horses. Bickmore's Gall Cure cures Galls and Sore Shoulders while the horse works. Approved remedy for Cuts, Wounds, Scratches, etc. Money back if it fails. Be sure to ask at the store for Bickmore's Gall Cure. Gray Horse trade mark on every box. Sample and 84-page horse book sent on receipt of a stamp for postage.

WINGATE CHEMICAL CO., Canadian Distr's, 8110 Notre Dame St. W., Montreal, Can.

WORK THIS PUZZLE. SEND NO MONEY.



$50 GOLD PRIZE

ALSO MANY OTHER PRIZES as PREMIUMS. Somebody who sends the Correct solution in this Puzzle Contest telling us what TWO CITIES are represented by the above two sketches will receive a $50 GOLD WATCH or $50 IN GOLD MONEY! as stated in the certificate of entry. In the event of a tie between two or more persons for the PRIZE, a Prize identical in character and value will be given each person so tied. Everybody who answers this Puzzle correctly will receive a beautiful Post Card FREE. Contest closes Dec. 31st, 1914. Try at once. It may be you. Use your Brains. Write your answer on a Post Card or letter, giving name and address plainly.

DOMINION WATCH COMPANY, Dept. 86 MONTREAL, CANADA

It Pays to Advertise in the Maritime Farmer.

Think of Spraying, Think of Spraymotor--- Think of Spraymotor, Think of Spraying!

WHAT is going to increase the yield from non-sprayed trees, row crops and vineyards? Spraying!

Is it ever too late for spraying? Not while trees, row crops or vineyards still bear. While there's life there's hope—of better crops.

What proofs exist of the benefits of spraying? There are actual proofs at almost every agricultural exhibition and country fair. See exhibits of sprayed and unsprayed fruits side by side. Notice the stunted, retarded development of fruit and vegetables which have not been sprayed. See the blight, canker, worm-eaten appearance and meagreness of grown things that have been left to the mercy of pests and parasites.

Then contrast them with the **protected, sprayed** product of field and orchard. Here you see plump, fully developed specimens brought to perfection unhampered in their growth by gnawing insects, rotting fungoids and withering disease.

There are proofs for you even if you never attended a Fall Fair in your life. The farm papers in every part of the country are full of photographs showing sprayed and unsprayed crops side by side. There are articles by the score published every year, urging spraying for better results, and giving the actual experiences of men who have tried both ways, offering freely of the advice of the foremost authorities in the land.

When You Are Ready to Spray Get A Spramotor!

Realize what the following means :—**We make Spraying Machines, and nothing else!** Perfecting the SPRAMOTOR has been our whole concern since we started in business years ago. There has been no side issue to distract, no other line of business to claim part of our attention and engage part of our thought.

We have labored to some purpose, because today we present in the SPRAMOTOR, the highest type of efficient spraying outfit on the market

Do not think we make this statement without the best of reasons. The SPRAMOTOR has been awarded over one hundred Gold Medals and First Awards at the hands of competent, critical judges. For instance :—

First Award at Canadian Government Spraying Contest, Grimsby, Ont. (11 entries.)

First Award at International Exhibition, Glasgow, Scotland.

Gold Medal at Pan-American Exposition, Buffalo, N. Y.

Gold Medal at Canadian Industrial Exhibition, Toronto, Ont.

Gold Medal at Halifax Exhibition.

Gold Medal at St. John, N. B. Exhibition.

Gold Medal at Western Fair, London, Ont.

Gold Medal at Central Exhibition, Ottawa.

2 Gold Medals at Council Bluffs National Horticultural Congress.

The above results come from being **specialists** in spraying machine construction and manufacture. We do not make a line of pumps or gasoline engines or windmills in addition to our spraying outfits. No! SPRAMOTOR gets all our attention and all the time we have for experimentation in the endeavor to still further perfect our output.

The judges at all the above exhibitions and at many others where SPRAMOTORS carried off first honors, were able, impartial men who gave credit where credit was due. Yet it is not from these men that the highest praise of SPRAMOTORS comes. It is from men out in the field and the orchard, men who actually use our machines year by year in betterment of their crops, men who have **seen** the improvement of the trees and plants upon which they depend for their livelihood.

It is a wise man who buys a SPRAMOTOR. It is a wiser man who gets all from a SPRAMOTOR that it will perform. This is the man who paints and whitewashes with his SPRAMOTOR during the idle season, disinfecting, fireproofing and brightening up his barns, hen houses, stables and outbuildings generally. You can apply lime, whitewash and paint, better, quicker and far more economically with a SPRAMOTOR than in any other way.

We Give a Written Guarantee With Every Spramotor Sold

For your protection and to ensure that every purchaser of a SPRAMOTOR will be a SPRAMOTOR booster, we bind ourselves to this condition :—**Every machine we ship is to be exactly as represented or money refunded.**

Furthermore, we undertake this :—

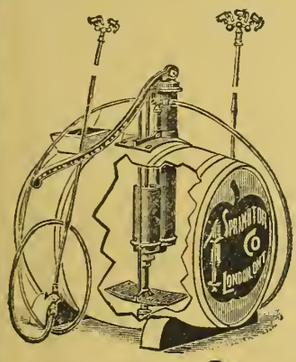
All Spramotors are guaranteed for life.

Any part proving to be defective in either material or workmanship will be replaced free of charge.

Now, since we do not wish to be troubled with constant repairs and changing of parts, you can see how it pays us to test every machine carefully before it goes out.

There is a Spramotor for every need--for the small farm as well as the largest Prices from $6 to $350.

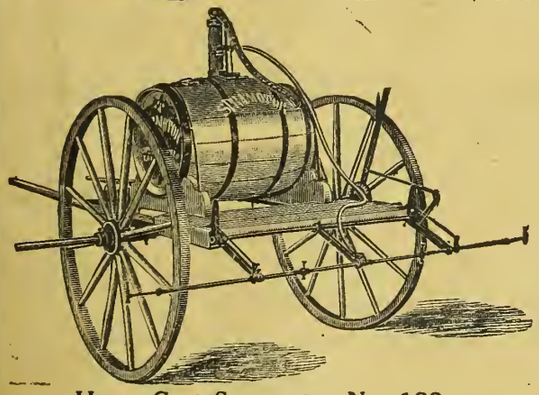
We make outfits in all sizes and capacities, from a Hand SPRAMOTOR costing only $6 to $360 gasoline machine. No matter which SPRAMOTOR you buy, be assured that you are getting **the best spraying outfit on the market** at the price.



Hand Spramotor Outfit No. 117

For high Spraying, 1,000 Trees or less.

This machine comes to you with two hose lines, each 10 feet long with couplings attached, patent hand valves, 2 bamboo extension rods with inside brass tube, brass cupped ends and patent drip guard, two double nozzle clusters, everything complete and ready to work.....**$26.00**



Horse-Cart Spramotor No. 123.

Can be arranged for all kinds of Spraying.

We built this machine to supply the demand for a good, moderate-price rig that could be used by hand, as many growers need a spraying outfit suitable for all kinds of work—row crops, orchards, vineyards, potatoes, etc., also painting and whitewashing. Outfit consists of 50 gal. cask on substantial hardwood frame, with 52 inch wheels. Equipment varies according to needs specified (see catalogue, page 57.)

Prices from $50.50 to $82.45.

Horse Power Spramotor

For all forms of Spraying on a Large Scale

With this outfit, the grower can meet every spraying need, whether row crops, vineyards or orchards. The horse does all the work—operator merely has to direct the spray. Twelve nozzles may be operated at once, spraying with a searchng pressure of 150 lbs. Extra nozzles may be added for weed destruction and operated at 100 lbs. pressure. For full description of this splendid outfit see page 69 of our catalog. Price complete as shown.....**$140.00 to 170.00**

Gasoline Spramotor Model C.

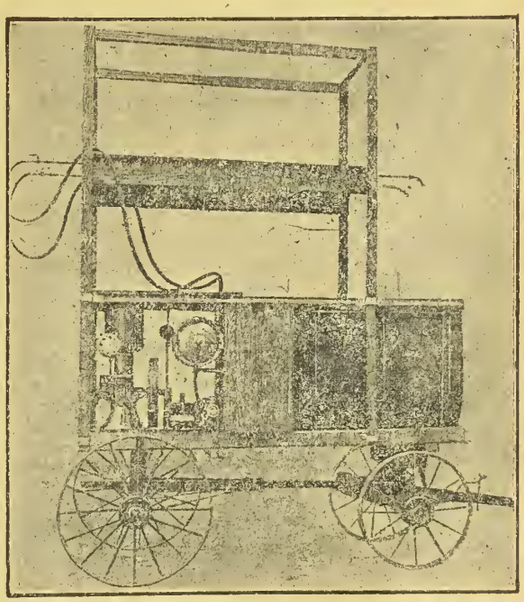
The Highest Type Spraying Outfit Made To-day.

Driven by double-acting, single piston motor of original design, (all parts standardized and renewable). 12 gallon Air Chamber relieves working parts of motor and pump of all shock and jar. Automatic Regulator placed on pump and gear frame, provided with emergency valve set at 250 lbs. pressure. Spraying Deck is three feet wide by six feet long, enclosed by rail 34 inches high,

Everything about this outfit is the result of years of practical experience and efficient work in the field,

Complete outfit consists of the following —

4 inch platform, 200 gallon tank, caboose with SPRAMOTOR, geared jack, automatic regulator, 12 gallon air chamber, strainer, agitator, emergency valve, two lines best 300 lb. hose and couplings, 12 feet each, two leakless stopcocks, two 10 ft. bamboo rods with drip guards, two 4-nozzle clusters, derrick 2½ h. p. hopper-cooled engine (attached) and low down wagon with heavy iron 4-inch wheels. **The whole guaranteed for the life** of the outfit against defects in materials and workmanship. Price complete and ready to run.....**$340,00**



These four models are simply representative outfits chosen out of our entire range. There are dozens of others. There is a spraylng outfit in the SPRAMOTOR line that will exactly fit your requirements, and we'll sell it to you at the same price as you would have to pay for an inferior machine.

Free While you are thinking about it. today, write us stating your exact needs in the way of a spraying outfit. This will not obligate you in any way. By return mail we will send you a copy of our valuable, illustrated treatise on "Crop Disease" without charge.

SPRAMOTOR CO., 1720 King Street, LONDON, CAN.

The Prince Edward Island Poultry Show.

The Sixth Annual Show held under the auspices of the P. E. I. at Charlottetown, P. A., 16th to 19th December was by far the best poultry show ever held in Prince Edward Island. The quality in all departments was excellent, the winning birds all scoring high.

A new feature this season was the introduction of a large utility class in which farmers only were allowed to compete and the birds entered in this class were strong evidence of the rapid strides being made by Prince Edward Island farmers in poultry culture.

It was noticeable that members of the Prince Edward Island egg circles carried off a large proportion of the prizes.

It should be mentioned in fairness that some who are scientific breeders and who could have claimed to compete in this utility class, refrained from so doing to give the farmers generally a fair chance. Among these may be mentioned, Mr. L. H. D. Foster, of Charlottetown. Mr. L. H. D. Foster's Barred Plymouth Rocks which were on exhibition are excellent birds, as also are Mr. George Lightizer's White Wyandottes, showing as they do perfect health and vigor.

The egg exhibit put up by the Poultry Division of the Live Stock Branch of the Department of Agriculture, was thought out in a masterly fashion and was really a wonderfully clear and graphic illustration of the old wrong way, and the new improved systems of marketing eggs. Every feature of the two systems was clearly compared by means of models set on landscape paintings, the great advantages of the egg circle system to both producer and consumer being made manifest. We understand that Mr. J. H. Hare of the Department at Ottawa is responsible for this exhibition as far as details are concerned and Mr. W. A. Brown who is in direct control of the poultry division is to be congratulated, as is the Department, upon the unqualified success of the exhibit both at Amherst and Charlottetown.

Editor's Note:—A full list of prize winners will be found in our next issue.

Heaves CURED

—by removing the cause—and cured to stay cured—If 3 boxes of

Fleming's Tonic Heave Remedy

fail to effect a cure of any case—old or new, we will refund the full amount paid.

Per Box 1.00, 3 for 2.50
Mailed on Receipt of price

Scratches Disappeared

Gentlemen:—I gave a course of your Tonic Powders, which has put a horse and his mate in fine shape, and a touch of scratches has quite disappeared

Fuller information in

FLEMING'S VEST POCKET VETERINARY ADVISER

Write us for a Free copy

FLEMING BROS., Chemists
41 Church St., Toronto, Ont.

ONENT A WORD.

SITUATION WANTED on good farm, either as foreman or would rent farm on shares with option of purchasing if satisfactory. Life-long experience in practical agricultural work.—X. Y. Z., care Maritme Farmer, Sussex.

WE WILL PAY YOU $120 to distribute religious literature in your community. Sixty days work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used.—International Bible Press, 182 Spadina Ave., Toronto.

Preservation of Barnyard Manure.

Professor F. H. King, in his book "Farmers of Forty Centuries," describes the methods used by the Chinese, Koreans, and Japanese in collecting and preserving manure, both solid and liquid, also the systems of composting used. In China, the manure is placed in glazed terra-cotta urns, some having a capacity of 1,000 pounds. In Japan cement-lined pits are used, the liquid excrement as well as the solid being carefully preserved. In China the compost piles are carefully plastered with a layer of earth mortar.

The results of the latest scientific investigations do not give us any better method than that practiced by the Chinese for many centuries.

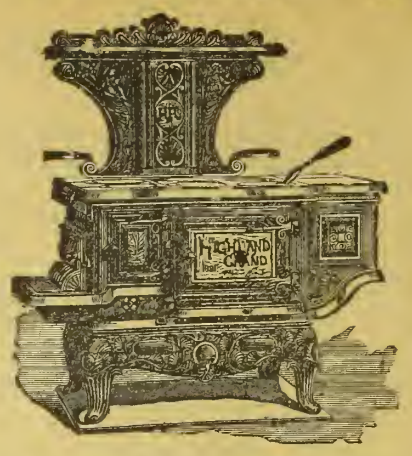
When fresh manure is taken directly to the field and distributed, the loss of plant food is reduced to the minimum. The practice of allowing manure to accumulate in piles or otherwise on the ground, exposed to the action of rain or snow, is exceedingly wasteful as the leaching removes a large part of the plant food. Fresh straw is much more valuable as a source of plant food than straw which has been exposed to the weather. A heavy rain washes out a considerable portion of the potash salts in the straw. Old straw is still of some value as a source of organic matter.

When manure is allowed to accumulate it should be kept under cover and if covered with a layer of earth the loss of plant food will be still further reduced.—G. W. Walker, Assistant Soils Chemist, University Farm, St. Paul.

Fitting the Punishment to the Crime.

The milkman who waters his milk and the grocer who adulterates his butter are not, after all, the products of our modern civilization and the culture of the Board school. These gentlemen, it appears, have an ancestry, if one may use the word, of a respectable antiquity. Witness an edict which an antiquary has discovered in the archives of Puy-de-Dome, in which the punishments assigned to the various forms of fraud fit the crime with a Gilbertian completeness. Thus, "whosoever shall have sold watered milk, in his mouth shall be set a tube, and into the said tube shall be poured the watered milk till the doctor or barber there present shall assert that the culprit cannot swallow more without being put in danger of his days. Whosoever shall have sold butter containing turnips, stones, or any other foreign substance shall be seized and attached in a very curios manner to our pillory of Pontet." One would like to know what the very curious manner was. "Then the said butter shall be placed on his head till the sun shall have melted it completely; and in the meantime the children and meaner folk of the village shall insult him with such outrageous epithets as shall please them—subject to the respect of God and his Majesty. Whosoever shall have sold evil or rotten eggs shall be seized by the body and exposed to our pillory of Pontet. The said eggs shall be given to the children of the villages, who shall, by way of joyful diversion, throw them in the face of the culprit, so that all may be full of merriment and laughter." What a red-letter day it must have been for the children when a large consignment was seized and there was enough ripe eggs to go round! Justice had a humorous way with it in those good old days.—Daily Telegraph.

A First Rate Baker



Easy to Work With, Light on Fuel, Strong and Durable

That these features form, together, the RANGE AS IT OUGHT TO BE, is known by all housewives. In the

HIGHLAND GRAND RANGE

these important points reach highest perfection. Its fine roomy oven is extra large, well ventilated, and the heat,—under ready control,—is exactly the same on the sides, top and bottom. The HIGHLAND GRAND

Burns Either Coal or Wood

equally well. Its structural features embrace all that is best in LATEST MODERN IMPROVEMENTS—large fire-box, patent sifting and dumping grate, large convenient ash pan. Made with high closet, upper or lower mantel shelves and reservoir.

Ask Your Dealer, or Write for Catalogue

THE RECORD FOUNDRY AND MACHINE COMPANY
Manufacturers Moncton, N. B.

Grease

I have two horses that have scratches. One of them has got a big leg, but not from scratches. It made its appearance in about one day. A doctor treated it and the leg is still large, but not quite so bad as the first. Scratches have appeared on that leg as well as on two others. What should be done in such a case? I bathed the leg with hot water and it took the swelling down somewhat. Concerning the scratches I used some medicine a doctor gave me. It healed them all, but some plaes left ridges and they will not heal. I have used lard without any effect and they got worse. Both horses have the same kind of scratches and at the same time. They have had them now for about two months and I have been doctoring them all the time.—A Subscriber.

Answer—Feed very lightly and make the horse live an outdoor life, as far as possible. Poultice the parts with hot flaxseed meal until discharge ceases and then wet two or three times a day with a weak solution of concentrated lye to be gradually made stronger, as found necessary.

Soft Crop.

Irregular feeding and watering cause a distension of the crop, in other words, the fowl overloads and distends the crop when fed frequently, causing it to become permanently enlarged and to hang down, rendering it impossible to perfectly press the food through the oesophagus into the stomach the food and water thus remaining in the crop becoming sour and producing inflammation and disease, better known as "soft crop" and inflammation of the crop.

A Dairy Farm On Top Of a Sky Scraper.—In New York City there is a dairy farm right in the heart of the busy city. If you can overcome your incredulity long enough to accept this statement you will probably think this farm is safely and sanely resting on old mother earth as dairy farms should do. Mistaken again! This dairy farm has contracted the habit, common in the city, on scorning the lowly earth and has become a "flat" dweller. In fact, it is found in the very top of a theatre building. There are three cows, a dairyman and a dairymaid in attendance. The latest down-to-date machinery including a milking machine, is used to convert the lacteal product into tempting dishes for the patrons of the summer theatre, which is also on the roof. Two thousand people visit this unique farm every day, so 'tis said. It is not to be presumed that these three cows furnish a glass of milk or a dainty for every visitor. They reserve these for the theatre visitors who are fortunate enough to be the recipients of these favors. For many of these visitors this little glimpse of cowdom is the only peep they ever get of the process by which a great city is furnished its milk. It is as novel to these city dwellers as would be a Broadway scene at midnight to the country crossroads dweller.—Herald's Dairyman.

Feed for Health.

The physical care a child receives during the early months determines largely whether it is to be a strong, healthy adult or sickly, unsuccessful one.

A well-known doctor recently stated publicly that nine-tenths of the deaths during the second summer are caused by the food given a baby during the first summer. We constantly see cross babies, and those who are really ill, partaking freely of the very foods which brought about that condition.

The baby should have no food but milk until it is one year old. Do not begin giving tastes of other food. The stomach will endure much, and it often happens that when the baby is given improper food and does not become immediately ill, we fail to see that it is that which makes him peevish and irritable. And when he does get sick the parents say it is his teeth. We are so accustomed to the old idea that a teething baby must suffer that we have been slow to see that we brought about the trouble by a heterogeneous diet.

The child who is to grow up strong and well must be allowed no starchy food before the age of two years. The reason for this rule is simple. The digestive juice that acts on starches is never present until a child has reached that age.

CAREFUL DIET.

Your child between one and two need not go hungry. Besides an abundance of milk it may have the juices of peaches, prunes and oranges, broths, long-cooked oatmeal, graham crackers, coddled eggs, nonstarchy breakfast foods with milk and sugar, crisp toast with butter, baked apples and scraped rare beef.

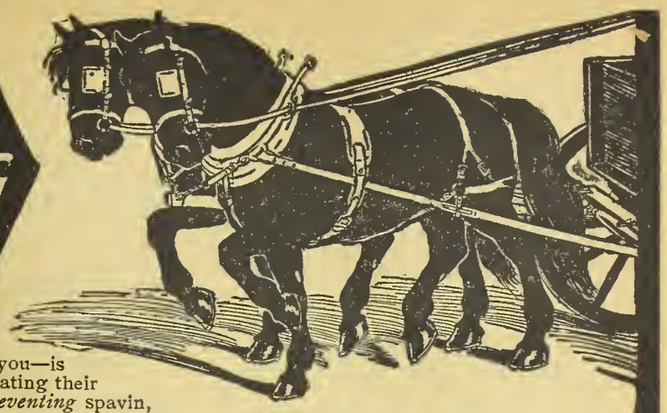
A pleasing variety may be had by a little study. Do not give potatoes or other vegetables to a child under three.

To thus carefully diet your child will be no small task. There will be plenty of older women to tell you it is "new-fangled" nonsense and that they fed their babies everything, from the time they were five to sixth months old. It is no doubt true. And those babies were always ill during teething, and it was very hard to get them through the "second summer," and one-sixth of them died during the first year.

Do not trust the advice of a woman just because she has had a large family, unless that family have strong constitutions and clear brains. The educated physician will give you sounder advice than the uneducated mother.—Pearl Chenowerth.

If your children are subject to attacks of croup, watch for the first symptom, hoarseness. Give Chamberlain's Cough Remedy as soon as the child becomes hoarse and the attack may be warded off. For sale by all dealers.

KEEP YOUR HORSES IN PRIME WORKING CONDITION



A HORSE in the field—working for you—is worth two in the barn—simply eating their heads off. There is no way of *preventing* spavin, ringbone, splint or curb from suddenly laming and laying up your horses—but there *is* a way of *safely* and *easily curing all these ailments* and preventing them from *keeping* your horses laid up. For over 35 years there has been a reliable remedy that horsemen everywhere have *depended* on to save them money, time and worry.

Kendall's Spavin Cure

has been the trusted remedy of horsemen everywhere. It has not only been saving untold time, work and worry but thousands of dollars' worth of valuable horseflesh and has many times saved horses from death.

Here's a man—Mr. David Waddell, Marney Man., who has used Kendall's Spavin Cure for a quarter of a century and is still using it to cure Lame Horses. He writes: "I have used Kendall's Spavin Cure for 25 years and always found it good."

Here's another man who uses it on himself as well as on his horses and cows. Mr. J. H. McCulloch, Cottonwood, Sask., writes: "We have been using Kendall's Spavin Cure on our horses and find it an excellent cure for cuts, bruises and lameness both on horses and human. It is also good for Caked Udders on cows."

Never be without a bottle of Kendall's Spavin Cure. You can never tell when accidents will happen—when this remedy may be worth the price of your best horse. It is better to be *prepared.*

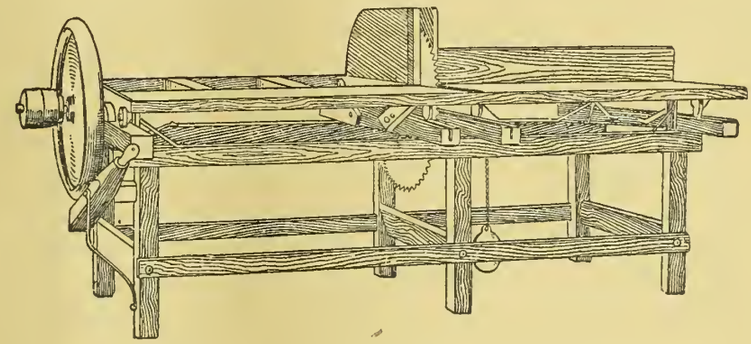
Don't call your case "hopeless" in the face of above testimony. 70

Next time you go to town get a couple bottles from your druggist. The price is uniform, only $1.00 per bottle, 6 bottles for $5.00. At the same time ask for our invaluable "Treatise on the Horse," or write to

Dr. B. J. Kendall Co., Enosburg Falls, Vt., U. S. A.

WOOD CUTTERS

Made in Four Different Sizes



We are offering these machines to the public with the belief that they are the best wood cutting machines on the market for the money. The Frame is made of the best seasoned hardwood, and well bolted and braced. The Arbor is of the best turned steel, and runs in bearings made of the finest quality babbit. The Balance Wheel is a solid web and weighs 180 lbs. The Table is of heavy Plates and indestructable. Wood Cutters are shipped with 28 in. saws unless otherwise ordered.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

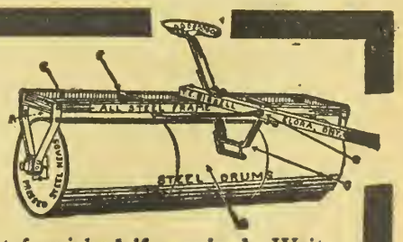
The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

The "Bissell" is a 3-drum roller

3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off with a Roller unless the name "Bissell" is plainly stencilled thereon.



Grass Seeder Attachment furnished if required. Write Dept. M for free catalogue. 63

T. E. BISSELL CO., LIMITED, ELORA, ONT.

Jno. Deere Plow Co., Ltd., 77 Jarvis St., Toronto—Selling Agents for Ontario and Quebec.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn Bulls. WALTER EATON, Upper Canard, Kings Co., N. S.

FOR SALE—Pure bred Percheron Stallion, 1 1-2 years old. LEO. A. MILLER, Linville, Car. Co., N. B.

FOR SALE.—Choice Barred Plymouth Rock Cockerels, one to three dollars. BOYD A. WETMORE, Bloomfield Station, N. B.

WOULD YOU MARRY IF SUITED? Best Matrimonial Paper Published. Mailed Free. THE CORRESPONDENT, Toledo, Ohio.

FOR SALE—Ayrshire bulls from two weeks to one year ten months. One Holstein two past. JOHN. A. HUGHES, Petitcodiac, N. B.

WANTED—Good, plain Cook. Write giving references for apply personally to MRS. T. H. ESTABROOKS, 102 Mount Pleasant Ave. St. John, N. B.

FOR SALE—Five yearling Guernsey Bulls Three sired by Imp Canada's Jethro Bass. Best milking stock. T. D. BLAIKIE, Great Village, N. S.

FOR SALE—Imported Clydesdale Stallion, rising four years old; exceptionally well bred, for further particulars, apply COSSAR FARM, Lower Gagetown, N. S.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED—A position as manager of a farm in the Maritime provinces, by an experienced married man Best of references. Apply to FARM MANAGER, The Maritime Farmer, Sussex, N. B.

FOR SALE—One second hand woodpecker gasoline engine 4 h. p.; good running order, suitable for carpenter shop or farm work. Price $50.00. THE SUSSEX MOTOR CO., LTD., Sussex, N. B.

FOR SALE.—Twenty-five extra well bred grade pigs for sale, four and five weeks old at resonable prices. Also sow 18 months of age with or without her litter of pigs a few days old. L. M. ANDERSON, SACKVILLE, N. B.

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

AGENTS—MALE OR FEMALE—In every City, Town or Village in the Maritime Provinces to sell best line of Flavors, Perfumes, Powders, etc. Workers earn from $3.00 to $6.00 a day. No others need apply. Write C. C. RAND, 241 Oxford Avenue, Montreal.

600,000 FT. BELTING all makes 100,000 rods Wire Fencing, 60,000 lbs. Barb Wire at 2c. per lb, Also 1000 other bargains at 1-3 to 1-2 less than regular value Special price lists on request- IMPERIAL WASTE & METAL CO., 713 Queen St. Montreal.

DON'T MISS THIS.—We are offering some choice Ayrshires bull calves from cows that are running in the record of performance test bidding fair to make good records. Sired by an extra good imp. bull. Also a few young females. Write or call. THOS. HAWKINS, Landor, Col. Co.

FOR SALE

One 240 Egg Cyphers Incubator, price $15.00. One trio Buff Orpingtons, 2 yearling Hens and one Cockerel. Price $8.00. Also a few S. C. R. I. Red Cockerels, prices from $2.00 to $5.00, Write your wants.

W. H. HENRY,
SHUBENACADIE, N. S.

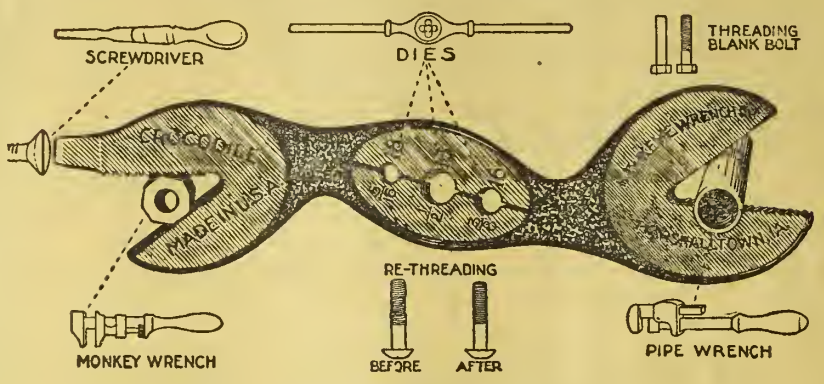
HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association.

W. A. CLEMONS, St. George, Ont.

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wreuch, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of recipt, renewals from date of expiration of present subscriptions.

The Maritime Farmer, Sussex, N. B.

HOUDANS

The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

Jan. 1, 1914.

W. J. M. MacLeod,
Sussex, N. B.

Dear Sir:—The trio of Houdans I ordered from you arrived in good shape this morning. I am well pleased with them. I think they are very fine birds and am glad to know they are of such good stock.

D. McKAY, Pictou Co., N. S,

One Cockerel the progency of last years Boston and New York Winners, and one Pullet for sale.

$5.00 takes the pair.

W. J. M. MacLeod
SUSSEX, N. B.

SHORTHORN AND JERSEY BULLS FOR SALE

I have for sale five young pure bred and registered Shorhorn Bulls, 8 to 10 months old. These bulls will be suitable for service next spring and are from the best stock that can be imported.

Two pure bred Jersey bulls 1 1-2 and 3 years old respectively.

R. O'LEARY, - - RICHIBUCTO, N. B.

SNOW PLOWS

For Township Roads. For Sidewalks.

Stone and Stump Pullers, Bob Sleighs

A. LEMIRE, Prop., Wotton, Que.

Highland View Dairy.

Young Guernsey Bulls, also Buff Orpington and White Wyandotte Cockerels and Pullets.

R. R. BLACK, Amherst, N. S.

Milking Shorthorns

I have for sale 5 Registered Bulls ready for service. For fifteen years I have used bulls from the best milking families in Canada.

Write or telephone

Bliss M. Fawcett,
Sackville, N. B.

SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to

F. S. BLACK, Amherst, N. S.

Barred Plymouth Rocks

Victors again at Maritime Winter Fair, 1st and 2nd Mating Pens. 1st Breeding Pen. 1st pair of Utility Cockerels; 1st and 4th Cock; 1st and 6th Pullet; 2nd, 3rd and 6th Cockerels; 3rd and 5th hen is Record for 1913. Lusty Cockerels and Cock birds for sale. Address

CRAIG BROS., Amherst, N. S.

GUERNSEY BULLS

At a Bargain.

During the month of January we will sell Guernsey Bulls at 20 p. c. discount from regular prices. The dams of these bulls are large milk producers. The bulls are of good size and a good dairy type. They will be a credit to any Agricultural Society. Let us send you description and prices.

JOHN N. CHUTE,
Berwick, - N. S

DURHAM BULLS

Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale.

C. C. H. EATON,
Canard, - - Nova Scotia

SPECIAL SALE

1 Barred Rock Cockerel and 3 Hens $5.00.
1 " " Cock and 3 Hens $5.00.
10 " " Utility Pullets 75c. each.
3 Buff Wyandotte Cockerels $1.50 each.
1 Columbian Wyaddotte Cockerel $1.50.
2 White Wyandotte Pullets $1.50 each.

ORCHARD HILL FARM
Brown's Flats, - N. B.

FOR SALE

A fine Dairy Shorthorn Registered Bull Calf 3 months old.

E. W HEURTLEY,
P. O. Sutherland's River, N. S.

URIC ACID NEVER CAUSED RHEUMATISM

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure." Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE,
Dept. 608, Brockton, Mass., U S. A.

FOR SALE

Two Jersey Bulls, twelve and thirteen months old, both from heavy milking dams. Apply to

ROBT. ROBINSON,
Meadow View Farm,
Box 265 Sussex, N. B.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, FEBRUARY 10, 1914. Number 9.

Nova Scotia Farmers in Annual Session

Banner Meeting at Bridgewater

The eighteenth annual session of the Nova Scotia Farmers' Association was held in the comfortable court house of the pretty town of Bridgewater, on the banks of the famous La Have, the Rhine of Nova Scotia, that with its tributaries drain the rich agricultural areas of Lunenburg County.

THE OPENING SESSION

was held on the evening of Tuesday, January 27th, when, after several numbers had been rendered by Webb's noted family orchestra, H. W. Corning, M. L. A., President of the Association, read his address.

The spacious hall was filled to overflowing at every session. A large number of delegates representing all parts of the province were present and Lunenburg County farmers, their wives and daughters and sons very creditably patronized the meetings.

PRESIDENT'S ADDRESS.

To the Officers and Members of the Nova Scotia Farmers' Association:

Gentlemen:—It is with pleasure that I extend to you a most hearty welcome to this the eighteenth annual convention of the Nova Scotia Farmers' Association, meeting as it does for the first time in its history in the busy town of Bridgewater.

As we come together again after another year of labor, let us first give thanks to Our Gracious God for the countless blessings that we have enjoyed during the past year, for the privileges of meeting again under such favorable circumstances and for the bright and hopeful outlook for the future.

Owing to the partial failure of the apple crop the total net cash returns from the land of our province will not be quite as much during last year as in 1912. Yet we can record a marked increase in dairy products and a good yield of hay, potatoes and root crops.

LIVE STOCK.

The encouragement to live stock development during the year has been gratifying indeed. The grants to agricultural societies were increased by the Nova Scotia government which should allow the societies to do more efficient work. The Dominion Government has undertaken, through the Live Stock Branch a widespread distribution of pure bred male animals, in districts that were not already organized, and during the fall a large number of pure bred rams and boars were supplied associations in different parts of Nova Scotia.

EXHIBITIONS.

The County Exhibitions all report successful years and there is no doubt but that these shows are beneficial to agriculture. The Provincial Exhibition held at Halifax was well up to the average both in quality of exhibits and attendance.

The Maritime Horse Show held at Amherst in April was great success and a credit to Eastern Canada.

The Winter Fair held at Amherst in December was the best yet and compared favorably with any of its kind held in Canada.

A number of successful Poultry shows were held in different parts of the Province during the early winter which also marked progress made in improved poultry raising.

AGRICULTURAL EDUCATION.

The Dominion Agricultural Bill of last year which provides for ten millions in ten years brings to those interested in agriculture in this province great encouragement. Last year this province received $54,282.45, which amount will be increased by $6,858.00 each year until 1917—when the annual grant will be $81,719.21 which this province will receive each year until 1923 from the Federal Government for Agricuftural education.

This has enabled the Government of Nova Scotia to favorably consider the resolution that was passed, at our annual session last year at Sydney in reference to a short course be-

Nova Scotia Farmers in Ann ual Session at Bridgewater, N. S.

ing held in different districts of the Province.

In the near future at least five of these short courses will be held in as many districts. These should add very materially to the interest already being taken in Agricultural education and should encourage a larger number of our young men to take advantage of the two years' course at our Agricultural College, Truro.

A goodly amount of institute work has been done during the year and I believe that the County Associations should take this work up with increased interest and put on meetings in every district of the province during the coming year. We can hardly estimate the value of these meetings.

In conclusion let me express my extreme satisfaction at finding this session of our Association convened in this beautiful town of Bridgewater, in the great County of Lunenburg, on the southern coast of our Province. My sincere wish is that this will be one of the most profitable sessions in our history. To this end I would solicit the co-operation of each one of you.

ADDRESS OF WELCOME.

Following the president's address, Mr. H. A. Hebb rendered a comic vocal selection after which His Worship Mayor Dawson, Arthur Raberts, Town Solicitor and Secretary of the Maritime Union of Municipalities extended greetings from the town and union. Mr. Dawson referred to the incentive to better fruit growing that had followed the meeting of the Nova Scotia Fruit Growers' Association held in Bridgewater several years ago and expressed the hope that a still greater impetus would be given the course of better farming through the seed sown by the 1914 annual gathering of the farmers in his town.

LUNENBURG COUNTY GREETING.

Wallace Rhodenizer, President of the Lunenburg County Farmers' Association read the following address:—

"I beg on behalf of the Lunenburg County Farmers Association to extend to you a cordial welcome to our fair County of Lunenburg. It was with great pleasure that the Lunenburg County Farmers heard that the Provincial Farmers' Association would be held in Bridgewater, which on account of its central situation affords a grand opportunity for the farmers of Lunenburg County to attend your meetings and thus get in touch with the best agriculturists of the Province. The County Association is in a healthy condition gaining nearly three hundred members the past year. A number of meetings were held which were largely attended.

"A striking evidence of how farmers are progressing in this County is found in the greater interest taken year by year in our Annual Fall Fair. The Fall Fair of 1913 was more largely attended than ever before and although some classes of exhibits were not as large as in previous years. In the standing field crop competition open in the various counties of the province, Lunenburg was able to show 8 entries on oats and 5 on potatoes. Farmers are beginning to realize that it pays to hand select your seed and to cultivate that soil more than we have in the past.

"It is worthy of special note that during the past year there were two co-operative fruit companies found, one at New Germany and one at Hebbville. The apple crop was light but the farmers are getting more for a light crop than they did for the larger crop in 1912.

"There seems to be a new era dawning along dairy lines. An Act of Incorporation has been passed recently with the result that the La Have Creamery has become a reality.

"In viewing the agricultural situation for 1913, we feel that we have great reason for encouragement, although somewhat disappointing in some lines. Yet after all conditions are not so bad as they might be.

"In conclusion I feel very much pleased that the Nova Scotia Farmers' Association decided to meet this year in the fair Town of Bridgewater.

"Again gentlemen I extend to you a most hearty welcome to our County and hope that you may meet with us again at some future date."

Wm. O'Brien, vice-president of the association fittingly replied to the cordial welcomes. He had been much impressed with what he had seen of Lunenburg county. The farms along the line were snug and home-like, and showed that the farmers were thrifty and prosperous. The value of an agricultural education and the necessity of making the home life happy for our young people on the farm were also emphasized by Wm. O'Brien.

The Farmers' Association was educational in character and from that source as well as from the social aspects of east meeting with west he trusted much benefit would be derived by all who would attend the meetings.

Following a musical number by Hebb orchestra and a vocal selection by a Bridgewater male quartet, Hon. W. H. Owen, Member of the Nova Scotia Legislative Council, A. C. Zwicker, M. L. A., and J. W. Margeson, M. L. A. for Lunenburg County had words of cheer to offer. Mr. Zwicker said the apples exported from Lunenburg County were the best received on the English market in 1913. Lunenburg County was noted for its mixed farming. Dairying was in its ascendency in the county and the energy that had been put into the organization of the La Have Creamery, now nearing completion, was a good omen for the future of the industry in his country.

Some of the points touched upon by Mr. Margeson were;—

How to keep our young men on the farms; agriculture in the common schools; making home life attractive; parcel post; rural telephones and mails; better transportation facilities and cheaper money for the farmers.

These problems require an early solution. To solve them it is necessary that each and every Nova Scotian resolve themselves into individual boost committees. The farmers of Nova Scotia were not calling for work in times of business stagnation; their lot was thus much more pleasant than that of the urbanites.

A GREAT ERA OF DEVELOPMENT

Prof. M. Cumming who followed Mr. Margeson said: "It is a great thing to be a Nova Scotian and we feel it. Those of us who are young are just in the right era in Nova Scotia's progressive movement for development. The east is a mighty good place in which to live." He then went on to enumerate how the special agricultural grants received from the federal department were being expended. The work was done with a view to laying strong, solid foundations on which to build the future development of the agricultural interests of the province. The work of combating insect pests and plant diseases was accomplishing gratifying results.

He recommended the appointment of a plant pathologist for the province and made reference to the ban that had been placed by the United States and Cuba on potatoes from districts infected with powdery scab.

The 1914 Short Courses had been most inspiring and short courses as requested by a resolution passed at the 1913 Farmers' Association were to be held in several parts of the province.

The dairy industry had shown an increase of 49.8 per cent. in the province in 1913 over 1912. He asked the Lunenburg County farmers to stand by the LaHave Creamery and they would find it a mighty factor in the development of their county. t

PROF. J. M. TRUEMAN

was present and contrasted conditions in Nova Scotia with what they were when he left the Province twenty-three years ago.

DIRECTOR'S REPORT

Your Directors have no extensive report to make to this the Eighteenth Annual Convention of the Farmers of Nova Scotia.

This is the first time the Association has met ae Bridgewater and we look forward to a pleasant and profitable visit to this County of Lunenburg, and trust that the farmers in this district will benefit by the discussions and business transacted during the session here.

We are glad to record that since last we met, the Province of Nova Scotia has continued to flourish, and on the whole farming communities have had a fairly successful year, but from the fruit growers we regret to hear of a great shortage in fruit.

We are glad of the continued and progressive interest taken in the Agricultural College and the Short Courses held there, there being a larger percentage of pupils from Nova Scotia than heretofore attending. The regular Course and the Short Course was exceedingly well attended—one noticeable feature being the attendance of ladies at the First Womens' Institute Convention. Several of these Institutes have been organized during the past year under the capable organization of Miss Jennie A. Fraser, Superintendent. Of the Halifax Exhibition and other local exhibitions you will hear fully from your commissioners and others and also from Superintendent of the Agricultural Associations in relation to County Farmers' Association. Another new departure is that following the close of the Convention there will be open in various parts of the Province a series of Short Courses, meetings of two or three days each under the superintendency of the staff of the Agricultural College, so those who could not attend at Truro will be able to receive some valuable instruction at home.

The Maritime Stock Breeders' Association as usual held a very successful Horse Show in April and a Winter Fair in December.

The liberal appropriation by the Provincial Government together with the Dominion appropriation for the aiding of agricultural has enabled the Department to accomplish much in the interest of the Agriculturist. New lines of work have been started and others expanded, which will be of great benefit to the Province.

We have in Nova Scotia started at last to make more rapid strides in the matter of butter making at creameries. The increased output this year being 49 per cent. but there is room for a larger increase than this.

Three new creameries are now under construction that will begin operation in the Spring, and from now on more attention will be given to making a concentrated effort to enlarge the output of the ones now in operation.

We shall hear from the Superintendent of Dairying further upon this subject, and we are glad to have secured the services of Mr. Gearge H. Barr. Chief of Dairy Division, Ottawa, to address the convention along this line, and Prof. Trueman will tell how to feed to increase the product.

The resolutions you passed at your last meeting were duly attended to. The Parliamentary Committee will report the result of those they had to deal with.

The program of this convention is before you. We trust the subjects thereon found will be thoroughly and advantageously discussed and that we shall put more enthusiasm into our work this coming year.

The treasurer's report is as follows and has been audited by Mr. J. P. Landry and Prof. J. M. Trueman.

Sgd. H. W. CORNING, President.
Sgd. CHAS. R. B. BRYAN, Secty.-Treas.

CREDIT.

Balance Jan. 1st.	$284.17
Gov. Grant	850.00
Membership fees	11.00
Delegates fees	97.00
	$1242.17

DEBTOR.

Annual Meeting Exps.	$852.98
Directors' Expenses	54.30
Legislative Committee Exps.	20.25
Secretary's Salary	150.00
Stationary & Printing	6.25
Postage etc.	7.73
Balance Dec. 31.	150.66
	$1242.17

Examined and found correct.
Sgd. JNO. M. TRUEMAN.
Sgd. JOS. P. LANDRY.

EXHIBITION COMMISSIONERS REPORT.

Mr. President, Officers and Members, The Nova Scotia Farmers' Association.

As your Representatives at the Provincial Exhibition Commission for 1913, we beg to report that we consider the exhibition for 1913, a success, comparing it with the last two or three years.

While there was considerable criticism about the main building not being up to the mark, yet taking every thing into consideration, it compared favorably with the previous years. While there was some very fine exhibits put on by some of the leading mercantile houses of Halifax, and outside firms yet it is very difficult to get busy firms who are behind with their orders to go to Halifax or any other exhibition, to put on a costly exhibit by way of advertising their goods.

In the Annex, one of the most interesting features was an educational display and Domestic Science demonstration by the Nova Scotia Agricultural College, Truro. Miss Jennie Fraser, Prov. Supervisor of the Women's Institutes, and Mrs. Dunback were in charge of the Domestic Science Demonstrations.

Then the demonstration work that was carried on by Mr. Harvey Mitchell, who has charge of the cow testing work in the Maritime Provinces, could not help but convince those that keep cows, of the necessity of keeping records of the amount of milk each individual cow gives then determining by the Babcock test the percentage of fat in her milk.

Mr. W. A. McKay, Inspector of Creameries, was there making butter, and in his very able manner teaching those interested in the proper way to make butter.

The Fishers and Mines Buildiugs were about the same as previous years.

The Agricultural building looked better than we expected to find it: there being a very creditable show of all kinds of roots, vegetables, grains, etc. Mention might be made of the Experimental Farm at Nappan, which put on a very fine exhibit of various products of the farm which were very tastefully arranged, also a splendid exhibit of roots and vege-

tables from the Nova Scotia Hospital, Dartmouth.

Considering the early date of the exhibition and the backwardness of the season, we consider the Agricultural building quite up to the average.

The Horticultural building, as far as the flowers, the canned and preserved fruits entered into the show, it would be hard to excell them in any Province. But again on account of the late season and the early date of the Exhibition, we consider the exhibit of fruit a detriment rather than an advancement, for our Province. For instance apple buyers and visitors get a very poor idea of the quality of our fruit; for they reason like this: "If this is the best fruit you can obtain for exhibition purposes then the quality of fruit from which this was selected must be very inferior:" and the impression such people get of the Nova Scotia fruit cannot be of very much commercial value to us.

The entries of Poultry, Sheep and Swine were very large, being well fitted and showing an abundance of quality throughout.

The horse barns were well filled, and all the horses came that were entered, there would have been only two empty stalls. Here again with very few exceptions the quality was good.

One noticeable feature was the number of new exhibitors, and in conversation with some of them, they seemed well pleased, several stated they would like to come next year and bring more stock if possible.

The cattle barns were well filled with Beef and Dairy Breeds, the majority of which showed careful fitting, and worthy of the name of show cattle in any country. Here again we find new exhibitors who were fortunate enough to carry off the much coveted Red Ribbons.

The horse racing was exceptionally good, there being many new performers who created new interest in the sport: and in conversation with Commissioner James A. Fraser, who is Superintendant of the speed department he told us everything went along without any frictions and no complaints, which speaks well for the management of the department.

The special attractions were most satisfactory: the flying machine proving a great drawing card.

Summing up the exhibition as a whole, we believe any fair minded man cannot but say that the 1913 Provincial Exhibition measured up quite favorably with previous ones.

Preparations for the 1914 Exhibition have been commenced. At the annual meeting held Nov. 19th. the date was fixed for Sept. the 9th. to 17th. At that meeting we were waited on by the Trades and Labor Council, asking for the free use of the race track and grand stand, for their Labor Day celebration which was granted. The Firemen also asked for the free use of the grounds for the purpose of putting on a tournament some day in August which was granted.

We are respectively, Your obedient servants,

Sgd. F. W. Foster.
Sgd. H. A. Kennedy.

Following the reading of the Exhibition Commissioners' report Thos. Aylward, Falmouth, one of the exhibitors at the Maritime Shows referred to a much need reform in transportation of live stock to and from exhibitions and in accomodation facilities for caretakers of stock while attending the exhibitions. He referred to the unnecessary delay that shippers of stock were subjected to and instanced the commodious comfortable quarters that the management of the Chatham exhibition has provided for the live stock herdsmen. The Halifax Exhibition Commission might well pattern after Chatham in this respect.

A lengthy discussion took place on ways and means of inducing a large number of stock breeders to show at Halifax. Some of the speakers though that a special class could be made for sweepstakes animals thus giving new beginners a fair chance to win in the open classes. J. A. Fraser, one of the commissioners thought the Sheep and Swine bars should be brought into more prominence on the grounds, instead of being tucked away in the most unacessable quarter of the grounds.

Professors Cumming and Trueman thought a four days show would be sufficient and would have a tendency to bring out larger and more numerous exhibitors.

Mr. Lee, Howard Kennedy, D. F. McLean, Wm. O'Brien, W. H. Woodworth, R. J. Messenger, Wm. Murray, A. S. McMillan, Wm. Sharp and others took an active part in the discussion.

THE REPORT OF SUPT. OF AGRICULTURAL SOCIETIES.

was given by Mr. F. L. Fuller. It showed that the Agricultural organizations in the province are in a flourishing condition. The Supt. showed the willingness of the Nova Scotia Department to co-operate with the Federal Department in the work of distributing pure bred sires in sections of the province where they were needed. In view of the fact that some agricultural society members have shown a tendency to drop out of their agricultural society and rely on the Federal Department for pure bred sires, the general concensus of opinion was that both Local and Federal Departments should work in unison so that the work done by the respective departments would not clash and leave the room for disgruntled society members to break down their Agricultural Society.

Messrs. D. Crockett, W. R. Barss, Prof. M. Cumming, Wm. Murray, H. W. Corning, D. F. McLean, Col. S. Spurr, S. A. Cook, F. W. Foster, A. S. McMillan, Jas. A. Fraser, Dave Findal and O. D. Wyley took part in the discussion.

REPORT OF COUNTY FARMERS' ASSOCIATIONS.

Annapolis County.—The season of 1913 was fairly favorable to the farmers of the county as a body.

Mixed farming has been proved beyond all doubt to be the surest and most profitable system for the general farmer.

The abundant crops of hay and of early grain well harvested and of roots cellared for the feeding of stock—the high prices of all products—the great demand for beef, pork, butter, cheese and in increasing prices with the available barn fertilizers all ten to make the farmer feel fairly content.

The apple crop was disappointing both as to quality and quantity yet those who sprayed early, persistently and thoroughly were rewarded with large crops of good, sometimes excellent fruit. The Entomological station at Bridgewater has proven a source of information to may in regard to the life and habits of many injurious insects. We are glad to learn that during the last three months a large force has been collecting and destroying the Brown Tail Moth which has increased rapidly during the last three years. We think farmers should be induced or compelled to spray.

We have at Lawrencetown a cheese and butter manufacturing Company which has adopted the cream gathering system for the fall and winter months. This Company has been in operation for some years. Owns its plant free from any indebtedness.

Our association had 152 members in 1913. Over twenty Institute meetings were held during the year.

Mr. L. D. Robinson of Berwick, J. M. Robinson of the Experimental Farm Kentville and C. F. Alward, of Havelock, were the speakers.

The Annual meeting of the first inst. was a success. The discussion animated a spirit of hope and an endeavour prevailed to profit by the experience and probably failures of the past.—L. W. Elliot.

Antigonish County:—The Antigonish County Farmers' Association had a very successful year. On March the 27th. and 28th. the Association held a Seed Fair. The sum of $131.-00 was paid in prizes. The quality of the exhibits shown was in the opinion of the Judges, Messrs. Fuller and Moore, of the Agricultural College, Truro, superior in almost every department. A notable advance was made in their opinion in the selection of seeds, cleaning and care of same. Some ten meetings were held and at them from 50 to 200 were present.

The Annual Fall Fair was held on Sept. 19th. and drew a larger attendance than for many years previously. The amount paid out in prizes and expenses in connection with the fair amounted to over $1100.00. The Association is on a good financial footing having about $250 on its credit. The question of erecting further buildings on the grounds was much discussed during the year by the managing committee but as some difference of opinion existed as to whether cattle sheds or larger exhibition buildings were more desirable the matter was postponed to be taken up by the coming committee.

The fair itself was largely successful. The exhibits of sheep and dairy cattle were larger than usual and horses showed up well. Roots, vegetables and fruits were hardly up to the standard, the fair having been held to early to permit of full maturity in many of these lines.

The annual meeting of the association was held on the 17th. of January instant. The question of holding a poultry show in connection with the seed fair was discussed and it was decided to hold both on the 2nd and 3rd. of February. A resolution was passed unanimously that an invitation be extended the Farmers' Association to hold their next annual meeting in Antigonish. This town is very well situated for this purpose being situated on the I. C. R. fairly central and has suitable accomodations for the purpose.

Mr. McPherson spoke at considerable length in the question of co-operation among farmers also of the drainage question, moved a resolution that the municipal council of Antigonish county be asked to pass a bye-law whereby money could be borrowed under the provisions of the Tile and Drainage Act to assist farmers in draining their lands. This resolution was commonly adopted.

Rev. Mr. Thompkins spoke of co-operation among farmers and was pleased that such an organization had been formed in Antigonish County. He thought it would be well to have a co-operative association among the farmers of the province. He therefore moved the following resolution which was to be placed before the Nova Scotia Farmers' Association at their first annual meeting "Resolved that steps be taken to form a Central organization representing the farmers of Nova Scotia for the purpose of co-operative purchase of fertilizers, seeds, feeds, and farming impliments." This motion was unanimously adopted. The following directors were appointed: A R. McAdam, John D. MacDonald, William Walsh, Geo. Taylor, John Brwon, A. S. McMillan, Wm. C. McIntosh, John Leyden, Rev. M. M. Doyle, F. R. Totter, Rev. Mr. Thompkins, Harry Eadie. At a meeting of the Directors held immediately afterwards, A. S. McMillan was appointed president, Rev. Dr. MacPherson, vice-

(Continued on page 292)

THE NEW MINISTER OF AGRICULTURE

Hon. J. A. Murray will Direct New Brunswick's Agricultural Policy

Hon. J. A. Murray, who returned by acclamation at the bye-election in Kings, New Brunswick, on Thursday last, will direct the Department of Agriculture in his native Province. Hon. Mr. Murray was a member of the government without portfolio and on the reorganization of the cabinet was called upon to assume control of the important department of which he will doubtless make a capable head. He is a business man of good judgment and being of an inquisitive turn of mind, may be looked to to thoroughly study the problems committed to his care. He is one of the best platform

Hon. J. A. Murray, New Brunswick's New Minister for Agriculture

speakers in the Maritime Provinces and is a "hale fellow" who sees the bright side of life. Mr. Murray is a farmer, in a small way, and has one of the best kept pieces of land near his home town, Sussex.

The Parliamentary Companion has this to say of the subject of this sketch; "Murray, James Alexander, (Kings) Son of John Murray, Scotch descent, and Caroline Mills, both Canadian born. Born, Nov. 9, 1864, at Moncton, N. B. Educated in New Brunswick schools. Married, Sept. 2, 1891 to Annie Kate, daughter of late John Mills, of Sussex, N. B. Children, one son and three daughters. Manufacturers Agent, Alderman-at-Large, Town of Sussex, acclamation, 1904-5. Mayor Town of Sussex, acclamation 1906-7. First elected to legislature March, 1908. A Presbyterian.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

FEBRUARY 10, 1914.

DATES OF ISSUE.

February 10-24
March 10-24

THE PARCEL POST AND FARM PRODUCE.

Now that the parcel post system has been brought into operation it will provide a boon which has long been desired by the people of Canada. It gives the people facilities which the increasing business of the country so imperatively needs.

If the farmers are awake and alive to their new opportunities, they can easily start a direct trade with the city consumers, from whom they should be able to get somewhat better prices than they can from the middlemen, while at the same time the city dwellers should be able to get from the farmers far cheaper rates than they have had to pay to the city retail dealers.

The new parcel post may thus be a great public benefit; but it remains for the farmers to make its usefulness the largest and highest possible.

Apart from the enormous convenience which the new system promises as providing a cheap and ready method of transmitting parcels both between private persons and also between storekeepers and their country customers, it will besides open up a splendid channel of communication between the farmer and the consumer. The cost of food question at present is one with which all are intimately concerned, and many suggestions have been made with the object of providing a satisfactory solution of it.

With the advent of the new parcel system, there is no reason why much of the housewife's daily requirements should not be supplied direct from the farm; and it is announced that in connection with the regulations regarding the system there will be full instructions for farmers and others regarding the methods of sending farm produce, such as butter, eggs, vegetables and fruit. The farmer's wife may thus secure a direct route to the consumer for what she has to sell, and at the same time the town customer will escape the levy of heavy intermediate tolls. This departure has within it great possibilities which it remains for agriculture and city customers to develop.

One of the first things to be done, however, is for the farmers to take practical steps to let the city consumer know where they live and what they have to sell, otherwise full advantage cannot be taken of the new transmission facilities. Unless farmers take proper means in advance to supply this required information, the city consumer cannot reach them.

The Maritime Farmer will have a column specially devoted to advertisements of farm produce for sale. If you have butter, eggs or other farm products for sale that can be shipped by parcel post it will pay you to run a small ad. in our Farm Produce by Parcel Post Column.

FEEDING IN PROPORTION TO PRODUCTION.

That at least one farmer who attended the recent meeting of the Nova Scotia Farmer's Association, at Bridgewater, was benefited by Prof. Trueman's address on "Milk Production" is vouched for by a letter received from a prominent Lunenburg County farmer, which will be found on another page of this issue.

Prof. Trueman advised the farmers to increase the meal ration to their cows so long as they could see that the respective cows were giving a profitable response in increased milk production.

The letter in question states that the writer had returned to his home determined to give Prof. Trueman's plan a fair trial and sure enough at the end of the second days test the old cow began to show a response to the more generous treatment she was receiving.

We would like to hear from some other readers who have tried this plan.

It takes a certain amount of feed to sustain life and it is only the amount of feed that a cow will produce over and above what she requires to keep her body in a thrifty condition that she will convert into profit for her owner.

The cow is a factory on a small scale and the more raw material that she can consume the more profit will she make for her owner if she is the right kind of cow. The proper ues of the scales and Babcock test will soon tell whether you have the right cow or not.

THE N. S. F. A. ANNUAL MEETING.

We had the pleasure of attending the Nova Scotia Farmers' Association recently held in Bridgewater. The writer has attended every annual meeting of the Association held during the past ten years and is free to say that the Bridgewater meeting was the best he ever attended. The attendance was all that could be desired, the hall was well lighted, warm and comfortable, the addresses were not too long and the various speakers confined themselves to their respective subjects. The programme was well arranged and not too much crowded so that practically each session saw the completion of the work scheduled for that particular session.

The best of order and a due observance of parliamentry rules prevaled. These features and the feeling of optimism that was evidenced made the several sessions most profitable to the farmers of Nova Scotia.

BEECHER'S FARM CREED.

We believe that our soil loves to eat, as well as its owner, and ought, therefore to be liberally fed.

We believe in large crops which leave the land better than they found it—making the farmer and the farm both glad at once.

We believe in going to the bottom of things, and, therefore, in deep ploughing and enough of it. All the better with a subsoil plough.

We believe that every farm should own a good farmer.

We believe that the best fertilizer for any soil is spirit of industry, enterprise and intelligence. Without this, lime and gypsum, bones and green manure, marl and guano will be of little use.

We believe in good fences, good barns, good farm houses, good stock, good orchards and children enough to gather the fruit.

We believe in clean kitchens, a neat wife in it, a spinning wheel, a clean cupboard, a clean dairy and a clean conscience.

We firmly disbelieve in farmers that will not improve: in farms that grow poorer every year; in starving cattle; in farmers' boys turning into clerks and merchants; in farmers' daughters unwilling to work, and in all farmers ashamed of their vocation or who drink whiskey until honest people are ashamed of them.—Henry Ward Beecher.

LEGAL DECISIONS IN REGARD TO NEWSPAPERS

1. Any person who takes a newspaper regularly from the post office, whether directed to his name or another, or whether he has subscribed or not—is responsible for the payment.

2. If a person orders his paper discontinued he must pay up all arrearages, or the publisher may continue to send it until payment is made and collect the whole amount whether the paper is taken from the office or not.

3. The courts have decided that refusing to take newspapers and periodicals from the post office, or removing and leaving them uncalled for, is prima facie evidence of intentional fraud.

THE N. B. F. & D. A.

The Thirty-ninth Annual Convention of the New Brunswick Farmers' and Dairymen's Association will be held in the city of Fredericton on March 2nd to 6th inclusive, A good programme is being arranged. Many matters of vital interest will be discussed. Plan to be present, take part in the discussions and we can assure that you will return home feeling much refreshed and better able to cope with the problems that will confront you and your farm labors during the remainder of the year.

THE FIFTH MARITIME HORSE SHOW

The Fifth Maritime Horse Show will be held in the Winter Fair Building, Amherst, N. S.. on April 1st to 4th inclusive. The very best horses in the Maritime Provinces will be there. Everything to please the eye of the horse lover from the majestic Clydes and Percherons to the smallest ponies, will be so exhibited as to make the four days of the Show one continuous whirl of pleasant excitement. Don't forget the dates.

New Brunswick Fruit Growers in Annual Session

The Ninth Annual meeting of the N. B. Fruit Growers' Association was held in the Council Chambers of the City Hall, Fredericton, January 22nd and 23rd, 1914. Notwithstanding the bad travelling a good crowd was in attendance.

The meeting was called to order at 10 o'clock, a. m., January 22nd, with Mr. C. N. Vroom in the chair. Mr. Vroom stated that the season of 1913 was one of the poorest we have had for a number of years, and consequently the association was unable to hold the fruit show in St. John, as had been planned for November. However he hoped that 1914 would he a good season, and that a good show might be put on.

MANY NEW TREES SET OUT.

Continuing, Mr. Vroom said:—

"You will be glad to hear from the secretary of large numbers of young apple trees which have been set out in the province during the past season. Through his influence these have been of varieties suitable to our province, and thanks to the Horticultural Division of our Department of Agriculture a considerable assistance has been rendered in the proper setting and care of the new orchards. Soon we may hope that it will not be necessary as it is now, to import from the United States and other parts of Canada over 25,000 barrels of apples in a year to supply normal consumption. This means sending out of the province say $50,000 for this fruit alone, and it would certainly be much better to distribute it among our own farmers. One hundred farmers raising 250 barrels each would meet the requirements and this would necessitate only a small orchard for each. Where some are setting several hundreds of trees, the time ought soon to be reached, where at least our home market will be fully supplied with home fruit, which is the best fruit to be obtained, and can be put on the market in the best condition.

"I think you will approve of an expression of appreciation of the work being done by the Department of Agriculture of the local and Federal Governments for the control of the brown tail moth. This year these destructive insects have been found in great abundance near the border of the State of Maine, while they are to some extent spread over nearly the whole of the province. The moths are coming in large numbers from Maine, which is badly infested by the insect, and I am sorry to say that in that state efficient measures for their control have not been adopted. The gypsy moth is also making headway there, and working this way, and we may look for its advent here within a few years. These, with the insects we now have, will add emphasis to advisability of general spraying of fruit trees and a constant watchfulness.

"In conclusion, I have only to say that we have every reason for greater enthusiasm in the work of fruit raising. It is said that he who makes two blades of grass grow where one grew before is a public benefactor. But what may be said of him who fills our homes with the beautiful and delicious apple. He is doing a work for the physical and moral advancement of the community, while at the same time engaging in the most pleasing and profitable branch of agricultural activity. Success and great enjoyment to the fruit growers of New Brunswick and may their numbers speedily increase."

REPORT OF THE SECRETARY.

Mr. President and Members of the Association:—

I beg leave to report, not only for the year just closed, but also cancerning matters of previous occurence I think it advisable to take this opportunity of giving as briefly as possible, a few facts of historical record in connection with our association. The New Brunswick Fruit Growers' Association was organized at Amherst on December the 14th, 1908. The first regular meeting was held at Fredericton on January 27th, 1905; the third annual meeting at Fredericton, February 14th, 1907; the fourth annual meeting at Fredericton, January 24th, 1908 and the fifth annual meeting at Fredericton, January 14th 1909; in 1910 there were two meeting, one being held in Fredericton on February 24th and the second one being held in St. John from October 30th to November the 2nd in connection with the first New Brunswick Apple Show. The seventh annual meeting together with the second New Brunswick Apple Show took place in St. John from October 31st to November 3rd, 1911. The eighth annual meeting was held in Frexericton, February 1913.

The late Mr. J. C. Gillman was president of the Association for the first three years of its exitsence and his able leadership did much to place the Association on a firm basis. He was succeeded as president by I. W. Stephenson who held the office during 1908 and 1909. Mr. C. N. Vroom now acting President ably directed the affairs of the Association in 1910, 1911 and 1912. Mr. Henry Wilmot has acted as Treasurer of the Association since its organization in 1904.

PREVIOUS SPEAKERS.

In addition to our own members, who have taken active parts in the meetings, we have been much indebted to the following speakers: From Ontario, Mr. A. McNeil, late Chief of the Federal Fruit Division; Mr. W. T. Macoun, Dominion Horticulturist, and Professor J. W. Crowe; From Nova Scotia Professor Shaw of the Agricultural College, Truro; Professor W. S. Blair, of the Experimental Farms at Napan and Kentville and Mr. R. W. Starr, the pioneer of Nova Scotia fruit industry. From our own Province, Mr. Wm. McIntosh, of the Natural History Society, St. John and Dr. Hamilton now at MacDonald College, formerly of the Normal School, Fredericton.

In the death of Mr. McNeil who was chief of the Federal Fruit Division and at one time President of the Ontario Fruit Growers Association. This Association and the Fruit Growers of all Canada have lost a strong friend and warm advocate, one who was at all times most unselfish and earnest in his efforts to improve their welfare.

ANNUAL REPORTS.

Our annual reports have been included in the Annual Reports of the Department of Agriculture with the exception of those of 1911 and 1912 which were included in the Annual Reports on Horticulture. These annual records of the Association's work from 1905 to 1910 inclusive total about 221 pages, and I think that the Association should make an effort to have them republished in a single volume, in an edition of about 500 copies. By doing this the complete records of the association will in time to come be available to all desiring them.

INCREASE IN MEMBERSHIP.

The record of membership shows progress, being as follows: In 1905, 34 members; 1906, 37 members; 1907, 37 members; 1908, 30 members; 1909, 24 members; 1910, 79 members; 1911, 115 members; 1912, 72 members; 1913, 115 members.

GOVERNMENT ASSISTANCE.

Commencing with the year 1910 our Association took on a new lease of life and largely extended its activities. This was made possible by the creation in that year of a horticultural Division under the Provincial Department of Agriculture and I am sure that all our members heartily appreciated such recognition on the part of the Government of the importance of fruit growing in New Brunswick. Generous financial assistance from the Government in the form of annual grants of $500 for prize money and in the payment of many other expenses made possible the holding of large apple shows in St. John in the fall of 1910 and 1911, the first of their kind in New Brunswick.

CO-OPERATIVE PURCHASE

In 1911, the Association commenced the co-operative purchase ol fruit trees for distribution to its members and in that year distributed 7,300 trees at a cost of 21 cents and 22 cents per tree; in 1912, 15,8000 trees were distributed at prices ranging from 23 cents to 25 cents and in 1913, 12,110 trees were distributed at prices ranging from 23 cents to 25 cents. Where complaints were received of unsatisfactory conditions and quality of trees supplied, investigations were made by an official of the Horticultural Division and refunds made according to his report. As the bulk of trees placed throughout the province by agents are sold at prices ranging from 30 cents to 45 cents and even as high as 50 cents per tree it is easy to see that the Association is saving its members hundreds of dollars through this co-operative purchase of nursery stock.

It became evident that if the good work of making co-operative purchases of fruit trees was to be continued more funds would have to be provided in order that the Association might obtain the special discounts by making cash payments pending the collection of the accounts due from the individual members. I therefore made application to the Honorable Dr. Landry, Minister of Agriculture, for the purpose of enabling the Association to better carry on the work supplying its members with fruit trees, spraying materials and other supplies at the lowest possible prices and I am sure that every member will he pleased to learn that the application was granted and that this amount namely, $500 was placed to the credit of the Association.

In the purchase of nursery stock the Association has always aimed to give the preference to and encourage home nurseries. In 1911 and 1912 a considerable amount of stock had to he imported as it was not possible to obtain it in the Maritime Provinces. For the last four years members of the Fruit Growers' Association and the Horticultural Division have been supplying the nurseries in New Brunswick and Nova Scotia with buds and scions taken from the good bearing trees in this province of the varieties most in demand. Consequently there are now available practically twice as many Maritime Province grown trees of such varieties as the McIntosh Red, Fameuse, Bethel, Dudley, Wealtny, Alexander and Wolfe River, as there were three years ago. This made it possible to obtain a much larger quantity of home grown trees for 1913 planting., and the great bulk of the trees being purchased for 1914 planting are New Brunswick grown stock.

A small quantity of spraying materials consisting of lime sulphur and lead arsenate were purchased and distributed to members in 1911; in 1912, spraying materials to the value of $515 were distributed and in 1903 to the value of $625. These spraying materials have been distributed at cost price and the introduction of their use by our members is resulting in a more general adoption of spraying.

APPLE SHOW IN 1914.

Early in 1912 the Association decided to hold no apple show that year and the members were consequently looking forward with murh interest to the nolding of a show in 1913. While the season opened with a good showing of hloom, the set of fruit was only fair and the apples continued to drop into late summer. What at first promised to he a good apple year proved as had a year as the province has experienced for a long time and the fruit growers were practically unanimous in their decision to postpone the apple show until 1914. While this decision was much regretted yet its necessity was much generally recognized and I am sure that all our members are this comiog fall, and that they are looking forward to holding a show determined to use their best efforts towards making a still greater show and success than that of 1911.

I believe that if we decide to make the apple show a biennial event, the Government may be prevailed upon to increase the prize money grant from $500 to $750 and this extra inducement of course would tend to bring out a greater exhibition. I would also suggest that this association should make a splendid exhibit irrespective of the exhibit and competition. Let every member who is growing apples contribute some fruit, any amount from a basket full to two boxes, and let all this fruit be blended into one special trophy, to he sold after the exhibition and the proceeds devoted to furthering the work of the association as its members deem best. Such a trophy would he a splendid advertisement for the Asaciation, add materially to the extent and success of the exhibition and improve our financial position.

In conclusion I would say that we have reason to feel much encouraged at the progress already made but there are a great many things which we could help to do towards the extension and improvement of fruit growing in New Brunswick. These things cannot he accomplished without hard work, individual self-sacrifice and effort. I cannot urge too strongly the necessity of each and every member taking as active a part as possible in the work of the association as only in this manner may the largest and most beneficial results be obtained.

Mr. S. B. Hatheway congratulated the association on having such an able secretary as Mr. A. G, Turney, and moved him a vote of thanks which was seconded by Mr. Herbert Smith.

MAYOR HOOPER WELCOMES MEMBERS OF ASSOCIATION.

In very fitting remarks, Mayor Hooper welcomed the N. B. Fruit Growers to the city of Fredericton.

Continued on page 306

Nova Scotia Farmers in Annual Session

(Continued from page 289)

president and Allan MacDonald, Secty. treasurer.

Sgd. Allan MacDonald,
Secty. Antigonish Co. Farmers Asso.

Cape Breton County—R. M. Jackson reported for Cape Breton county. They had held a very successful exhibition in Sydney. The demonstration plots of turnips conducted in various parts of the county during the past season were destined to produce good results.

Digby County—D. C. McKay reported for Digby county. The farmers in the vicinity of Digby are getting together on the question of co-operative purchase of fertilizers, seeds, etc. Several new creameries have been established during the past year.

Hants County—The progress of Hants County was reported by Wm. O'Brien.

Inverness Copnty—D. F. McLean reported for Inverness county. The seed fair which was inaugurated there last year, under the auspices of the Association had been successful beyond the most sanguine expectations of its originators.

Kings County—The Kings County Farmer's Association has had another prosperous year. Twenty-seven meetings were held with an attendance of 920. The lecturers were Prof. W. S. Blair, of the farm, Kentville, who kindly consented to address meetings for two weeks. This was done without remuneration from our Association. Mr. S. C. Parker also assisted for six meetings and was paid by our Association. The secretary addrtssed every meeting held. The balance on hand January 1913 was $81.68. At the annual meetjng Roy Blair spoke on "Potato Growing" and Mr. A. E. Adams of the United Fruit Company lectured on the "Marketing of Fruit" under co-operation.

On June the 24th, the Association ran an excursion to Truro College Farm and 1,000 people took advantage of the cheap rates to visit Truro W. H. Woodworth reported.

Lunenburg County.—In giving a report of the Lunenburg County Farmers Association for 1913, I am pleased to report a year of progress. Our membership being 222, the largest since organized, out of this number 178 are subscribers to The Maritime Farmer, a paper that every farmer should have in his home. During the year fourteen meetings have been held under the auspices of the said Association with a total attendance of 856. Twelve of these meetings were addressed by Mr. C. F. Alward, a practical farmer, of Havelock, Kings Co., N. B., who was sent to us by Mr. F. L. Fuller. He was well versed in his several subjects, has been extensively engaged in farming, with an extensive knowiedge along the different phases of the dairy interests. He advised the building of a butter factory and co-operation in the dairy business. I believe his address had much to do with the starting of a butter factory in Lunenbury County, which is now nearly finished. Prof. Cumming and Mr. W. A. McKay also addressed meetings at different places in our county advising the farmers to build a creamery and Mr. McKay has rendered valuable assistance toward the building of the said creamery.

We are desirous that 1914 will be a prosperous year for our county, as well as for the whole province. — J. D. DeLong reported.

Pictou County—Howard Kennedy reported briefly for Pictou County.

Queens County—Mr. Freeman reported progress in Queens County. Two apple warehouses had been established and milk testing was being systematically done for the members.

Yarmouth County—Mr. Porter reported a year of progress in Yarmouth County. The new creamery is meeting with good success and the county in general is prosperous.

A RESOLUTION COMMITTEE consisting of Wm. O'Brien, R. M. Jackson, Fr. Tompkins, R. J. Messenger and Rev. Mr. Lewis was appointed to receive and introduce the various resolutions that might be presented.

ON WEDNESDAY AFTERNOON the Legislative Committee presented the following report.

"Your Committee in February 1912 appeared before the Agricultural Committee of the House of Assembly, Halifax, and presented the Resolution passed by the Association at its annual meeting at Sydney, or rather those passed which would be dealt with by the Committee. Since your members will probably wish to know the outcome of result of passing these resolutions we will mention each one and as far as possible note the action taken thereon :

"A resolution asking that the duty be removed from Traction Ditcher outfits coming into Canada. This was a resolution, with many others, passed by organizers all over Canada and as a result of this general petition as you all know this duty has been removed.

"A Resolution requesting an investigation into the working and financial standing of the Maritime T. & L. Co. A committee was appointed to do this work, whose report you will doubtless hear later.

"A Resolution asking for five district exhib tions in different parts of the province. This has been very well provided for by the act passed allowing the combination of two or more counties and their individual grants for such a purpose on the agreement of the Municipal Council, and of Agricultural Socicties that such should be done.

"A Resolution re the distribution of short courses throughout the Province in addition to the one at Truro This has been done and one will be put on in Yarmouth Co next week. Several others will follow in other

BANK OF NOVA SCOTIA ESTABLISHED 1832

System-Saving

The surest way to save is by system. If you deposit a certain amount each week or each month in this bank's Savings Department, you will soon find that you have the means to do something worth while. You will also find that the habit of thrift has fostered your spirit of independence and self-reliance.

16

The Bank of Nova Scotia

Capital and Surplus $17,000,000
Total Resources over $78,000,000
81 Years in Business
BRANCHES OF THIS BANK
in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

EIGHTY-SECOND ANNUAL REPORT OF
The Bank of Nova Scotia

Capital Paid-Up, $6,000,000 Reserve Fund, $11,000,000

PROFIT AND LOSS

1912. Dec. 31.	By Balance		$54,854 48
1913. Dec. 31.	" Net profits for current year; losses by bad debts estimated and provided for		1,210,774 39
			$1,265,628 87
1913. Feb. 15.	To Premium paid Bank of New Brunswick on purchase		$ 100,000 00
Dec. 31.	To Dividends for year at 14%		814,504 60
	" Contribution to Officers' Pension Fund		50,000 00
	" Written off Bank Premises Account		150,000 00
	" Transferred to Reserve Fund		110,000 00
	" Balance carried forward		41,124 27
			$1,265,628 87

RESERVE FUND

1912. Dec. 31.	By Balance		$8,728,146 00
1913. Feb. 15.	" Reserve Fund Bank of New Brunswick		1,790,000 00
Dec. 31.	" Premium on New Stock		371,854 00
	" Transferred from Profit and Loss		110,000 00
			$11,000,000 00
1913. Dec. 31.	To Balance carried forward		$11,000,000 00

GENERAL STATEMENT AS AT DECEMBER 31st, 1913

LIABILITIES

Capital Stock paid in	$ 6,000,000 00	
Reserve Fund	11,000,000 00	
Balance of Profits, as per Profit and Loss Account	41,124 27	
Dividends declared and unpaid	215,545 17	
Rebate of Interest on unmatured Loans	208,724 28	
		17,465,393 72
Notes of the Bank in Circulation	5,948,022 01	
Deposits not bearing Interest $12,670,716 40		
Deposits bearing Interest, including Interest accrued to date 43,305,668 61	55,976,385 01	
	61,924,407 02	
Balances due to other banks in Canada	107,131 46	
Balances due to banks and banking correspondents in the United Kingdom	78,577 68	
Balances due to banks and banking correspondents elsewhere than in Canada and the United Kingdom	430,679 54	
		62,540,795 70
Acceptances under Letters of Credit		145,640 57
		$80,151,829 99

ASSETS

Current Coin held by the Bank	$ 4,363,163 08	
Dominion Notes held	6,077,686 00	
Notes of other Banks	736,092 08	
Cheques on other Banks	3,142,765 74	
Balances due by other Banks in Canada	880 56	
Balances due by banks and banking correspondents in the United Kingdom and sterling exchange	2,107,219 16	
Balances due by banks and banking correspondents elsewhere than in Canada and the United Kingdom	1,898,505 53	
	18,326,312 15	
Deposit in the Central Gold Reserves	500,000 00	
Dominion and Provincial Government securities not exceeding market value	651,439 25	
Canadian Municipal securities and British, Foreign and Colonial public securities other than Canadian, not exceeding market value	1,268,300 18	
Railway and other bonds, debentures and stocks, not exceeding market value	3,489,742 02	
Call and demand loans in Canada secured by bonds, debentures and stocks	4,208,081 67	
Demand loans in Canada secured by grain and other staple commodities	4,468,668 00	
Call and demand loans elsewhere than in Canada	6,160,565 08	
	39,073,108 35	
Deposit with the Minister of Finance for the purposes of the Circulation fund	248,495 22	
Loans to governments and municipalities	1,165,793 01	
Current loans in Canada secured by grain and other staple commodities	2,082,566 95	
Other current loans and discounts in Canada	30,184,073 53	
Other current loans and discounts elsewhere than in Canada	5,584,004 27	
Liabilities of Customers under Letters of Credit, as per contra	145,640 57	
Overdue debts, estimated loss provided for	84,125 11	
Bank Premises at not more than cost, less amounts written off	1,560,150 12	
Other assets not included in the foregoing	23,872 86	
	$80,151,829 99	

JOHN Y. PAYZANT, President. H. A. RICHARDSON, General Manager.

AUDITORS' REPORT

We have investigated the affairs of The Bank of Nova Scotia, and certify that the above Eighty-second General Statement in our opinion presents a fair and conservative view of the condition of the Bank as at the close of business on December 31, 1913.

Our investigation included an examination of the general books of the Bank as kept at the offices of the General Manager in Toronto, and an investigation and compilation of figures from certified returns made by its various branches. We further verified by count and examination the cash on hand at the offices in Halifax and Toronto, King Street, and inspected all securities owned by the Bank excepting those held at St. John and Havana. In verification of the securities held at these two branches certified statements were forwarded to us.

MARWICK, MITCHELL, PEAT & CO.
Chartered Accountants.

Toronto, January 13, 1914.

FARMERS' ATTENTION !!!

We want a man in every locality in Eastern Canada to sell our big line of Household Necessities, Medicines, Extracts, Spices, Stock Remedies, Poultry Supplies, etc., — direct to farmers. Every one a household necessity, sold on Rawleighs' Pay-After-You-Are-Satisfied Plan.

YOU CAN MAKE

PER MONTH **$100 TO $200** CLEAR PROFIT

over and above all expenses. If you can furnish team, write at once for our matchless offer.

NO DUTY TO PAY. Good freight service. Practically no competition. We are the only Company who owns and operates its own factory in Canada. Hundreds of our salesmen are making big money here in the West. Now is the time to secure good Eastern territory.

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parts of the Province.

"A Resoldtion that the sun of one hundred and fifty dollars be given each County Association for Institute work. No action.

"A Resolution asking for an additional bonus of 5 p. c. per rod of ditch dug be given to each traction ditcher outfit operating in the Province. No action as no need of action. Government willing to assist buyers.

"MILK PRODUCTION"

was the theme of an excellent address by Prof. Trueman. Prof. Trueman is a convincing speaker, who confines his theories to what he has been able to accomplish in many years of actual practise. His address will appear in a future issue.

Prof. Trueman received a hearty welcome from the farmers of Nova Scotia. They are heart and hand with him in his work.

A REPORT OF DAIRYING IN NOVA SCOTIA

was given by W. A. MacKay, Dairy Supt. Mr. MacKay is doing things in Nova Scotia and he commands the confidence of every cow owner and dairyman in the province. His report will be published later.

ON WEDNESDAY EVENING

Mr. Geo. H. Barr, Chief of the Dairy Division, Ottawa, delivered an address on "Some Phases Affecting the Dairy Industry in Nova Scotia."

Mr. Barr took occasion to congratulate the Lunenburg farmers on the splendid creamery they are establishat Bridgewater. Extracts from his address will appear in a future issue of the Maritime Farmer.

WOMEN'S INSTITUTES

was the theme of a well prepared address by Miss Jennie A. Fraser, Superintendent of Women's Institutes for the Province. Miss Fraser received a well merited ovation and her work is sure to result in the betterment of the farm homes of the province. Read her address in our next issue. You will be convinced that Miss Fraser is the right woman in the right place, and that in appointing her to her present position, Prof. Cumming has exercised his usual good judgment in the selection of members for his staff.

THURSDAY MORNING

ELECTION OF OFFICERS

President—Wm. O'Brien, Windsor Forks.

Vice-President—A. S. McMillan, Antigonish.

Vice-President—R. S. Starr, Port Williams.

Directors—Samuel Freeman, Amherst; Wm. Murray, Union Centre; Wallace Rhodenizer, Bridgewater; D. R. Nicholson, Coxheath; D. C. McKay, Digby.

Auditors—Prof. J. P. Landry and Prof. J. M. Trueman, Truro.

Exhibition Commissioners—Howard Kennedy, Alma; and W. W. Black Amherst.

The meeting went on record as being ready to co-operate with the work that Miss Fraser is doing for the betterment of the homes of the province.

ON THURSDAY AFTERNOON

the Resolution Committee reported. After the resolutions which will be found below had been passed Prof. Cumming gave a talk on Stallion Enrollment and the work that has been so far accomplished along this line in Nova Scotia. He submitted the question of optional inspection to get the concensus of opinion of the members present. Considerable discussion took place but no decision was rendered.

Why Not Cut Off the Two Cars of Filler?

It takes 400,000 cars to carry American Fertilizers to our farmers and planters every season. Forty per cent.—2 cars out of 5—of this stuff is Filler, which requires 160,000 cars! Order less filler, higher grade and

Nitrate of Soda

for your active Nitrogen and save freight bills.

The greater productive capacity of high-grade fertilizers without so much filler means a greater outbound tonnage for railroads and greater purchasing power for farmers, so that railroads and everybody would be benefited.

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NO BRANCH OFFICES 25 Madison Ave., New York

"RENOVATION OF OLD ORCHARDS

was the subject of an interesting, instractive talk by Prof. P. J. Shaw, of the N. S. A. C. Extracts of his address will be published later.

ON THURSDAY EVENING

the first subject on the docket was an excellent address by W. W. Baird, Superintendent of the Nappan Experimental Farm, on Soil Cultivation. Extracts from Mr. Baird's address will appear in a future issue.

Prof. W. S. Blair, of the Kentville, Experimental Station gave a general talk on matters of interest to every farmer present. How to stop the leaks, that drain our farms of both fertility and of our young people was ably handled by Prof. Blair.

(Continued on page 308)

AGENCY HARAB FERTILIZERS Grow Bigger Crops MADE IN CANADA BY THE HARRIS ABATTOIR CO., LIMITED TORONTO

Progressive Jones Says:

"Watch for this Sign"

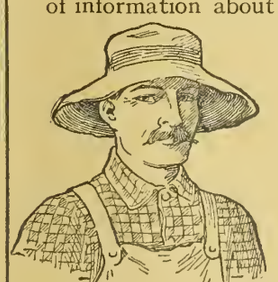
If you want to get right on the fertilizer question, friend, take my advice and visit the nearest agency for

Harab FERTILIZERS

You will know the Harab agency by the sign shown above. It will be found over the door of our dealer in your nearest town or village. Every agent is thoroughly posted about profitable fertilizing. I say here—that fertilizing the Harab way is like sowing pennies to harvest dollars, for it not only gingers up the present profits by providing a bigger crop—but also nourishes the soil for future dividends.

Every one of the Harab Fertilizers is a proven success—one of them is the right fertilizer for your soil and for the crop you wish to raise. Harab experts will give your enquiry individual attention. By their aid your proper fertilizer is easily selected.

The Harris Abattoir Company have an interesting booklet of information about their twenty-five successful fertilizers. Just write for a copy to-day—and keep a weather eye open for the Harab sign—visit the Harab agency.



Yours for bumper crops,
Progressive Jones

Fertilizer Department
The Harris Abattoir Co., Limited
Toronto

17

BENN & TURNEY CO., Limited, Woodstock, N. B.
General Agents in New Brunswick for Harab Fertilizers

Nova Scotia Dairymen in Annual Session

The second annual convention of the cheese factory and creamery men of Nova Scotia was held in the Agricultural College, Truro, during the term of the recent short course. There were about 25 men in attendance representing the dairy industry from one end of Nova Scotia to the other.

D. W. Murray, President of the Scotsburn Creamery was appointed chairman, and J. W. Hebb, Secretary Treasurer of the LaHave Creamery Company, Secretary.

Principal Cumming, Secretary of Agriculture gave a short address expressing his pleasure at the progress that dairying had made during the past year and of the excellent representative delegation that had gathered together to still further the interests and assured the convention of the continued support of the department to all that pertained to the advancement of dairying.

W. A. MacKay, Dairy Superintendent, gave a report of the year's work showing that the creamery output had increased about 50 per cent over the previous year. That three new creameries had commenced operation, and each had a successful season. The two new ones that began in 1912 had both trebled their output in 1913. At the present time there are three new ones under construction that will be ready for operations in the spring. A Dairy Herd competition was held the report of which will be published later.

A discussion took place on co-operation in buying supplies for the cheese factories and creameries, but no action was taken.

Mr. C. W. McDougal, Dairy Superintendent for New Brunswick gave an excellent talk and demonstration on the use of the acidimeter, showing the value of it in the manufacture of butter and cheese and advising all cheese factories and creameries to adopt it, during the coming season.

Mr. Harvey Mitchell, of the Dominion Dairying service dwelt on the importance of the improvement of dairy herds, this being the vital part of the dairy industry. He pointed out the assistance that was being rendered by the Department in the contesting work and asked for the support of all the factory men towards making the work more general.

Mr. Robert T. Stewart, the sec.-manager of the Scotsburn Creamery Company, Limited, dealt with creamery book-keeping in a most efficient manner, dealing fully with the system as adopted by the Scotsburn Creamery and recommending the advisability of all creamery and cheese factory men adopting some such system thus ensuring more confidence in the business and one of the principles that go to make creamery work a success.

Good discussions followed all the addresses and much good was derived from all meeting together.

As this was the second convention gathered together by the Dairy Superintendent, it was considered wise to now make this an annual affair and that the dairymen become united it was decided to organize an association to be known as the Nova Scotia Dairymen's Association. The following officers were appointed:

President—D. W. Murray, President Scotsburn Creamery , Scotsburn N. S.

Vice-President—R. B. McLennan, Manager Brookfield Creamery, Brookfield.

Secretary—W. A. MacKay, Truro, N. S.

These three to form the executive and arrange for the next annual meeting.

Votes of thanks were passed to Messrs. C. W. McDougal and Harvey Mitchell for the excellent addresses and after passing the following resolutions the convention adjourned, all of the one mind that dairying was coming to its own in Nova Scotia.

Your Resolution Committee beg to submit for your consideration:

That this Nova Scotia Dairymen's Convention here assembled desire to place on record their appreciation of the valuable work done by the Dairy Division of the Dominion Department of Agriculture in connection with the work of herd improvement and realizing that the production end is the weakest part of the dairy business in Nova Scotia, we would urge upon the Department the importance of extending the work, and that a copy of the resolution be forwarded to Mr. J. A. Ruddick, Dairy Commissioner, at Ottawa.

(Signed) W. A. MacKay, F. W. Bishop, Robt. Stewart, Resolution Committee. 1

* * *

Resolved, that the Convention here assembled desires to express its appreciation of the services rendered during the past year by Mr. Harvey Mitchell, of the Dairy Division at Ottawa, to the dairying in the Province and wishes that a copy of this resolution be forwarded to Mr. J. A. Ruddick, Commissioner at Ottawa.

* * *

Resolved, that this Convention here assembled desires to express its appreciation of the fact that out of the Dominion Grant an amount has been set aside for Dairy Education and further of the excellent results that have occurred from the expenditure of same and further resolved that a copy of this resolution be forwarded to Hon. Martin Burrell, Minister of Agriculture and Dr. C. C. James, Agricultural Adviser at Ottawa.

* * *

Resolved, that having been asked to mave suggestions as to the most effective educational work that could be done for the advancement of dairying in Nova Scotia, we are convinced that nothing would be equal to a competition for the highest production of milk and butter fat of herds supplying milk and cream to the various cheese factories and creameries in Nova Scotia, and that we would recommend that, if the Act could be interpreted as bringing a Competition of this kind within the scope of Dairy Education, a sum not to exceed $500.00 be set aside and apportioned to the various factories for this purpose.

* * *

Resolved, that the suggestions outlined in the discussions of this afternoon respecting Legislation be approved by this Convention.

* * *

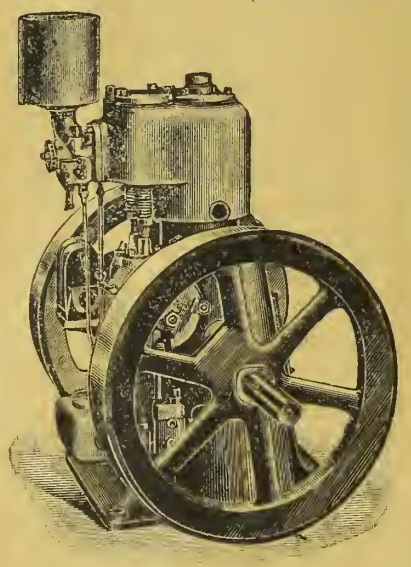
Resolved, that we approve of the suggestiob of our Dairy Superintendent, Mr. W. A. MacKay, that a practical butter and cheese maker be appointed as Assistant Instructor and Inspector, whose time will be employed, in so far as may be desirable in assisting in our factory operations.

* * *

Resolved that this Convention appreciate the deep interest taken by our Provincial Government in the

DON'T take our word only, but examine the Lister Engine at work alongside any other, compare its quality, efficiency, economy—In a word, let the engine speak for itself and you will become another delighted user of

THE LISTER
GASOLINE ENGINE
(British Made Throughout)



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Fitted with phosphor-bronze bearings throughout, the best money can buy.

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In a word, the best quality engine ever seen in Canada

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Now think! That claim must either be true or not true. Twelve hundred Canadian families proved its truth to their own satisfaction last year. They made a thorough investigation, and satisfied themselves beyond any reasonable doubt, that the

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was one of the world's few great instruments — by all odds the world's best piano at the price. So they endorsed our claim in a practical manner by buying 1,200 Sherlock-Manning pianos. If you are thinking about buying a piano why not investigate our claims for yourself! Just write, asking us to prove two points to you: First, that the Sherlock-Manning is "Canada's Biggest Piano Value" Second, that the Sherlock-Manning is one of the world's best pianos.

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This is the season of the year when mothers feel very much concerned over frequent colds contracted by their children, and have abundant reason for it as every cold weakens the lungs, lowers tne vitality and paves the way for the more serious diseases that so often follow. Chamberlain's Cough Remedy is famous for its cures, and is pleasant and safe to take. For sale by all dealers.

Dairy interests of our Province, and the excellent work being done by our Dairy Superintendent, Mr. W. A. MacKay, who is untiring in his efforts in that direction, and especially Principal Cumming, whose zeal is a constant inspiration to the farmers and under whose inspiration as Secretary for Abriculture, our Province is making rapid strides.

(Signed) F. W. Bishop, Robert Stewart.

A Convert to Better Feeding.

Editor The Maritime Farmer:—

The recent Annual meeting held in Bridgewater, was, without doubt the best ever held. Each speaker had something to say, that would very materially help any farmer who had a mind receptive enough to grasp the truths and who would try to help himself. Prof. Trueman's address on Breeding and Feeding the dairy cow was the best I ever listened to and since I returned home I have decided to put in practice some of the ideas set forth in his address. I concluded that it would be a wise move for us to better feed the cows we have before going out to buy high priced cows.

Many people think that if they coufd get a pure bred dairy cow they would get all the milk and butter they would wish for. Yet these same people would not treat a pure bred cow any better than a scrub. They would run her out of doors eating old fag until the ground freezes up and when they stable her they feed nothing but hay that is of such poor quality that it is not good enough for the horse and the oxen. As a result they only get a very small flow of milk and very soon they condemn the breed.

I have a ten-year-old Jersey cow that has raised eight calves, seven of which were heifers. One of these heifers, at four years of age made by actual test in the month of February fifty-two pounds of butter. The old cow has been making over three hundred pounds of butter each year. She freshened on the first of October, 1913 after which she gave thirty lbs. of milk each day for four months.

After using milk and cream for the family we have churned one hundred and ninety-six pounds of butter. How is that for a scrub cow, on half feed? I have started to increase her feed and in two days she has increased her milk flow by two pounds which is a clear indication to us that she will respond to more generous feeding.—W. R. Barss, Lunenburg Co. N. S.

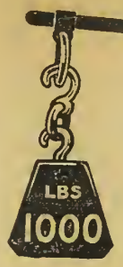
Editor's Note:—Our friend Mr. Barss has a good cow and we will be pleased to hear later as to the extent to which she responded to better feeding. Let us have experiences along this line from some other readers.

C. P. R. Farm at Fredericton Junction Under new Management.

Mr. A. A. Campbell, of Quebec, an expert agriculturist has been appointed manager of the C. P. R. demonstration farm at Fredericton Junction and will take over his new duties immediately.

Mr. Wm. Illingworth, who has been manager of the farm since it was taken over by the C. P. R. recently resigned.

The control of the demonstration farm is now vested in Dr. Ruther, ford, the director of the C. P. R.'s animal husbandry division, who visited Fredericton Junction with other C. P. R. officials a week or two ago.



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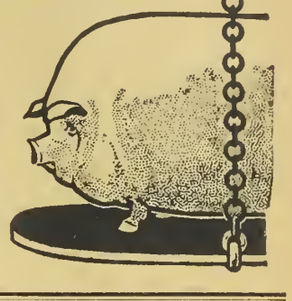

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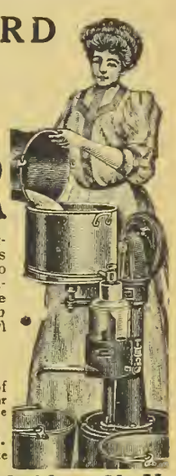

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LIVE STOCK.

Keeping Pigs Healthy.

In conversing with farmers upon the subject of pig raising at least cost and highest profit, I find that the experience of most of the farmers engaged in this pursuit is that it is more difficult to raise and finish pigs profitably in winter than in spring: it is harder to keep them healthy and pushing up to the high mark of the finished proddct at this time. We have found this to be true in our experience. Provisions to lessen the difficulty often are not so far distant but what we might grasp and ultilize them to our profit if we only thought of them.

Contrive to keep pigs comfortable and they will grow into money right along. If they are not comfortable, they cannot be as healthy as they be. If you wish to keep them at this point there are three positions from which you must accomplish it, sleeping quarters, feed lot, and range, each one of which has its particular function to perform.

SHELTER, OR SLEEPING QUARTERS FIRST.

I mention this first, for, if pigs are not properly sheltered, the feed lot (which, by the way, should be feeding floor) is worth little and any quantity of valuable feed is wasted, with corn worth from 70c to 80c per bushel, too.

At this point, mistakes are often made. We have made them ourselves, and so that others may profit by ours I shall write of them. The beginning of the mistakes were in usin a portable pen on runners which we made. It had a broad floor, was tightly sided, sloping to the rear with door in front, pen very low and about ten or twelve feet in length. Cozy, snug and warm, were our satisfied thoughts of the thing.

We lodged twenty pigs just weaned in that pen, and, though the snow was piled high and the cold severe, we were satisfied that our pigs were snugly housed. In spite of this the pigs began to drop and half of them died, but not before we changed them to different quarters.

Disease has fastened itself upon them. It was some plumonary disease. The mistakes were: Too many pigs in pen of small dimensions, pen was to close and too warm, circulation of air imperfect, air became foul and diseased, pigs overheated, came out into snow and cold air to get their feed and caught cold and half of their number was reduced in thrift and stamnia, and the other half died because of our mistakes.

Another foolhardy thing is to allow pigs, or hogs to nest in a strawstack or a heated manure heap during the night and then in the morning rush out steaming and sneezing into the cold air. If you allow such conditions to exist don't be surprised if some plumonary disease which finally proves fatal, is contracted. Dry bedding often changed, in dry quarters, warm, yet with a free circulation of air, is what is required by pigs in winter.

THE FEED LOT OR FEEDING FLOOR.

All farmers that raise pigs should have a feeding floor for sanitary reasons and the saving of feed as well. I have seen corn thrown into feeding pens knee deep to the hogs in mud, and the hogs were obliged to root after it up to their eyes. Corn "coated" with mud is a nasty pill to swallow and profit is hard to dig out of the mire.

A good feeding floor without those distressing little leaks in it will save the farmer more feed in a year than it cost him to maintain the floor, not considering the more rapid gain and heavier weight of the hog at its finish.

THE RANGE.

Pigs certainly need exercise. It is absolutely necessary for the maintenance of their health, for the prevention of that common ailment thumps, with which the farmer has to contend. This is caused by overfeeding and lack of exercise—activity insufficient to work it off.

Sows that are fed corn while nursing pigs are apt to produce thumps in their young, especially if held in close confinement. Corn should not be fed to nursing sows to any great extent but slops of a laxative nature should be given which will cause the bowels to be active in the small pigs.

The crop of pigs depends largely upon the care of the brood sow. The origin is the basis which determines what subsequently shall be, thus it is advisable to breed only from prolific stock. Out of the many types of brood sows those should be selected that show strong indication of a large growth and promises fair of having, when needed, ample room to carry big litters. The kind that have the reputation of being from a prolific and easy keeping family.

Usually the homliest sows prove to be the most prolific and best mothers.

The kind that are closely built and chubby, with no stretch of size, are the kind the experienced hog raiser discards if large litters are desired more than showy stock, for he knows that this type does not farrow big litters as a rule. But the sow, however ugly looking she may be, that has a large and even litter of pigs at her side takes my eye as the good sow, and the vast majority of farmers have found this type to be truly "the mortgage lifter" of the farm.

The experienced pig raiser is not above counting the teats of the sow he anticipates breeding. He knows that if she is to produce large litters she must have a sufficient number of teats. It will not avail anything for her to have more pigs than she can suckle. He also looks carefully into the matter of disposition. He does not care ta have a sow that has farrowed a large litter, kill the majority of them through her nervousness or viciousness, or to be so clumsy that she will lie down on them and kill some in that way.

Briefly, here are a few essentials that are the price of profit in hog raising, such as cleanliness, exercise, sunlight, perfect ventilation, dry quarters, and a balanced ration of feed with plenty of water as pure as can be had, charcoal, wood ashes and salt. If we are careful as to these, seeing that they are provided I cannot see why we should not succeed in this pursuit as well as the most experienced of them.—J. A. Fraiser.

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No matter whether you grow large or small quantities of potatoes we have a size of planter that is just what you need. The Eureka line of Potato Planters is the largest manufactured. This machine takes only *one* man to operate it. That means less trouble and expense for *you*.

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TO MY READERS:

Of the little illustrated advice book described below, which I gladly send free to all men who fill in the coupon. I beg to say that it represents the very BEST information of a private nature which I am able to offer you as a result of over 30 years' observation and study of my subject, during which time I have personally interviewed many thousands of men, young and elderly, single and married, rich and poor alike, who came to me in confidence with their confessions of debility, lost nerve force and failing strength.

It is, reader, this vast and unusual opportunity which has enabled me to compile this very popular and valuable little free book (over a million of which have been sent everywhere to men who wrote me for them), and in a manner to reflect the exact living, breathing experiences and needs of real men who sought information as to the newer ways of self treatment without the use of drugs.

Remember, this book of over 8000 words and 30 illustrations will come to you by return mail in reply to your request, and in a perfectly plain, sealed envelope, for it is no one's business but your own what the envelope contains. There is absolutely no obligation on your part to buy anything or pay anything, and merely the receipt of this book which does not mean in any way that you are to use one of my VITALIZERS (see description below) and, in fact, only a portion of the book has any reference to the VITALIZER at all. Primarily it is a compendium of useful information for private reference, which you and all other men may easily profit by through life.

Therefore, please use the coupon, or if nearby, I should be very glad to have you call.

SANDEN, AUTHOR.

MANLY MEN MOVE THE WHOLE WORLD

It is a fact, reader, which you and I must recognize and admit, that the whole world admires and is fascinated by strong, vigorous, husky, manly manhood, and we must also admit that it is this same manhood and this alone which is back of the real leaders and producers in every walk of life. No matter where we go, we find it to be the manly, vigorous, vital fellow who forges to the front, who fascinates men and women of his community, who does the really great things. An unmanly man merely means nature's laws gone wrong, for it is he who halts and hesitates, who takes the back seat, who does not fit into the picture in a way that a manly, vital nature should. And yet, reader, it is my firm believe that any man, no matter what his past, no matter what dissipations or follies may have left their mark upon his physical and mental being, I say to you that such a man, unless there be some unusual reason, may hope for a complete return of his strength, vigor and self confidence, if he but go about his self restoration in a natural commonsense way.

I make a little appliance which we will call a VITALIZER, because I think that is the best word to describe its strange power. I don't want you to think of getting one of these VITALIZERS just now, but I would like you to investigate my claims as to what I believe can be accomplished by almost any weakened man who uses this VITALIZER faithfully for a few weeks. I speak, of course, of him who is willing to give up dissipation and lead a decent, conservative life, not only while using the VITALIZER, but for the future. The other kind of man, the dissipated, can hope for nothing from any treatment, no matter what it may be, hence such a man is eliminated from my consideration.

This little VITALIZER is made to wear upon the body all night. It weighs only several ounces and is no more unhandy than any ordinary belt, yet it generates a great FORCE that I call VIGOR, which flows inio your blood organs and nerves while you sleep. Men say it often takes any pain or weakness out of the back in one application, and that 60 to 90 days' use has been sufficient to restore manly strength and to put men in the "never felt better in my life" class. Special attachments carry the FORCE of the VITALIZER to any part of the body, for the use of women as well as men in cases of rheumatism, kidney, liver, stomach, bladder, disorders, ete.

Over two hundred thousand of these VITALIZERS have been used or are now being used by men all over the world.

You had better learn more of this VITALIZER. It is fully described in my free book. If you live near me, why not call and test the VITALIZER yourself.

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The free illustrated advice booklet mentioned above is meant to be a single declaration of certain important truths that every man in the world should know. The day has gone by when men are kept in ignorance of the real problems pertaining to these private subjects, and this illustrated advice booklet, which I send to men sealed, by mail, gives certain important facts relating to sex, just as these facts are. The booklet also fully describes my VITALIZER and you are told how you may get one for your own use if you decide that you want one. Please use coupon below, or call. Hours 9 to 6.

DR. M. F. SANDEN,
140 Yonge St., Toronto, Ont.

Dear Sirs,—Please forward me your book, as advertised, free, sealed.

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Foot-Rot in Sheep.

There are two forms of foot-rot, one contagious, one mechanical; the latter is due to injury of feet from decay, cuts or bruising, by which means soil and filth gain an entrance and set up inflammation of the sensitive strictures of the foot, from which pus is usually discharged. The injury may be caused by long drazing on low-lying pastures or by the animal stepping on shrap or rough objects. This latter is the common form. It only affects comparatively

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The Maritime Farmer
SUSSEX, N. B.

few animals in the flock. The treatment for this form of foot-rot consists first in carefully trimming the foot or feet. If pus has formed, give an exit for it at the lower surface of the foot, and apply an antiseptic foot poultice, such as bread, upon which a weak solution of Jeyes' fluid has been sprinkled. The recovery is usually soon with attention.

CONTAGIOUS FOOT-ROT.

The contagious form of foot-rot is quite different, and is far more serious, but it can be prevented, and is amenable to treatment. It is primarily due to the entrance of necrotic bacteria into soft structures of the foot. It spreads from sheep to sheep causing lameness, loss of flesh and even death. It first shows itself in a small, moist, unhealthy sag between the toes. This rapidly extends from above downwards, and may extend to two, three or even all four feet. The horn becomes broken, and the discharge attracts flies, eggs and larvae, which develop in the wound, or on the fleece which has come in contact with the discharge.

PREVENTION.

If noticed early, the disease should not get beyond control. Examine all fresh arrivals for lameness, isolate at once from the rest of the herd any animal showing the least sign of disease affecting the skin between toes. The shepherd should disinfect his hands, and also the sheepfold, and the manure and a few inches of surface soil should be removed and ploughed into the land, and the pastures given a rest until a winter's frost has sweetened it. A foot bath is more effectual than a dressing. Even the apparently healthy sheep every second day should be put through a shallow bath, and this is to be continued for a fortnight after the last case is detected.

TREATMENT.

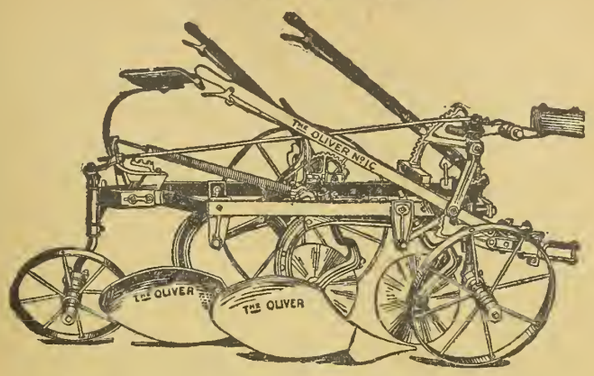
After cleansing the affected foot, cut off all detached horn, so as to expose all the diseased tissue (trimmings burn or bury deeply). If much has to be cut away apply clean tow saturated with a weak antiseptic lotion, keep it in position with a properly adjusted bandage to keep out filth and wet. Later on a dry dressing of one part of chinosol, one part of burnt alum, and six parts of powdered Fuller's earth, applied once daily on cotton wool, and protected with suitable coverings, will quickly effect a cure.

The directions for bath are as follows:—Make a bath of wood or concrete, 16 ft. long, 8 in. wide, sides sloping out, provided with cross pieces to prevent slipping, and side-fences boarded to admit sheep walking easily through.

The solution is made by dissolving 1 lb. of powdered sulphate of copper to each gallon of water. Although somewhat slow of solution, stirring and using warm water in the first instance will hasten it (for prevention half this strength will saffice). Pare the hoofs first, when necessary, so that the solution can come in direct contact with all the parts.

PRECAUTION.

Choose a day when grass and soil are dry. Remember the bath is poisonous, and take care the stock cannot get access to it. If ewes are treated, put them through the bath quietly, so that the teats are not splashed or wetted, as this is likely to make lambs ill. Do not hurry sheep through the bath. The object is only to wet the feet. If the wool becomes damped with the solution it may discolour it. This bath repeated at frequent intervals will effect a cure. The sheep should remain in the bath for about five minutes.—Southern Vet.

Oliver Plows


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SUSSEX, - - N. B.

THE HORSE.

Harness Galls and Sores.

Harness galls and sores are likely to occur on various parts of the horse's body, including the shoulders and neck, where they are caused by the pressure of the collar, and on the back or withers underneath the harness-pad, and on the brisket just behind the elbow, owing to the tender skin at this part getting chafed by the girth or belly-band; and, occasionally, on the sides, where these are touched by the traces, but their occurrence in this last position is comparatively rare. Shoulder galls are by far the most common kind, and usually, also, the most objectionable.

A BADLY FITTING COLLAR.

They are principally the result of a badly fitting collar; hence it is always important to see that the collar fits a horse in a proper manner. When the same set of harness is used for different horses in a stable, as sometimes happens, there should, at any rate, be provided a separate collar for each horse, for although the rest of the harness may fit them well enough, or can be readily adjusted to suit their respective size or shape, the same collar is hardly likely to fit them satisfactorily, while any adjustment of it is, of course, impossible. An unduly large collar is particularly liable to wring the shoulders, on account of its fitting so loosely that, instead of lying firmly in position, as a well-fitting collar does, it tends continually to shift about on them, which may easily result in the skin being rubbed sore. Galling is less likely to be caused by a collar that is to small, although this frequently gives rise to the trouble, while there is the special objection that it is apt to have a choking effect on the horse and impar its working powers. Apart, however, from badly fitting collars, there are other causes which are often responsible for sore shoulders, and the evil occurs in plenty of cases, even when the collar is a perfect fit.

DEFECTIVE COLLAR LINING.

Thus it sometimes results in consequence of the leather collar lining having got very hard, and perhaps even ridged. But this is very easily guarded against by periodically well oiling the inside of the collar, so as to keep the leather lining soft and pliable. Neatsfoot oil is the most suitable for the purpose. This precaution should be observed as a matter of course in every stable. In the case of collars lined with serge, most ly used for lining carthorse collars, the fact of the lining still being wet with sweat absorbed on the previous day may induce sore shoulders. For this reason it is incumbent to hang such collars in an airy place, so that they may dry properly, while it is desirable from time to time to put them out to air in the sun or wind and afterwards to beat and brush the lining well in order to remove the scurf and dried sweat adhering to it, and so to keep it soft and clean. As soon as the serge lining becomes defective, the collar should be re-lined.

TO RELIEVE FROM PRESSURE.

When a horse's shoulder is rubbed sore the galled place may be relieved from pressure by attaching a pair of pads to the collar, one pad being fastened to it just above the sore, and the other just below it. This will serve to keep the collar of the wound. Pads especially made for this purpose, and which strap into the collar, can be obtained from a harness-maker, but they are often improvisioned at home, and tied on with tapes. One must be careful however, to see that no galls arise under the pads, as is rather liable to happen if they are used for any length of time, because of the extra pressure which they cause. A rough-and-ready expedient sometimes adopted is to cut into and hollow out a suitably sized hole in the stuffing where it would press upon the injured place. This plan answers well enough as a temporary measure in slight cases. Very often a breast collar—also sometimes referred to as a Dutch collar—will come in usefully when a horse is suffering from sore shoulders, for it may leave the galled part or parts entirely untouched, in which the animal can temporarily worked in it without experiencing any inconvenience until the galls are healed. There are some horses which are afflicted with an inherent or special susceptibility to have their shoulders wrung by the collar, and which, in consequence, are constantly giving trouble on this account. In a case of this kind, recourse may be had to a false collar, made of leather or thin felt, which is worn underneath the collar. This expedient will often prevent any trouble. Another plan that may be

A GREAT SCANDAL

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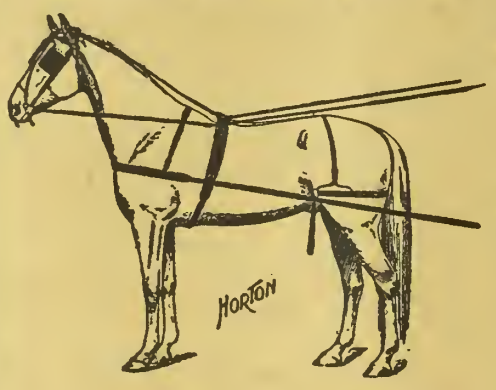

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tried is to use a zinc-lined or galvanised iron collar, which sometimes suits tender-shouldered horses very well; while in the last resort a remedy may possibly be found by substituting a breast collar for the ordinary pattern. When there is a special tendency for the neck or withers to be chafed by the collar, a zinc-collar pad, which is fastened on the inside of the collar at the top, will in a certain proportion of cases prove a successful remedy.

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The main cause of sores on the back underneath the harness-pad consists in the latter being girthed up to tightly, so that it exerted an undue degree of pressure. This particular trouble is thus, as a rule, entirely avoidable with care. There is no need to tighten up the girth-band in an excessive manner, and a moderately firm adjustment of the pad is all that is required, for it does not readily shift or slip. If, however, as sometimes is the case, a horse should show a special liability to become galled at this part in spite of the harness-pad being comparatively loosely adjusted, it will be advisable to let the animal wear a thin leather or felt pad underneath it. Galls on the brisket frequently tend to be extremly troublesime, in some cases being even more so than bad collar galls. Some horses possess a constitutional tendency to suffer from them. The remedy for this trouble is to keep the girth and belly-band off the part that is chafed, or liable to become so, by strapping them back by means of a specially made narrow strap. This is provided with a loop at one end, through which the girth and belly-band are slipped, while the other end buckles into the breeching stop on the shaft. Very often a piece of twine is used as a makeshift for this purpose, and this may do as a temporary expedient, though it is apt to break, even when pretty strong, as a result of the strain upon it, and as the fact of this having happened cannot be observed by the driver while seated in the vehicle, it may easily happen in these circumstances that at on returning to the stable the old sore is found to have been badly chafed again by the girth-band, while all the time the driver may have believed that the latter was being held clear of it by the sting. If the skin is chafed at any part by a trace, several thicknesses of flannel or soft wash-leather should be smoothly wrapped round and securely sewn on to the trace at the place where it chafes.

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When they are first put into harness, young horses are particularly liable to be galled by the harness, because their skin is not accustomed to the pressure and friction caused by the collar, pad, etc. Horses just up from the grass are also specially susceptible to suffer from this trouble because of their soft condition. The fact of a horse's system being in a heated state, or "humoury," in another predisposing cause of harness galls and sores, while some horses are usually prone to them, owing to their skin being specially sensitive and delicate. In all these cases it is a useful plan, in order to harden the skin, to bathe the parts exposed to galling twice or thrice a day with a saturated solution of alum, while a lotion consisting of bluestone (copper sulphate), dissolved in water (at the rate of 5 grains to an ounce of water), may also be recommended for use as a toughening agent and to counteract any tendency on the part of the skin to become chafed. Two simple remedies for abrasions and sores caused by the harness are oxide of zinc ointment and Goulard's extract, the latter making a very good wash.—Argus.

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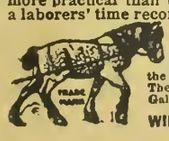

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Prize by J. J. Stewart, of one bushel of wheat, for best Barred Rock, cock and hen—won by L. H. D. Foster.

Prize by Ed. Saunders of 25 lbs. cut bone, for best White Wyandotte cock and hen—won by G. Lightizer.

Prize by L. C. Worthy, of pound cake, for best pair Rhode Island Red Pullets won by A. Nelson.

Prize by Rogers Hardware Co., of one razor, for best Buff Leghorn, cock, hen, cockerel and pullet—won by G. Chilton.

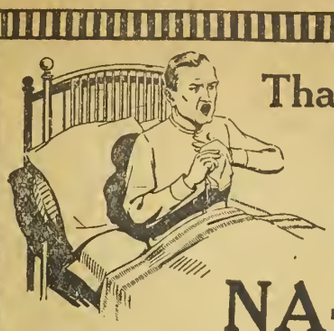
Prize by W. W. Walker, of $2.50 gold piece for best Black Minorca male and female—won by W. J. Cudmore.

Prize of $2 by H. Lapthorne, for best Brown Leghorn breeding pen—won by H. Lapthorne.

Prize of $1 by Jos. Crabbe, for best Ancona cock and hen—won by J. Whitlock.

Prize of $1 by Nelson Whitlock for

(Cantinued on page 309)



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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. adies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

On these occasions Mr. Dick never travelled without a leathern writing-desk, containing a supply of stationary and the Memorial; in relation to which document he had a notion that time was beginning to press now, and that it really must be got out of hand.

Mr. Dick was very partial to ginger bread. To render his visits the more agreeable, my aunt had instructed me to open a credit at a cake-shop, which was hampered with the stipulation that he should not be served with more than one shilling's-worth in the course of any one day. This, and the reference of all his little bills at the county inn, where he slept, to my aunt, before they were paid, induced me to suspect that he was only allowed to rattle his money, and not to spend it. I found on further investigation that it was so, or at least there was an agreement between him and my aunt that he should account to her for all his disbursements. As he had no idea of deceiving her, and always desired to please her, he was thus made chary of launching into expense. On this point, as well as on all other possible points, Mr. Dick was convinced that my aunt was the wisest and most wonderful of women; as he repeatedly told me with infinite secrecy and always in a whisper.

"Trotwood," said Mr. Dick, with an air of mystery, after imparting this confidence to me, one Wednesday; "who's the man that hides near our house and frightens her?"

"Frightens my aunt, sir?"

Mr. Dick nodded. "I thought nothing would have frightened her," he said, "for she's—"here he whispered softly, "don't mention it—the wisest and most wonderful of women." Having said which he drew back, to observe the effect which this description of her made upon me.

"The first time he came," said Mr. Dick, "was—let me see—sixteen hundred and forty-nine was the date of King Charles execution, I think you said sixteen hundred and forty-nine?"

"Yes, sir."

"I don't know how it can be," said Mr. Dick, sorely puzzled and shaking his head. "I don't think I am as old as that."

"Was it in that year that the man appeared, sir?" I asked.

"Why, really," said Mr. Dick, "I don't see how it can have been in that year, Trotwood. Did you get that date out of history?"

"Yes, sir."

"I suppose history never lies, does it?" said Mr. Dick, with a gleam of hope.

"Oh dear, no, sir" I replied, most decisively. I was ingenious and young, and I thought so.

"I can't make it out," said Mr. Dick, shaking his head. "There's something wrong, somewhere. However, it was very soon after the mistake was made of putting some of the trouble out of King Charles's head into my head, that the man first came. I was walking out with Miss Trotwood after tea, just at dark, and there he was, close to our house."

"Walking about?" I inquired.

"Walking about?" repeated Mr. Dick. "Let me see. I must recollect a bit. N—no, no; he was walking about."

I asked, as the shortest way to get at it, what he was doing.

"Well, he wasn't there at all." said Mr. Dick, "until he came up behind her, and whispered. Then she turned round and fainted, and I stood still and looked at him, and he walked away; but that he should have been hiding ever since (in the ground or somewhere), is the most extraordinary thing!"

"Has he been hiding ever since?" I asked.

"To be sure he has," retorted Mr. Dick, nodding his head gravely. "Never came out, till last night. We were walking last night, and he came up behind her again, and I knew him again."

"And did he frighten my aunt again?"

"All of a shiver," said Mr. Dick, counterfeiting that affection and making his teeth chatter. "Held by the pailings, Cried. But Trotwood, come here," getting me close to him, that he might whisper very softly; "why did she give him money, boy, in the moonlight?"

"He was a beggar, perhaps."

Mr. Dick shook his head, as utterly renouncing the suggestion; and having replied a great many times, and with great confidence, "No beggar, no beggar, no beggar, sir!" went on to say, that from his window he had afterwards, and late at night, seen my aunt give the person money outside the garden rails in the moonlight, who then slunk away—into the ground again, as he thought probable—and was seen no more; while my aunt came hurriedly and secretly back into the house, and had, even in the morning, been quite different from her usual self; which preyed on Mr. Dick's mind.

I had not the least belief, in the outset of this story, that the unknown was anything but a delusion of Mr. Dick's, and one of the line of that ill-fated Prince who occasioned him so much difficulty; but after some reflection I began to entertain the question whether any attempt, or threat of an attempt, might have been twice made to take poor Mr. Dick himself from under my aunt's protection, and whether my aunt, the strength of whose kind feeling towards him I knew from herself, might have been induced to pay a price for his peace and quiet. As I was already much attached to Mr. Dick, and very solicitous for his welfare, my fears favored this supposition; and for a long time his Wednesday hardly ever came round, without my entertaining a misgiving that he would not be on the coach-box as usual. There he always appeared, however, grey-haired, laughing, and happy; and he never had anything more to tell of the man who could frighten my aunt. ...

...These Wednesdays were the happiest days of Mr. Dick's life; they were far from being the least happy of mine. He soon became known to every boy in the school; and though he never took an active part in any game but kite-flying, was as deeply interested in all our sports as any one among us. How often have I seen him, intent upon a match at marbles or peg-top, looking on with a face of unutterable interest, and hardly breathing at the critical times! How olten, at hare and hounds, have I seen him mounted on a little knoll, cheering the whole field on to action, and waving his hat above his grey head, oblivious of King Charles the Martyr's head, and all belonging to it! How many a summer hour have I known to be but blissful minutes to him in the cricket-field! How many winter days have I seen him, standing blue-nosed, in the snow and east winds, looking at the boys going down the long slide, and clapping his worsted gloves in rapture!

He was a universal favorite, and his ingenuity in little things was transcendent. He could cut oranges into such devices as none of us had an idea of. He could make a boat out of anything, from a svewer upwards. He could turn crampbones into chessmen; fashion Roman chariots from old court cards; make spoked wheels aut of cotton reels, and birdcages of old wire. But he was greatest of all, perhaps, in the articles of string and straw; with which we were all persuaded he could do anything that could be done by hands.

Mr. Dick's renown was not long confined to us. After a few Wednesdays, Doctor Strong himself made some inquiries of me about him, and I told him all my aunt had told me; which interested the Doctor so much that he requested, on the occasion of his next visit, to be presented to him. This ceremony I performed; and the Doctor begging Mr. Dick, whenever he should not find me at the coach office, to come on there, and rest himself until our mornings work was over, it soon passed into a custom for Mr. Dick to come on a matter-of course, and, if we were a little late, as often happened on a Wednesday, to walk about the courtyard, waiting for me. Here he made the acquaintance of the Dactor's beautiful young wife (paler than formerly, all the time; more rarely seen by me or anyone, I think; and not so gay, but not less beautiful), and so became more and more familiar by degrees, until, at last, he would come into the school and wait. He always sat in a particular corner, on a particular stool, which was called "Dick," after him; here he would sit, with his grey head bent forward, attentively listening to whatever might be going on, with profound veneration for the learning he had never been able to acquire.

This veneration Mr. Dick extended to the Doctor, whom he thought the most subtle and accomplished philosopher of any age. It was long before Mr. Dick ever spoke to him otherwise than bareheaded; and even when he and the Doctor had struck up quite a friendship, and would walk together by the hour, on that side of the courtyard which was known among us as the Doctor's walk, Mr. Dick would pull off his hat at intervals to show his respect for wisdom and knowledge. How it ever came about, that the Doctor ever began to read out scraps of the famous Dictionary, in these walks, I never knew; perhaps he felt it all the same at first, as reading to himself. However, it passed into a custom too; and Mr. Dick, listening with a face shining with pride and pleasure, in his hearts of hearts believed the Dictionary to be the most delightful book in the world.

As I think of them going up and down before those school-room windows—the Doctor reading with his complacent smile, an occasional flourisn of the manuscript, or grave motion of the head; and Mr. Dick listening, enchanted by interest, with his poor wits calmly wandering, God knows where, upon the wings of hard words—I think it as one of the pleasantest things, in a quiet way, that I have ever seen. I feel as if they might go walking to and fro forever, and the world might somehow be the better for it. As if a thousand things it makes a noise about, were not one half so good for it or me.

Agnes was one of Mr. Dick's friends very soon; and in often coming to the house, he made friends with Uriah. The friendship between himself and me increased continually, and it was maintained on this odd footing: that, while Mr. Dick came professedly to look after me as my guardian, he always consulted me in any little matter of doubt that arose, and invariably guided himself by my ad-

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Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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"I began taking Lydia E. Pinkham's Vegetable Compound and am now in good health. If it had not been for that medicine I would have been in my grave a long time ago."—Mrs. ARTIE E. HAMILTON, R. F. D. No. 6. Warren, Ind.

Another Case.

Esmond, R. I.—"I write to tell you how much good your medicine has done me and to let other women know that there is help for them. I suffered with bearing down pains, headache, was irregular and felt blue and depressed all the time. I took Lydia E. Pinkham's Vegetable Compound and commenced to gain in a short time and I am a well woman today. I am on my feet from early morning until late at night running a boarding house and do all my own work. I hope that many suffering women will try your medicine. It makes happier wives and mothers."—Mrs. ANNA HANSEN, Esmond, Rhode Island.

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vice; not only having a high respect for my native sagacity, but considering that I inherited a good deal from my aunt.

One Thursday morning, when I was about to walk with Mr. Dick from the hotel to the coach-office before going back to school (for we had an hour's school before breakfast), I met Uriah in the street, who reminded me of the promise I had made to take tea with himself and his mother: adding, with a writhe, "But I didn't expect you to keep it, Master Copperfield, we're so humble."

I really had not been able to make up my mind whether I liked Uriah or detested him; and I was very doubtful about it still, as I stood looking him in the face in the street. But I felt it quite an affront to be supposed proud, and said I only wanted to be asked.

"Oh, if that's all, Master Copperfield," said Uriah, "and it really isn't our humbleness that prevents you, will you come this evening? But if it is our humbleness, I hope you won't mind owning to it, Master Copperfield; for we are all well aware of our condition."

I said I would mention it to Mr. Wickfield, and if he approved, as I had no doubt he would, I would come with pleasure. So, at six o'clock that evening, which was one of the early office evenings, I announced myself as ready, to Uriah.

"Mother will be proud, indeed," he said, as we walked away together. "Or she would be proud, if it wasn't sinful, Master Copperfield."

"Yet you don't mind supposing I was proud this morning," I returned.

"Oh dear, no, Master Copperfield!" returned Uriah. "Oh, believe me, no! Such a thing never came into my head! I shouldn't have deemed it at all proud if you had thought us too humble for you. Because we are so very umble."

"Have you been studying much law lately?" I asked, to change the subject.

"Oh, Master Copperfield," he said, with an air of self-denial, "my reading is hardly to be called study. I have passed an hour or two in the evening, sometimes, with Mr. Todd."

"Rather hard, I suppose?" said I.

"He is hard to me, sometimes," returned Uriah. "But I don't know what he might be, to a gifted person."

After beating a little tune on his chin as he walked on, with the two forefingers of his skeleton right hand, he added:

"There are expressions, you see, Master Copperfield—Latin words and terms—in Mr. Todd, that are trying to a reader of my humble attainments."

"Would you like to be taught Latin!" I said, briskly. "I will teach it to you with pleasure, as I learn it."

"Oh, thank you, Master Copperfield," he answered, shaking his head. "I am sure it's very kind of you to make the offer, but I am much too umble to accept it."

"What nonsense, Uriah!" ...

(Continued in next issue)

How to Guard Against Measles and Scarlet Fever.

The greatest preventative force against any disease is the normal, healthy conditions of the person exposed to the infection of that disease. A person's power or degree of resistance is his best safeguard. A lowering the normal vitality, from whatsoever cause, tends toward the rapid multiplication of disease germs lodged in the body. Normal, vital resistance is the first great guard.

To keep that resistance at its best one must live normally—no excess in working, playing, eating or drinking. Sleep eight hours, work eight hours, recreate the body and mind eight hours. Eat plain nutritious food. Drink no stimulants but much pure water each day. Dress comfortably both as to weight of clothing and fit of each article worn. All clothing from head to foot should be loose. Anything worn tight constricts circulation, impinges nerves and lowers vitality. Exercise systematically as to kind, degree, duration, time of day and always with vigor and a cheerful mind. Muscles and vital force are built up by exercise. Eliminate the fret and worry of life. Worry and fear reduce the resistance more than any other cause. Sleep in a well ventilated room or out of doors. Get in the sunshine as much

YOUR FLOUR AND YEAST MAY BE THE BEST —AND THE COOK MAY BE AN EXPERT—

but if you have a poor stove, your bread is doomed. So with cakes, pastry and meats—a good baking stove is an absolute necessity.

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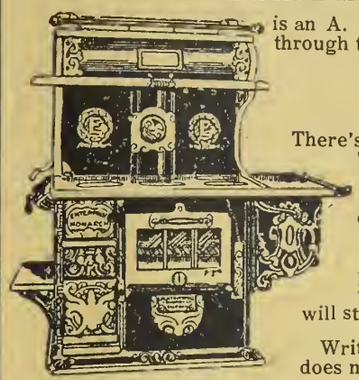

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Below will be found six sets of mixed or jumbled letters. Can you arrange these six sets of letters in such order that each set will spell the name of a well known vegetable. By sending a proper arrangement you have an opportunity of winning a cash prize. Write these six words plainly and neatly on a slip of paper, as in the case of ties, both writing and neatness will be considered factors in this contest.

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Send your answer at once; w will reply by Return Mail telling you whether your answer is correct or not, and we will send you a complete Prize List, together with the names and addresses of persons who have recently received Two Thousand dollars in Cash Prizes from us, and full particulars of a simple condition to be fulfilled. This condition does not involve the spending of any of your money.

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WORK THIS PUZZLE. SEND NO MONEY.

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ALSO MANY OTHER PRIZES as PREMIUMS. Somebody who sends the Correct solution in this Puzzle Contest telling us what TWO CITIES are represented by the above two sketches will receive a $50 GOLD WATCH or $50 IN GOLD MONEY! as stated in the certificate of entry. In the event of a tie between two or more persons for the PRIZE, a Prize identical in character and value will be given each person so tied. Everybody who answers this Puzzle correctly will receive a beautiful Post Card FREE. Contest closes Dec. 31st, 1914. Try at once. It may be you. Use your Brains. Write your answer on a Post Card or letter, giving name and address plainly.

DOMINION WATCH COMPANY, Dept. 86 MONTREAL, CANADA

as possible each day. The sun's rays destroy many germs. The care of the skin is very important. The sweat glands are sewers pouring the refuse from worn out tissues out on the surface of the body. Any habit of life which tends to clog the mouths of these sweat glands will keep the poisons inside to reduce the vitality. Frequent cleansing of the skin is a necessity of life. No article of clothing containing wool should be worn next to the skin at any time. Wool is non-absorbant, and prevents the evaporation of the sweat and greatly reduce the activity of the sweat glands. Wool cannot be sterilized and brings live germs in direct contact with the skin.

But Measles and Scarlet Fever are very largely diseases of childhood. It becomes the duty of the parents to see that these directions for preserving and building up the resistance of their children are enforced. A normal healthy child rarely "catches" disease.

But should a child or older person become ill with either measles or Scarlet Fever he should be completed isolated from all others save the nurse or attendant. The parents of a sick child should, as an act of neighborly kindness, keep the child away from healthy children. The infection from both of these diseases lies largely in the skin. The infested skin peels off or scales off and is carried in may ways to others. In Scarlet Fever the discharge from the throat and nose are also highly contagious. A few ways of preventing this spreading of the germs of these diseases may be mentioned. The sick child should be isolated in an upper room removed from the other occupants of the house. Only one attendant and the physician should be allowed to enter the room. A sheet moistened with a 1 to 2000 solution of Bichloride of Mercury (Corrosive Sublimate) should be hung over the doorway. The room should be free from all unnecessary articles. All clothing and bedclothing should be disinfected before leaving the room. Food remaining from a meal should be covered with disinfectant and burned. Utensils of all kinds should be boiled in the room before being removed. A simple expedient for the prevention of the spread of these diseases is the annointing of the entire skin surface of the patient with Cocoa Butter and wiping the surface with a soft cloth and then literally "burn the rag."

After the recovery of the patient the room should be fumigated with formalin gas and thoroughly cleaned, and each and every article in it disinfected.

Absolute disinfection and cleanliness are the key words to the prevention of the spread of these diseases.—C. S. Putman, M. D., N. Dak. College.

Home Hints.

There is seldom little space to spare in cottage homes, and therefore every little recess should be taken advantage of, either by fixing up shelves or by constructing a cupboard that will hold things that are only wanted occasionally. In this way bulky articles are not essential, and much valuable space in the middle of a room is saved. Occasionally the underneath of a stairway is cased round with match boarding, which, if removed, opens up a valuable corner that could be given up to shelving. If the floor thus opened up be rough a spare piece of linoleum should be tacked down. A recess between the fire-place and wall in a bedroom could be fitted up as a clothes chest. Fix up a couple of boards to form the uprights, to which the shelves can be nailed, or, better still, grooves, so that each shelf is easily taken out and kept clean. The top board will answer for holding a swing looking-glass and many little ornaments and trinkets dear to the cottager. Finish off neatly by fastening up a rod to hold a few curtain rings; curtains of pretty cretoone will finish the clotes store tidily.

In old cottages the large beams can be made excellent use of. A couple of iron brackets screwed up will hold a handy, respectable shelf for holding odds and ends. Or screw hooks fastened in will hold many utensils that usually take up cupboard room. Children are fond of a small stool. This can often be found a pleasant place for a cosy corner. In the scullery, if there is a beam, it is extremely handy for hanging things on, or a shelf may be fitted up there for holding boot brushes and like things.

Never wring out the water from blankets by twisting them. Fold them neatly before passing them between the rollers of a machine, but never with much pressure — just enough to squeeze out the water. Use a clean sheet to enfold the blanket, so that they don't catch in the some times rough rollers.

After cleaning a chopping or mincing machine and its disc knives in strong soda soapy water, dip them in boiling water, quickly drying them with a cloth. Then place them on a hot plate, or inside the oven. There is then no danger of rusting, which, however, is generally caused by keeping it in a damp place.

To clean a smoked-blacked ceiling, make a fairly thick paste of starch and water, and apply this with a pad of flannel. When dry, brush off with a soft brush, and you will find the result well worth the trouble.

White paper should not be used for wrapping articles that are to be stored away, for the chloride of lime, in it will destroy the color of the fabric. Yellow or blue paper answers the purpose far better.

How to Keep Sausage.

My way of preserving sausage for summer use is exceedingly easy, yet seems to be unknown to many people.

I keep on hand a quantity of inexpensive enamel basins of sizes holding from one to three quarts. As we mix our sausages at buchering time I pack it at once in these basins, which are placed in a moderately hot oven and allowed to bake until the fat draws out and meat browns a little on top—usually from 15 to 25 minutes, according to size of basin. It is then removed and a weight placed on the meat so that the melted fat rises over it; I like to place an inverted plate under the weight and leave it covered with the fat when it becomes cold.

With a paper tied over the top these basins are set in a cool, dry place. When the meat is cut it looks and taste like fresh sausage, having been cooked just enough to cover it securely with the fat. It browns in the frying-pan, making the browned gravy the men think indispensable with sausage. We usually eat the last of it in August when it is still in good condition. The object of using such smali receptacles is that but a small quantity need be cut at once, since it does not keep long after being exposed to the air in hot weather.

"Dont" for Mothers.

Don't say, "Oh, do be quiet," or "Do be still!" Remember that bones and muscles must develop. Make a place for them to do so. This is your duty.

Don't permit a fear to be implanted in your child.

Don't forget that "What?" and "Why?" are the best manifestations of a normal brain. Take time and pains to make it grow wisely.

Don't take your small child shopping.

Don't fail to give the reason why every time you give a command. You want the obedience of an intelligent, reasonable being, not that of an automaton.

Don't forget that the mother who can enter into all her children's pleasures has discovered a marvellous "youth restorer."

Don't bring up your children upon a steady diet of "Dont's," miserable prickly little word that it is, and sure to rub the wrong way.

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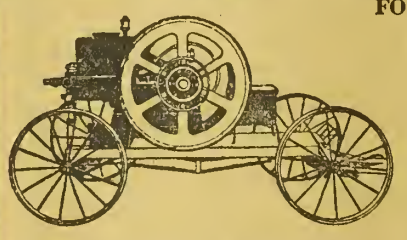

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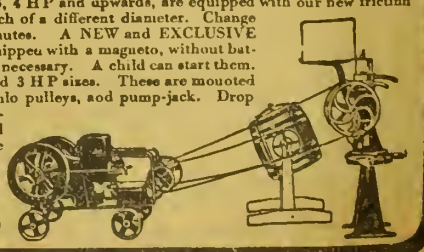
Does satisfaction mean anythiog to you? Does mooey saved in fuel, io time, in repairs and expense bills appeal to you? Get Gilson Facts, aod find out how the Gilson 60-SPEED engioe does the greatest variety of work—how it gives the maximum satisfactioo—saves money in equipment, and yields 100% service at lowest cost. Every engino covered by a cast-iroo guaraotee.

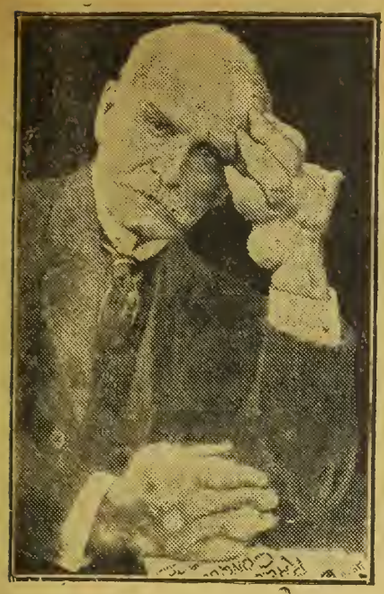
NEW FEATURES AND LATEST IMPROVEMENTS

The new Gilson 100% SERVICE ENGINES, 4 HP and upwards, are equipped with our new frictinn clutch pulley with fivo interchangeablo rims, each of a different diameter. Change to the proper speed for every job in a few minutes. A NEW and EXCLUSIVE GILSON FEATURE. These cogines are also equippeu with a magueto, without batteries or coil, with spark retarder,—no cranking necessary. A child can start them.

We also make 60-SPEED engines io 1½ aod 3 HP sizes. These are mouoted on truck, with lino shaft and five interchangeablo pulleys, aod pump-jack. Drop us a card to-day, and wo will send you full descriptivo literatyre. We are making special prices to the first purchaser of one of these engines in every locality. Write NOW.
Agents wanted.



GILSON MFG. CO., LTD.
1607 YORK ST., GUELPH, ONT. (975)



LET ME CURE YOU OF RHEUMATISM FREE

Mr. Delano took his own medicine. It cured his rheumatism after he had suffered tortures for thirty six years. He spent thousands of dollars before he discovered the remedy that cured him, but I will give you the benefit of his experience for nothing

If you suffer from rheumatism let me send you a package of this remedy absolutely free. Don't send any money. I want to give it to you. I want you to see for yourself what it will do. The picure shows how rheumatism twists and distorts the bones. Maybe you are suffering the same way. Don't. You don't need to. I have the remedy that I believe will cure you and it's yours for the asking. Write me today. F. H. Delano, 531-C Delano Bldg., Syracuse, New York, and I wil send you a free package the very day I get your letter.

Don't offer bribes as an inducement to good behaviour.

Don't forget that "almost fourteen' are crucial years in the lives of your son and daughter.

Uses for Stale Bread.

In almost every home there occurs every once in a while an accumulation of stale bread that the housewife does not want to throw away and yet finds it puzzling to prepare in ways that are palatable. Here are two good routes over which to send your stale bread:

Tomato Patties—Moisten one quart of stale bread crumbs with stewed tomatoes, enough to make them mouldable; one cup of grated cheese, one egg and a piece of butter the size of an egg salt and pepper. Mould into patties, roll in crumbs and fry in butter or lard. Serve hot garnished with parsley.

Breaded Eggs in Ramkins — Place a small piece of butter in the bottom of the dish, over this a layer of the bread crumbs. Break in a fresh egg, season with salt and pepper; over this another layer of bread crumbs, with a generous layer of grated cheese, and lots of butter for the last layer. Bake about ten minutes. Serve hot from the ramkins.

A Carpenter's Hint.

A carpenter who came to the house to labor with some recalcitrant window sashes showed us a hole hollowed out in the end of his hammer handle. In this he kept a supply of soap which he recommended as useful for a variety of household purposes, such as freasing windows sashes which refused to move up or down, drawers which would not open, gas joints which leak the meres trifle, the end of a door catch which sticks in closing, and, last of all, the end of a nail which must be driven straight into a piece of hardwood, a difficult trick, as every person who has tried it is aware.

French Doll FREE

to the little girl selling 30 sets of our Birthday, Floral, Scenic, Comic, (Christmas, Valentine, Easter, Thanksgiving in season), Postal Cards, (6 in set for 10c.) the doll has sleeping eyes, long flowing curls, jointed limbs, very daintily dressed. Send your name and address today plainly written, we will send cards free. Return us money when sold and we will mail doll post paid. Get big catalogue of free premiums for boys and girls.

Toronto Novelties Co. Dept. 42 Toronto, Ont.

The "New Century" SMILE

Is worn by every housewife who uses one of these washers. The reason is quickly found for the New Century makes washing easy. It removes the hard rubbing and does the work more thoroughly than any other way.

The New Century Hand Washer works quickly and easily. It gushes the water through the fabric, leaving it sweet and clean in a few minutes. It cannot injure the finest garment you possess.

The product of twenty-five years experience in making washers, the New Century is without an equal. Patented features make it the leading hand washer.

Examine it at your dealer's or send to us for information.

CUMMER-DOWSWELL Limited
Hamilton, Ontario.
202

Bank of N. S. Annual Statement.

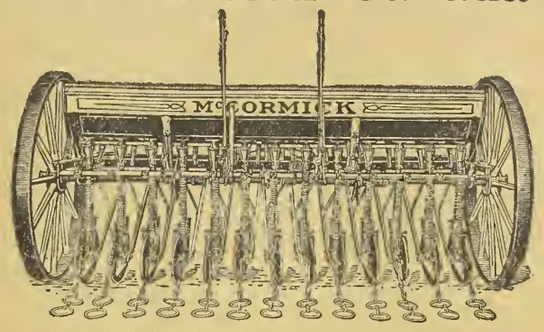
The bank of Nova Scotai's eighty-second Annual Statement appears in this issue. Owing to changes in the form of statement made necessary by the recent revision of the Bank Act, comparisons with last year's figures cannot readily be made. However, it may be noted that the total assets have increased from $71,279,298.95 to $80,151,829.99 during the year. Liabilities to the public (deposits, notes outstanding, etc.) total $62,686,436.27. The holdings of coin and legal tender amount to $10,440,849.08. Notes of and cheques on other banks, balances due by banks and banking correspondents, including Sterling Exckange, amount to $7,885,463.07, and other readily available assets such as call loans and investments are held to the extent of $20,746,796.20. So it can be seen that against the Bank's total liabilities to the public it holds in cash 16 per cent in immediately availables 29 per cent, and in quick assets 62 per cent. This is a very strong showing and should be viewed with satisfaction by the shareholders and Depositors.

Net profits for the year, after losses by Bad Debts are estimated and provided for, amount to $1,210,774.39, as compared with $970,544.38 a year ago. These profits are distributed in the payments of dividends at the rate of 14 per cent, amounting to $814,504.60, contribution to the Officers Pension Fund $50,000, written off Bank Premises $150,000. Premium paid Bank of New Brunswick on purchase $100,000. and transferred to the Reserve Fund $110,000. leaving a balance of $41,124.27 to carry forward.

The paid-up Capital has been increased by an issue of new stock and by the Capital Stock of the Bank of New Brunswick, from $4,734,390. to $6,000,000. The Reserve Fund, with the addition of the Reserve of the Bank of New Brunswick $1,790,000. Premium received on new stock $317,854. and an appropriation from Profit and Loss of $110,000. is brought to an even $11,000,000.

The Shareholders of this sound old institution must be pleased indeed to note that that their bank has so well maintained its position during the year 1913.

McCormick Drills For Eastern Canada



A McCORMICK drill prepares the best possible seed bed, and McCormick drills are longest-wearing. Any man who owns one of these implements will assure you that these are facts. When you buy a drill, buy a McCormick.

McCormick single disk and hoe drills have continuous axles, strong, light, thoroughly braced frames of angle steel, and durable, wide running drive wheels. They have a double run force feed which adapts them perfectly to the sowing of all kinds of seed.

Bearings are simple, as nearly as possible dust-proof, and easily oiled. Grain boxes are of large capacity, and they are too firmly supported to allow sagging.

See McCormick drills at the nearest I H C local agent's. All their features are explained in our catalogues. Get catalogues from the dealer, or drop a line to the nearest branch house.

International Harvester Company of Canada, Ltd

Hamilton, Ont. London, Ont. Montreal, Que.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.

These machines are built at Hamilton, Ont.

Try Something New In Your Garden Next Spring

Have you ever grown Asparagus—Pole Beans — Cress — Kohl Rabi — Salsify? Get the new Catalogue of

Ewing's Reliable Seeds

and study up some of these uncommon but delicious vegetables. Plant them along with some of your regular "stand-bys" — they'll add interest to your gardening and pleasurable variety to your meals.

Ewing's Seed selections are strictly up-to-the-minute, and at the same time they are backed by a reputation of over 40 years of sterling satisfaction on Canadian farms and gardens.

Write at once for our Illustrated Catalogue, and if your Dealer hasn't Ewing's Seeds, buy Direct from us.

THE WILLIAM EWING CO., LIMITED,
Seed Merchants,
McGill Street, MONTREAL.

31

Was Badly Run Down.

Milburn's Heart and Nerve Pills Built Her Up.

Mrs. Frank Blough, Sarnia, Ont., writes:—"I embrace the opportunity to write you saying that I have used Milburn's Heart and Nerve Pills, and found them very helpful to me. I was very badly run down, and was taking doctor's medicine. My son, out West, wrote me saying, 'Mother! you use the Milburn's Heart and Nerve Pills, they will be better for you than doctor's medicine.' This I did with good results. I often recommend them to other people. My doctor did not know I was using them, he used to say 'Why! I never saw any one's heart gain up like yours has. You do not need any more medicine.'"

Milburn's Heart and Nerve Pills are 50c. per box, 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

18k Rolled Pendants, worth $3.00, our price..... ....99 cents

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36

Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

N. B. Fruit Growers in Annual Sussion

(Continued from page 291)

He expressed his pleasure in being able to welcome them, and said he was much pleased with the work of the association, and of Mr. Turney in particular, to whom great credit was due for the splendid exhibit of fruit at the exhibition last fall. He also paid a tribute to the late J. C. Gilman. "If the fruit growers of N. B. are all men like Mr. J. C. Gilman the success of the province is assured," said the mayor.

The chairman thanked Mayor Hooper for his kindly welcome and words of encouragement.

COMMITTEES APPOINTED.

A committee composed of Messrs S. L. Peters, S. B. Hatheway, W. B. Gilman and A. G. Turney was appointed to consider report on amended conditions under which apples are to be placed on the market.

The nomination committee was composed of Messrs. S. B. Hatheway, S. L. Peters, J. W. Clark and James Barnes.

DELEGATES TO DOMINION FRUIT CONFERENCE AT OTTAWA NEXT SUMMER.

Nominations for delegates to Dominion Fruit Conference at Ottawa were called for. Messrs. C. N. Vroom S. B. Hatheway and W. B. Gilman were elected by ballot.

Messrs Herbert Smith, J. W. Clark and H. Wilmot, were elected as substitutes in the order named.

MR. S. L. PETERS ON MARKETING FRUIT.

Mr. Peters spoke very highly of the conditions of this province as regards fruit growing. He said that the question of fruit growing had long ago been settled. It is now an established fact that apples can be grown in New Brunswick equally as well as in any other part of Canada. "We can grow," said Mr. Peters "just as good fruit as we care to work for." The pack is the important feature in regard to marketing fruit. Very often poor packages of fruit are put on the market which means a big decrease in the revenue for fruit, and a substantial loss to such a packer. Don't sacrifice quality for quantity.

Mr. Peters then explained some ammendments in the Fruit Marks Act. No prosecutions were made for violation this past year, but the Department at Ottawa intends to punish to the limit any one infringing on the rules. A copy of the Fruit Marks Act as ammended, will gladly be sent to anyone writing to the Fruit Division, Ottawa.

Mr. Peters warned the growers against overfacing, and cautioned them to be very careful in grading. "A well graded and well-packed No. 2 will sell for almost as much as No. 1. If we prune and spray well and grade and pack honestly, our success is assured."

SMALL FRUITS.

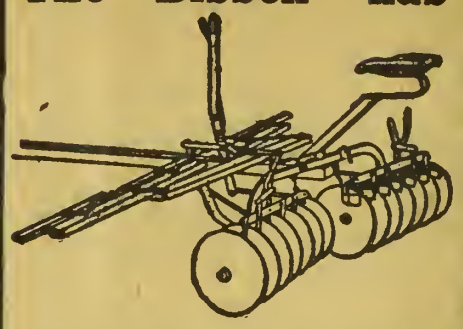
"Small fruits can be grown very profitably in New Brunswick. There is a good home market as well as a large market in Montreal, Boston and Halifax. One and a quarter million boxes of small fruits were produced in New Brunswick in 1912. The season of 1913 being poor, only 750,000 were produced.

As our berries are always later than those from other provinces and United States, there is always a ready market for them."

A discussion followed this address from which a great deal of information was derived. Mr. Hatheway thinks that apples which bring the highest prices can be grown here to perfection.

He suggested that the Department

The "Bissell" has the capacity



Because of its capacity, time after time the "Bissell" Disk Harrow has done DOUBLE THE WORK in field competition against all competitors, under the same conditions.

The special shape of the "Bissell" plates cause them to enter the ground naturally and TURN THE SOIL EASILY. Steel scraper blades meet the Disk Plates chisel fashion and keep the plates clean of trash by movable clod irons—the only Harrow that has this feature.

Anti-friction balls (40) are used in the bearings, on every "Bissell" Disk.

The seat is placed back on the Harrow so that the weight of the driver when riding balances over the frame and REMOVES NECK WEIGHT. The hitch is well back, MAKING LIGHT DRAUGHT.

Search the Continent over and you will not find a Harrow with such cutting capacity, easy draught and correct proportions as the "Bissell." A postcard to Dept. M will bring you a free catalogue.

T. E. BISSELL CO., LTD., ELORA, ONT. 84

Jno. Deere Plow Co., Ltd., 77 Jarvis Street, Selling Agents for Ontario and Qnebec

Make Your Stock and Poultry Pay Better with Royal Purple

STOCK AND POULTRY SPECIFICS

At a cost of less than a cent a day per head of stock, it will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases. Tones up run-down animals so that they quickly gain weight and vigor. Increases the yield of milch cows three to five pounds a day, besides enriching the quality of the milk.

ROYAL PURPLE is not a food. It is a conditioner—the best ever so'd. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not pamper them with soft predigested mush so that after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do.

ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared foods."

Try It On a Poor-Conditioned Animal

If there is a run-down, poorly nourished beast on your farm, see what **ROYAL PURPLE SPECIFIC** will do for it. A 50-cent package lasts a cow or horse 70 days. The cost is so trifling that no farmer in Canada has any excuse for having out-of-health stock around his place. Try it on the poorest-conditioned animal you have and we know you'll be surprised at the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of $1.50. Steers treated in the same way cost no more than $1.00 each to put in prime state for market. **ROYAL PURPLE SPECIFIC** fattens and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 50c, and air-tight tins, $1.50.

Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens

Do you know that **ROYAL PURPLE POULTRY SPECIFIC** makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If **ROYAL PURPLE** does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give **ROYAL PURPLE POULTRY SPECIFIC** a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and $1.50 air-tight tins.

WE ALSO SELL

Royal Purple Cough Specific for cough and distemper. (Will cure any ordinary cough in four days). 50c, by mail 60c.

Royal Purple Sweat Liniment for lameness, rheumatism, sprained tendons, etc. 50c, by mail 60c.

Royal Purple Worm Specific for animals; removes the worms, also their larvae. 25c, by mail 30c.

Royal Purple Disinfectant, in 25c, 50c and $1.00 tins.

Royal Purple Lice Killer for poultry and animals. 25c and 50c, by mail 30c and 60c.

Royal Purple Gall Cure for scratches, harness scalds, open sores, etc. 25c and 50c, by mail 30c and 60c.

Royal Purple Roup Specific for roup, pip, diphtheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry. 25c, by mail 30c.

Free

TO STOCK AND POULTRY RAISERS

We will mail for the asking our new revised 80-page book on common ailments of stock and poultry. Tells how to feed light and heavy horses, colts, mares, cows, calves, steers, hogs; also how to feed and keep poultry so that they lay winter and summer. Cover lithographed in six colors, showing farm utility birds in their natural colors. This is a book that should be in every farmer's possession. IT'S FREE. Write for your copy today. 31

W. A. Jenkins Mfg. Co. London, Canada

It Pays to Advertise in the Maritime Farmer.

200,000 Have Learned to Play the Piano In One Hour

Without Lessons or Knowledge of Music Anyone Can Play the Piano or Organ in One Hour.

Wonderful New System That Even a Child Can Use.

He—"You surprise me! You told me yesterday you couldn't play a note!"
She—"I couldn't; I learned to play in one hour by the wonderful 'Easy Method Music.'"

Impossible, you say? Let us prove it at our expense. We will teach you to play the piano or organ and will not ask one cent until you can play.

A musical genius from Chicago has invented a wonderful system whereby anyone can learn to play the Piano or Organ in one hour. With this new method you don't have to know one note from another, yet in an hour of practice you can be playing your favorite music with all the fingers of both hands and playing it well.

The invention is so simple that even a child can now master music without costly instruction. Anyone can have this new method on a free trial merely by asking. Simply write saying, "Send me the Easy Form Music Method as announced in The Maritime Farmer

FREE TRIAL

The complete system together with 100 pieces of music will then be sent to you Free, all charges prepaid and absolutely not one cent to pay. You keep it seven days to thoroughly prove it is all that is claimed for it, then if you are satisfied, send us $1.50 and one dollar a month until $6.50 in all is paid. If you are not delighted with it, send it back in seven days and you will have risked nothing and will be under no obligations to us.

Be sure to state number of white keys on your piano or organ, also post office. Address Easy Method Music Co., 137 Wilson Bldg., Toronto, Canada.

SEEDS

SURE GROWERS
GOVERNMENT TESTED
Write for Catalogue
Wm. RENNIE Co., Limited
190 McGill Street, MONTREAL.

TRAPPERS. WE BUY FOR CASH

And pay highest prices for **Fine Fox, Mink, Martens, Rat, Lynx, Wolves** and all other **Furs, Hides** and **Ginseng.** Best facilities in America. Send for Free Price List and Shipping Tags. No commission charged.
ROGERS FUR COMPANY,
Dept. 332 St. Louis, Mo.

of Agriculture take up the question of marketing and find saitable workers for all fruit produced.

REPORT OF TREASURER.

Mr. H. Wilmot submitted his report which was referred to an auditing composed of Mr. S. L. Peters and Mr. Chas. Fulton.

AFTERNOON SESSION.

Chairman in few remarks stated that while some varieties could not be grown as well as in other provinces, still we can grow a number of varieties which are among the best, as well as any other provinces.

Mr. Smith, vice-president said he was in the small fruit business to some extent and considered it a very profitable business.

Mr. J. B. Daggett, Secretary for Agriculture was then asked to make a few remarks. He said he was pleased to see as many present as had come. It was very encouraging considering the bad travelling. Has always been interested in production of fruit and is satisfied that no mistake has been made in going into the fruit business. Thinks our fruit compares very favorably with that seen at Horticultural Show at Toronto. Mr. Daggett's motto is "Quality instead of Quantity. Strive to grow an A 1 fruit, and our returns will be very satisfactory." He congratulated the association on the very enthusiastic man they had in their secretary, Mr. Turney.

In closing, Mr. Daggett stated that the Department was willing to assist the farmers in every way possible, and that the fruit industry would be pushed to the limit.

REPORT OF COMMITTEE ON STANDARDIZATION OF SIZE OF APPLES.

Mr. Turney, speaking for the committee said they recommended that the delegates chosen for the Dominion Conference at Ottawa, together with Mr. S. L. Peters, confer at some future date before the conference. The recommendation was adopted.

DAMAGE BY DEER AND COMPENSATION BY THE GOVERNMENT.

Mr. Turney led in this discussion and said he was glad of the assurance of Mr. Daggett to help the farmers financially and hoped that some remuneration could be got for farmers whose crops were destroyed by deer. He had a number ol letters from various parts of the province complaining of damage done, also letters from other provinces, and some of the eastern States concerning the laws in this connection. In most every case the government would pay for damage done. There is no law to that effect in New Brunswick.

Several members stated that deer had been troublesome to them or to their neighbors.

A committee was appointed to adopt a resolution as to whether this Association shall confer with the Farmers and Dairymen's Associations, and to ask the government to ammend the law so that farmers may be remunerated for damage done to their crops by deer.

FRUIT SHOW FOR 1914.

It was decided to hold a fruit show in 1914, the date and place to be decided by the executive.

Mr. Hatheway suggested that each member send the surplus of his best apples to be used for the exhibit, providing the executive would guarantee as good returns as they otherwise could get.

Mr. Turney favored County exhibits This idea was quite popular.

It was decided to ask the government for an increased grant. $1000.00 was named.

GROWING NURSERY STOCK.

Mr. R. A. Filmore, Manager of Fruit and Farm Lands Co., Burton, gave a very interesting talk on the care of nursery stock. He said some seedlings were raised here from imported seed of the French crab. Some seedlings were imported.

Mr. Filmore gake a demonstration in root grafting, and explained the difference between root grafting and budding. He prefers root grafting because it can be done in slack time in winter.

Some trees grow very much faster than others. These may be sold to advantage at 2 years old, while the slower growing ones have to be kept for three years.

"Never buy trees kept in storage," said Mr. Filmore, as they are not likely to do well." Mr. Filmore also advised buying trees direct from the nursery, as there was then less danger of getting mixed varieties.

EXPERIMENTAL SHIPMENTS.

Some shipments of Duchess apples were made to the Old Country in 1912. The result may be found in the report for that year.

In the fall of 1313 some Dudley winter apples were shipped to Glasgow. On account of overripeness of the fruit, and the fact that they had to be hurried away before being properly cooled made it that considerable shrinkage occured, causing quite a loss. There were a hundred odd boxes sent to our advertising office at London which gave very good results.

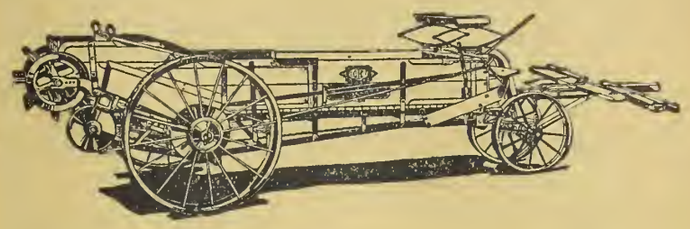
The recommendation of the Nomination Committee was adopted in full. The officers elected for the ensuing year are as follows:

President, C. N. Vroom.
Vice-President, H. H. Smith.
Secretary- Treasurer, A. G. Turney.
Asst.-Treasurer, H. Wilmot.
Committeeman, Wm. Cobourn.

A very interesting feature of the meeting was the display of apples. By the courtesy of the British Columbia Government we had several boxes of British Columbia apples Along with these were some New

(Continued on page 310)

International Harvester Manure Spreaders



THE I H C LINE
GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
Hay Presses
CORN MACHINES
Planters, Pickers
Binders, Cultivators
Ensilage Cutters
Shellers, Shredders
TILLAGE
Combination,
Peg and Spring-Tooth, and Disk Harrows
Cultivators
GENERAL LINE
Oil and Gas Engines
Oil Tractors
Manure Spreaders
Cream Separators
Farm Wagons
Motor Trucks
Threshers
Grain Drills
Feed Grinders
Knife Grinders
Binder Twine

INTERNATIONAL Harvester manure spreaders have a score of good features in their construction. Each one is the result of careful field experiment.

An I H C spreader is low enough for easy loading, yet it has plenty of clearance underneath. The rear axle is well under the load, rear wheels have wide rims and Z-shaped lugs, insuring good traction under all conditions. Frame, wheels, and all driving parts are of steel. Apron tension is adjusted by a simple device. Winding of the beater is prevented by large diameter, and beater teeth are strong, square and chisel-pointed.

International manure spreaders are built in several styles and sizes, low or high, endless or return apron, for small farms or large. Examination will show sturdiness of construction in every detail. Repairs, if ever needed, may always be had of the local dealer.

Examine International spreaders at the dealer's. We will tell you who sells them, and we will send you interesting catalogues.

International Harvester Company of Canada, Ltd
At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

FREE
COMPLETE HOCKEY OUTFIT

BOYS—Don't pay $5.00 or $6.00 for a hockey outfit, when you can get, **ABSOLUTELY FREE,** this magnificent outfit complete, consisting of a pair of splendid, strong, polished steel, hockey skates (all sizes), a good lively puck, and a strong, well-made rock elm hockey stick, and in addition every boy can secure as an extra present, a dandy pair of well-padded hockey gloves with fingers and wrists protected by cane splints covered with leather, or a pair of strong, heavy hockey boots with specially padded ankles and reinforcements across the instep. **WITH THIS SPLENDID OUTFIT YOU WILL BE THE BEST EQUIPPED PLAYER ON THE TEAM.**
WRITE TO-DAY—before you forget, and we will send you by mail just **30** handsome bottles of our delightful Royal Japanese Perfume to sell among your friends at only 10 cents a bottle. Six different odors—White Rose, Arcadian Violet, Lilac, Carnation, Heliotrope, etc.; no trouble at all to sell; everybody wants two or three bottles. You will sell them all in an hour. Then return our **$3.00** and you will receive at once, the complete hockey outfit of fine quality skates, rubber puck and hockey stick which gives you the opportunity to also win the additional present of fine hockey gloves or hockey boots without selling any more goods. Hurry boys! We arrange to stand payment of all charges on your outfit right to your door under our reimbursement plan. 67

Address: **REGAL MANUFACTURING CO.** **DEPT. H. 47 TORONTO, ONT.**

Nova Scotia Farmers in Annual Session

(Continued from page 293)

J. A. Fraser followed Prof. Blair, and in the course of his remarks paid a high trihute of respect to the work that Col. Blair, father of the previous speaker, had done for agriculture in Nova Scotia. Several other speakers followed in the same strain.

A resolution tendering the hearty congratulations of the Association to Col. and Mrs. Blair on their having recently celebrated the fiftieth anniversary of their wedded life was unanimously passed and the Secretary was instructed to convey the same to Col. and Mrs. Blair.

After votes of thanks had heen tendered to the various speakers, to the citizens of Bridgewater, to the entertainers to representatives of the press and to all others who had helped to mave the Nineteenth Annual Meeting a success, the convention closed with the singing of the National Anthem.

Following are the resolutions passed:—

Whereas, the Live Stock Improvement Associations organized hy the Federal Department of Agriculture at Ottawa and the Agricultural Societies carried on under the puhlic statutes of the Province of Nova Scotia are doing almost identical work and have the same purpose in view, and, Whereas at the present time these organizations are promoted under different arragnements and are therefore liahle each to interfere with the other.

Therefore resolved, that the Nova Scotia Farmers' Association recommend that Mr. F. L. Fuller, Superintendent of Agricultural Societies, do confer with the Dominion Live Stock Commissioner with a view to co-operation in this work for the improvement of live stock.

* * * *

Resolved that the Farmers' Provincial Association suggest to the Exhibition Commission the advisability of providing sleeping quarters during the exhihition for live stock attendants, such quarters to he of such construction as to enahle them, under proper restrictions, to use oil lamps to heat their food.

* * * *

Resolved that steps he taken to form a central organization of the farmers of Nova Scotia for the purpose of co-operative purchase of fertilizers, feeds, seeds and farming implements.

* * * *

Whereas, the present arrangements for carrying visitors to and from the Provincial exhibition provide for one first class fare throughout the dates of the exhihition, with one excursion lasting only one day and,

Whereas, it often happens the day set apart for the special excursion proves stormy thus preventing a very large number from attending the exhihition.

Therefore resolved that the Nova Scotia Farmers' Association now in session respectfully ask the exhihition commission to endeavor to arrange for a special excursion to last during full period of the exhihition.

Further resolved that a copy of this resolution be sent to every Board of Trade and Municipal Council asking them to co-operate with this association and petition the railroad authorities rc the matter.

* * * *

Resolved that the Farmers' Association heartily endorse the resolution adopted by the Women's Convention at Truro, during the late Short Course held at the Agricultural College asking for a Women's Department in connection with the College where women and girls may he instructed in such of the arts as particularly come under women's realm on the farm.

* * * *

Whereas, The Dominion Experimental Farm for Nova Scotia, situated at Nappan, is primarily intended to be of educational value to the farmers of Nova Scotia and

Whereas, the railway accommodations are very unsatisfactory for visiting the farm,

Therefore, resolved that a committee representing this association be approached to hring this matter before the Minister of Railways through our members of Parliament.

* * * *

Whereas, under the present working of the Tile Drainage Act, it is difficult for the farmer to ohtain money for drainage purposes

Therefore resolved, that the Government be asked to so simplify the act that the farmer desirous of ohtaining money for such purpose be enahled to do so directly from the Government without the intervention of the Municipal Councils.

* * * *

Whereas, intending exhibitors at the Provincial exhihition in Halifax are desirous of placing their live stock on the grounds in very hest condition possihle and

Whereas, in the past stock has heen injured by over-crowding and unnecessary delay in transportation—many times cars having been side tracked for hours.

Therefore resolved, that this Nova Scotia Farmers' Association, in annual convention, respectfully ask the Exhibition Commission to take steps that in the future hetter and more rapid transportation facilities he provided to and from exhihitions.

* * * *

Resolved that this Association should take immediate steps at this session of parliament to have all agricultural implements placed upon the ahsolute free list.

* * * *

Whereas, exhihitions are very heneficial to live stock development, and,

Whereas, the excessive freight rates charged at present prohihit a large number of the stockmen from exhihiting their animals and,

Whereas, previous to 1910 exhihitors paid one full tariff rate to the first exhihition, one-half tariff rate to each subsequent exhihition and were returned home from the last exhihition free, and

Whereas, since 1910 full tariff rate has been charged on exhibits from first exhihition to each suhsequent exhihition with a free return home from last exhihition, and

Whereas, live stock has heen confined to cars for an unreasonahle length of time and has heen suhmitted to most cruel treatment hy heing shipped forward on way freight trains and often shunted ahout with cars of coal and other dead freight, particularly was this true in 1913 and

Whereas, a committee from the Maritime Stock Breeders' Association has heen apoointed to confer with the railway authorities with a view to materially reduce the present rates and secure morc rapid transportation of exhihits of live stock.

Therefore resolved, that the Nova Scotia Farmers' Association convened at Bridgewater appoint a committee to associate and assist the committee from the M. S. B. A. in securing improved conditions and,

Further rcsolved, that a copy of this resolution he sent to the Provincial Farmers' Association of New Brunswick and Prince Edward Island.

Comm ttee—Wm. O'Brien, Howard Corning, R. S. Starr.

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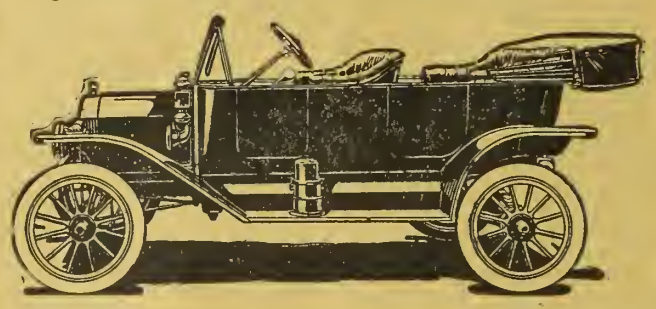

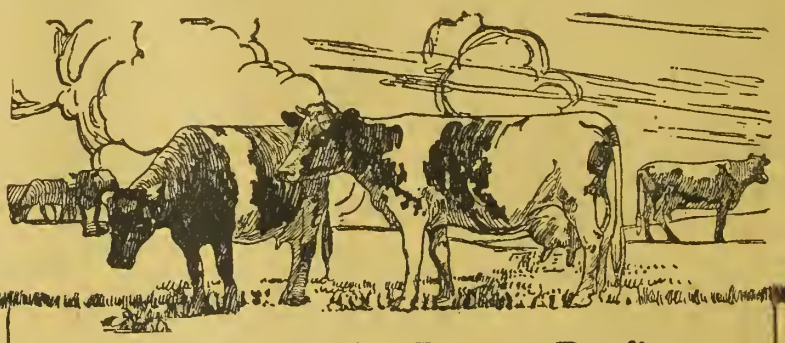

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Provincial Seed Fair.

The eleventh Annual Nova Scotia Provincial Seed Fair was held at the Agricultural College during the closing week of the Short Course and proved a splendid success and that of the exhibitor. Of the thirty-seven sections in the Prize List, only one failed to receive an entry. That one, calling for a variety of oats of inferior quality was put on the Prize List during the opening years of the Fair in response to the demands of a large number of farmers who wished to exhibit it. By means of the educational propoganda carried on in connection with the Seed Fair, however, the number growing this oat has been reduced until not one exhibitor put in an appearance this year.

The wide spread nature of the good seed movement in Nova Scotia is shown by the fact that exhibits came from practically every part of the Province, and included not only cereals, buckwheat, peas, beans and potatoes, but timotny, clover, turnip seed and corn as well.

Another pleasing feature of the exhibition, which deserves attention, was the increased tendency of farmers to grow improved strains of standard varieties and a corresponding decrease in the growing of new unproven ones.

Great credit is due to Mr. Landels, of the College staff, and Mr. S. J. Moore, of the Seed Branch, for their efforts to make this Fair a success. Great improvement has been made but we can confidently look forward to a larger and better Fair each year for some time to come.

Successful winners are as follows:

Wheat, White Fife—, J. E. Harrison, Maccan; 2, Geo. Milne, Woodburn, Pic. Co.

Wheat, Red Fife—1, J. A. McFarlane, Fox Harbor, Cumb. Co.; 2, J. R. Harrison, Maccan; 3, John W. Murray, Balmoral Mills, Col. Co.; 4, Robt. Kaulback, Middle Musquodoboit.

Wheat, White Russian—1, J. E. Harrison; 2, J. R. Harrison; 3, Jas. Dunn, Lower South River, Ant. Co., Edgar Harrison, Maccan.

Wheat, Any Other Variety—1, Joe Bruce, Mid. Musquodoboit, Hx. Co.; 2, T. E. Smith, Cen. Clarence, Anna. Co.; 3, J. R. Harrison; 5, M. B. Harrison, Athol.

Banner Oats—1, John A. MacDonald, Marydale, Ant. Co.; 2, J. A. MacFarlane; 3, John C. Chisholm, L. S. River, Ant. Co; 4, A. J. Campbell, Alexander, C. B.; 5, J. G. Taylor, Antigonish.

Sensation Oats—1, John Harrison; 3, J. E. Harrison.

Oats, Any Other Variety, White—1, J. A. MacFarlane; 2, Clark MacFarlane, Fox Harbor, Cumb. Co.; 3, J. E. Harrison; 4, Geo. Burrows, Valley, Co-. Co.; 5, J. A. Johnston, Valley.

Oats, Any Other Variety, Black—1, John R. Harrison; 2, J. E. Harrison.

Barley, Two Rowed—1, John R. Harrison; 2, J. E. Harrison; 3, Geo. Retson.

Barley, Six Rowed—1, John C. Chisholm; 2, M. R. Johnston, Valley; 3, M. B. Harrison; 4, J. E. Harrison.

Buckwheat, Rough—1, Geo. Retson, Truro; 2, J. E. Harrison; 3, Edgar Harrison; 4, John R. Harrison.

Buckwheat, Any Other Variety—1, J. E. Harrison; 3, John R. Harrison; 3, H. T. Hebb, Bridgewater.

Field Peas, Marrow.at—1, J. E. Harrison; 2, Edgar Harrison; 3, John R. Harrison.

Field Peas, Any other Variety—1, John C. Chisholm.

Field Beans, White—1, John R. Harrison; 2, Edgar Harrison; 3, M. B. Harrison; 4, J. E. Harrison.

Field Beans, Yellow Eye—1, Ed. Harrison; 2, John R. Harrison; 3, J. E. Harrison; 4, Wallace Rhodenizer, Bridgewater.

Field Beans, Any Other Variety—1, J. E. Harrison; 2, Melville MacNutt, Masstown; 3, M. B. Harrison; 4, John R. Harrison.

Corn, Canada Yellow—1, Manning Chute, Berwick.

Corn, Any Other Variety Flint—1, Manning Chute.

Turnip Seed—1, Wm. Pinckney, Yarmouth; 2, Harry Cann, Chegoggin; 3, S. A. Cook, Chebogue.

Mangel Seed—1, Melville MacNutt.

Timothy Seed—1, J. E. Harrison; 2, John W. Murray, Balmoral Mills; 3, John R. Harrison; 4, Hector Cutten.

Clover Seed—1, J. G. Taylor, Willowdale Farm, Antigonish.

POTATOES.

Beauty of Hebron—1, Geo. Retson; 2, J. E. Harrison; 3, Howard King, Central Onslow.

Early Rose—1, J. E. Harrison; 2, John Retson, Truro; 3, Wallace Rhodenizer; 4, Geo. Burrows.

Any Other Early Variety Named—1, Geo. Retson; 2, John R. Harrison; 3, J. E. Harrison; 4, Geo. Burrows.

Gold Coin—1, Geo. Retson; 2, John Retson.

Prize Winners at the P. E. Island Poultry Show.

(Continued from page 301)

best Houdan pullet—won by J. Whitlock.

Prize of $1 by G. D. Wright, for best pair dressed fowl—won by J. Whitlock.

Prize of $1 by Chas Chandler for best pair dressed geese—won by L. H D. Foster.

Prize of $1 by Chas. Chandler for best pair dressed cockerels—won by Sp. Pk. Poultry Yds.

Prize by Jas. Tait, of a Fern for best female, any solid colored variety—won by Sp. Pk. Poultry Yds.

Prize by Williams, of a Pot Plant, for best female, any parti-colored variety—won by H. Lapthorne.

Prize of $2 by L. Piggot, for best pair Indian Runner ducks—won by J. Whitlock.

Prize of $2.00 by Chas. Pippy, for best pair geese—won by L. H. D. Foster.

Prize by Frank Discoll, of one bushel wheat for best pair White Minorcas—C. Pippy, Hillsborough.

Prize by Wm. Pippy, of one bushel wheat for best any other variety pen Minorca—won by C. Pippy, Hillsborough.

Prize by Henry Stewart, of one bushel wheat for best Pen Plymouth Rocks—won by L. H. D. Foster.

Prize by Benjamin Wood, of one bushel mixed grain for best pen Wyandottes—won by G. Lightizer.

Prize by Wm. McGregor, of one bushel mixed grain for best pen Orpington—won by V. L. Gurney.

Prize by Geo. Jenkins, of one bushel wheat for best pen young Leghorns—won by G. Chilton.

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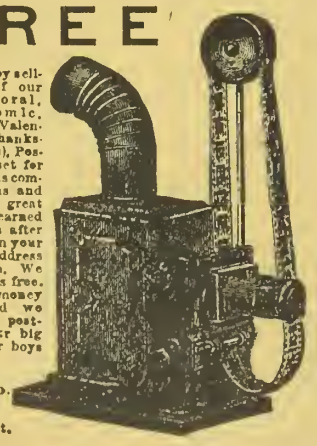

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N. B. Fruit Growers in Annual Session

(Continued from page 307)

Brunswick apples, and it is interesting to note that they compare very favorably with the western fruit.

EVENING SESSION.

The evening session was held in the Provincial Normal School at 8.30 o'clock. The subject for the evening was an illustrated lecture on "Insects Injurious to Fruit," by Mr. R. P. Gorham.

Mr. Gorham showed slides of the more important apple insects, as codling worm, the borers, scale insects, brown tail moth, etc. He discussed their life histories and best methods of control.

At the close of his lecture, Mr. Gorham was tendered a very hearty applause.

FRIDAY JAN. 23.

Meeting called to order at 10 a. m.

Mr. Hatheway opened a discussion on "By-products of Apples." He pointed out that quite a lot of apples are not fit to market in a fresh condition, and suggested that an evaporating plant, a canning factory or a vinegar factory would be a more economical way of disposing of them. He also pointed out that there was quite a large and increasing demand for these products, and it might be warth while to investigate further. The chairman was of the same opinion. Mr. Peters, however, did not think that we would be in a condition to start anything of that nature for a number of years yet. The horticultural division was requested to investigate the matter for further information to be presented at the next meeting.

NEED OF SPRAYING IN NEW BRUNSWICK.

Mr. R. P. Gorham led the discussion. He told of some of the pests which with which the fruit growers had to contend, dealing more particularly with the apple scab and apple aphis.

During the past two years, both these pests have been very troublesome and the sprays used have not controlled them. Mr. Gorham pointed out the need of some experimental work to determine the relative value of lime sulphur wash and bordeaux mixture.

Mr. Hatheway has had the same results. Previous to the past two years he has always sprayed with bordeaux mixture. During the past two years he has used lime sulphar and has not been able to control the apple scab. He has nothing to show, however, that bordeaux is any better than lime sulphur, although his personal opinion is that it is better.

Mr. W. C. Gilman has had the same experiences and believes in the bordeaux.

Mr. T. W. Macoun, Dominion Horticulturist, then gave some of his experiences. Spraying has been carried on at the experimental farm at Ottawa, for the past twenty-one years, and good results are obtained. He said that bordeaux was a better fungicide but caused some russeting to certain varieties of apples. Their method of spraying is to use lime sulphur for the first or dormant spray, and bordeaux for the subsequest sprays. For scale insects, he has found that lime and water, at the rate of 2 pounds to 5 gallons, is the best remedy.

He also gave the conclusions reached by the Nova Scotia Fruit Growers. They are as follows:

I. The first spray should not be applied until the leaves are partly open. The strong spray seems to have no effect on the young leaves, while it is more apt to kill the germinating spores.

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I know a woman's trials.
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If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understand women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back, or bowels, feeling of weight** and **dragging down sensations, falling or displacement of internal organs, bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete **ten days' treatment** entirely **free and postpaid**, to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escapiug the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured**, my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatmeut is for all,—**young or old**. To **Mothers of Daughters**, I will explain a simple home treatment which speedily aud effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, **write for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask** for the **free treatment to-day**, as you may not see this offer again. Address:

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II. The bordeaux is a better fungicide than lime sulphur, although it causes russeting.

III. That it is best to use lime sulphur for dormant spray, and bordeaux for subsequent sprays.

It has been found that a mixture of flour will control red spider, and Mr. Macoun thinks that it may be of great use in controlling aphids.

NEW VARIETIES APPLES.

Mr. Macoun was called on to give some information on new varieties of apples. He stated that 140 new varieties of some value had been found out of the 800 tested in the last 25 years; 90 of the 140, he said, were very good. The idea in testing so many varieties, is to get hardy, early blooming varieties of good flavor. Some of the best seedlings come from seeds of Spy and McIntosh.

In discussing top-grafting, he said he did not consider it a good commercial proposition. Though some experiments should be conducted to determine which trees would form best union in grafting.

AFTERNOON SESSION.
BETTER FRUITS FOR LOCAL MARKETS.

C. N. Vroom led this discussion.

He said he would class the subject under three headings:

1. Varieties.
2. Condition of varieties.
3. The way in which the fruit was put on the market.

For a small orchard, for the purpose of supplying a local market, he thought it best to plant trees ripening their fruit at different periods, so that a succession of fruit could be had for the customers. In choosing the varieties for different seasons, it is best to plant only the ones that can be handled to advantage. He emphasized the fact that, while it was very important to have the best varieties, it was equally important to pack them attractively in some package suitable to the market.

Mr. Peters gave his experience in handling to advantage early apples of the Yellow Transparent type. He had got as high as 75 cents for a 11 quart basket.

Mr. Turney did not favor the basket, as it did not show the fruit to advantage. "The idea of this discussion," he said, "is to see if some suitable package can be adopted."

Mr. Dunphy tried the basket but had poor success in Fredericton market.

Some other gentlemen spoke but none had had experiences with baskets.

Mr. Charlie Williams, P. E. I., Horticulturist, was asked for a few remarks. He stated that conditions on P. E. Island were quite different to those of New Brunswick. However, they had same very good apples although they could not equal the New Brunswick apples.

In the matter of strawberries he thought they were ahead of any other province. The berries seemed to have a flavor all their own. He cited an instance where one farmer raised 11,000 boxes per acre, which is somewhat more than is produced in New Brunswick.

...

ORCHARD WORK ON P. E. ISLAND

Mr. Macoun gave a very helpful address on the orchard work on the Central Experimental Farm at Ottawa.

They have on the farm a plot of Wealthy's planted ten feet apart seventeen years ago. Since the trees got large enough to interfere with one another, every other one was cut out. Very satisfactory results were obtained. The net returns per acre, per year, during the seventeen years, averaged $87.00 per year, which is apparently a good investment.

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It would not be advisable to plant any variety other than Wealthys on this system.

CULTIVATION.

Mr. Macoun said that the plan which gave them best results, was to plow in cover crop as early as possible in the spring and after several harrowings at intervals of a week or so, to seed down again to a cover crop. A mixture of rape and vetch is cover crop used and is sown about the last of June.

MR. W. W. HUBBARD.

"It is the intentian af the Director to make the Experimental Farm at Fredericton a strong horticultural station," said Mr. Hubbard. Twenty-five acres were to be devoted to that division of the work, and nine of those were to be planted to orchard this coming spring.

Mr. Herbert Smith gave a talk on raising strawberries. He pointed out some of the important things to consider and was of the opinion that it was a good business if properly attended to. Would give a return of $400 to $500 per acre. Thought that it was not advisable to keep a patch more than one year.

ILLUSTRATION ORCHARDS.

Mr. Alexander and Mr. James Barnes said that the illustration orchards on their farms were doing well and that they were very much pleased with the results.

Mr. Turney gave some results from the Demonstration Orchards. These results are published in the Horticultural Report for 1912.

Before closing, a resolution was adopted, expressing the appreciation of this Association for all the assistance from the Department of Agriculture, and hoping that the Department would see fit to continue the assistance.

EVENING SESSION.

In the evening Mr. R. P. Gorham delivered an illustrated lecture on "Some Insects, Injurious or Beneficial to Garden Crops. Mr. Gorham explaindl the life histories of some of our worst enemies, also of some of our best friends among the insects, and described the remedies that are most practical. Before closing Mr. Gorham showed a few slides of beautiful New Brunswick scenery.

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, waite us at once enclosing 2-cent stamp for our reply, DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDECINE CO., Dept. 81 MONTREAL, QUE.

Fertilizing the Potato Crop

The potato is the most widely grown crop in the world and is by far the most important of our vegetable foods.

The average yield of potatoes in Canada is slightly over 100 bushels per acre. Many farmers by proper fertilization, treble this yield. A yield of over 300 bushels per care is common in the potato districts of the Dominion. During the past season a yield af 735 bushels per acre was recorded in Nova Scotia. This was exceptional but it shows what can be done and should encourage many to try to increase their yield of tubers. The man who raised this tremendous crop of 735 bushels, FERTILIZED,—Using in addition to manure and Phosphatic fertilizers, 160 lbs. Sulphate of Potash. He realized that potatoes are gross feeders and require heavy quantities of AVAILABLE Plant Food, especially POTASH for their proper growth and sustenance.

POTASH IS THE CHIEF INGREDIENT IN A POTATO FERTILIZER

This is readily realized by a glance at the following figures:

A crop of 300 bushels removes from the soil, 105 lbs. of POTASH, 60 lbs. of NITROGEN and 30 lbs. of PHOSPHORIC ACID.

ENSURE TO YOUR POTATO CROP A READILY AVAILABLE SUPPLY OF POTASH, MURIATE OF POTASH AND SULPHATE OF POTASH can be obtained from the leading fertilizer dealers and seedsmen.

IF YOU CANNOT BUY LOCALLY, WRITE US, AND WE WILL ADVISE YOU.

"The Potato Crop in Canada" (4th Edition) is a bulletin published by the German Potash Syndicate. It deals with the cultivation, fertilization prevention of diseases, etc., and contains interesting resultss of fertilizer experiments. This bulletin will be mailed FREE, together with any of the following, to any address in Canada.

"Artificial Fertilizers; Their Nature and Use."
"The Principal Potash-Crops of Canada."
"Fertilizing Orchard and Garden."
"Fertilizing Grain and Grasses."
"Fertilizing Hoed Crops."
"Farmers' Companion," etc.

STATE WHICH YOU REQUIRE.

GERMAN POTASH SYNDICATE,
1102b Temple Bldg., Toronto, Ont.

URIC ACID NEVER CAUSED RHEUMATISM

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure." Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE.
Dept. 608, Brockton, Mass., U S. A.

SNOW PLOWS

For Township Roads. For Sidewalks.

Stone and Stump Pullers, Bob Sleighs

A. LEMIRE, Prop., Wotton, Que.

Do you know that more real danger lurks in a common cold than in any other of the minor ailments? The safe way is to take Chamberlain's Cough Remedy, a thoroughly reliable preparatian, and rid yourself of the cold as quickly as possible. This remedy is for sale by all dealers

Feed and Profit.

We came across two records recently that set us thinking. A Jersey cow that gave a yield of 14,450 pounds of milk and 727 pounds of fat, consumed an average of 12.4 pounds of meal per day all year. An Ayrshire's record was almost identical, 12.8 pounds of meal per day. Just what the average cow in Canada receives as meal is uncertain, but this is certain that vast numbers of them would do infinitely better if they got the opportunity and were fed on the basis of one pound of grain for every three or four pounds of milk per day that they yield.

As the average cow in Canada gives probably only about one hundred and forty pounds of fat per year, it is a question if she gets an average of three pounds of meal per day. The two cows noted above received four times this amount, and paid for it. More of our cows would pay, that is pay a good profit above the cost of feed, if they got the right feed.

When we find good dairymen willing to give seventy or eighty dollars worth of feed to a cow per year, it means they not only have faith in their judgment, and in the cow's productive ability, but beyond this, they keep records both of milk and fat produced, and feed consumed, so as to be perfectly certain they don't waste good feed on cows that don't produce.

Feed record forms and a herd record book will be supplied free on application to the dairy division, Ottawa. Make sure each cow pays a good profit this year.

The 1914 Short Course

Editor The Maritime Farmer—

The two week's Short Course at the Nova Scotia Agricultural College was completed on Friday, Jan. 16th. The enrolled attendance was 351, which is the record for the institution. Of this number forty came from New Brunswick, upwards of ten from various parts of America, and the balance from the Province of Nova Scotia.

Not only in numbers but in the character of the work and enthusiasm the Course of 1914 stands out as the most successful of the series that have been held during the past ten years. As each year goes by one becomes more and more impressed with the fact that the Maritime Province farmers are realizing their Agricultural possibilities and that the movement toward improvement of agricultural conditions is gradually gaining force and will lead before many years pass by to the Maritime Provinces taking the place which they were always intended to take among the foremost agricultural parts of America.

M. CUMMIEG.

Don't fail to listen attentively and patiently to all the little trials which come into the lives of these small people. Help adjust them, and remember that at six they are as great in proportion as those which daily come into your own life.

Make your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosine Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the Interior of the dome of the "Great White Light" Burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosine oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oll itself, although bofh are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT** it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely diffenent, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two besides one we furnish free by sending 35 cents for each additional one wanted.

The Story of the Prince Edward Island Egg Circles

Early in July, 1912, Mr. W. A. Brown, B. S. A., Chief of the Poultry Division of the Live Stock Branch Department of Agriculture, Ottawa, visited Prince Edward Island to investigate the poultry industry of that Province. Mr. Bsown stayed in the Province for some weeks, visiting the farmers and those who were handling the egg trade in the rural districts, Charlottetown and some of the large towns. In addition to making a very thorough investigation, Mr. Brown delivered addresses at many different points, and this assisted him greatly in that he was able to meet large numbers of farmers and others and familiarize himself, not only with existing conditions, but also with the views of all concerned, and the future outlook. The impression left on Mr. Brown's mind was that conditions justified special assistance being given to Prince Edward Island, that reforms in all departments were needed and that in no part of the Dominion was there a greater future in store for the poultry industry than in this wonderful little Province. Mr. Brown on his return to Ottawa reported accordingly. The result was the appointment of Mr. T. A. Benson as Dominion Poultry Representative on the Island. Mr. Benson, who had for some time held the position of assistant District Representative for Ontario County under Mr. J. H. Hare whom he assisted to organize the successful Ontario County egg circles, landed on the Island at the end of September 1912, and with the co-operation of the Provincial Department of Agriculture immediately set about investigating conditions.

The winter was spent in this way and delivering addresses in the rural sections preparatory to organization work. In the spring of 1913, organization of egg circles commenced and in all some eighteen egg circles have been organized up to this time, some of them quite recently.

These associations have been well spread over the Province with a view to demonstration and are located as follows:

Prince County—Kensington, Darnley, Mt. Carmel, Lower Bedeque, Central Bedeque, Grand River, Miscouche.

Queens County—New London North, Springfield, Wheatley River, Hope River, York, Bedford.

Kings County—Brooklyn, Southern Kings (Murray River), Red House, New Perth, Georgetown.

So far 581 farmers have been registered as members of one or other of these circles. 381 additional stamps and ink pads for stamping the eggs, have been sent out to managers upon their request. 56,473 dozens of eggs have been shipped to the Montreal markets at an average premium over local prices of at least 3½ cents per dozen after expenses being deducted and not taking into account an undue inflation of prices by those in strong opposition to the movement.

Quality and new-laidness have been the watchwords of these associations and deteriorated eggs have been sharply discriminated against. The Brooklyn egg circle sent out one shipment of 270 dozens to Montreal which was described by the buyers as a shipment that any egg circle in the Dominion might well be proud of, it was a record!

The extra profit to the producers is simply due to the elimination of waste and unnecessary handling as a result of the interest awakened which may be described as almost phenominal. Mr. Benson now has on file in his office applications from 56 different sections, of the Island for organization many of which take the form of demands and these in addition to applications for lectures.

Mr. Benson is a busy man, continually travelling up and down the Province and cheering on his friends, the farmers, and it looks as if the work is growing too rapidly for one man to cope with it and according to Mr. Benson the credit lies with the farmers of Prince Edward Island, whom he describes as far-seeing, intelligent fellows who are ready to take hold of a fair business proposition.

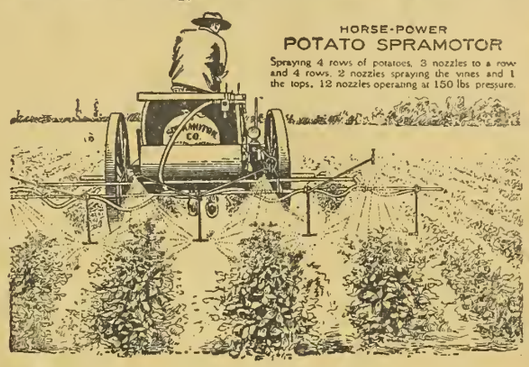
Destruction and Preservation SPRAMOTOR Accomplishes Both

There are countless enemies to your prosperity this season, and every other season. **Spramotor destroys** bugs, parasites, insects, worms. spores, lice, blight, rot, canker, scale, fungi, slugs, scab, caterpillars, beetles, etc.

All these pests can undo your hardest work and bring your labor to naught. There is one efficient way to fight them, saving yourself the dollars they would devour, and that is to get a **Spramotor** and let it do the work of destruction **thoroughly** in its own economical way.

For purposes of preservation, the **Spramotor** will whitewash or paint barns, stables, hen houses, granaries, silos, sheds and farm buildings generally.

You can spray on fire-proof or ordinary paint at half the cost and in one-tenth the time. It means all the difference between having dirty, unsanitary outbuildings and clean healthy vermin-proof places to house your live stock, chickens and other possessions.


HORSE-POWER
POTATO SPRAMOTOR
Spraying 4 rows of potatoes, 3 nozzles to a row and 4 rows, 2 nozzles spraying the vines and 1 the tops, 12 nozzles operating at 150 lbs pressure.

Spramotor for Weed Extermination

Wild mustard can be killed in the growing grain at a cost of only 60 cents an acre—with a **Spramotor.** You can clear your land of all noxious weeds just as cheaply and turn unproductive tracts into big money-makers. Here are some figures for you:—A plot of land (**sprayed**) produced 84 lbs. of crop and 1½ lbs. of mustard. A plot exactly the same size (**unsprayed**) produced 16 lbs. of crop and 112 lbs. of mustard. Was the **Spramotor** worth its cost in this case ?

Contented Cows Give More Milk

It is a recognized fact that during the fly time, milch cows are liable to be so pestered and tormented by stinging flies and biting insects that the milk yield falls off noticeably. Dairymen have hitherto accepted this situation as something unavoidable but latterly some of them who own **Spramotors** have taken to using it to give the animals a thorough spraying with fly repellant, not only affording the tortured beasts ease and comfort but causing them to yield fully one-third more milk than before. Surely, if you are without a **Spramotor,** you realize how much you can benefit from owning one. If you believe that fuller information on your own particular case would be worth while, take advantage of the following:

FREE Write us telling what you need a **Spramot** or for and we will send you complete information of the best style of machine to fit your requirements. We will also forward you a copy of our valuable illustrated book on Crop Diseases FREE This puts you under no obligation whatever, so don't delay—write while the matter is in your mind.

We Make Spramotors in over 50 Different Sizes

From the No. O. Hand Machine at $6 to the $350 Gasoline operated outfit. Our wide range of designs and sizes embraces machines for every conceivable purpose, suitable to the spraying needs of the small farms as well as the largest in Canada.

SPRAMOTOR CO.,

1721 KING ST. E, LONDON, CANADA

Dairy Acres

While glancing over the results of the dairy herd competition given at the recent dairy convention, one could not help being struck by the yields—7,317 pounds of milk: 214 pounds of fat per cow.

During the same session a chart was displayed indicating that some dairy farms are producing very little milk, one was listed giving a yield of only 125 pounds of milk per acre.

With a dairy farm growing corn, oats, clover and alfalfa, and having pretty good pasture, it should not be very difficult to produce 2,000 pounds of milk per acre and at the same time increase the fertility of the soil. This system should yield an income of over thirty dollars per acre instead of the insignificant average of five dollars and seventy-nine cents which was the average yield per acre cultivated including pasture given officially as the average return from cows; are yours just common acres, acres need not be idle more than the five thousand cows in Ontario. The or dairy acres?

The herd will average up better if the poor cows are weeded out. Do you know for certain which they are? You can easily detect them if you keep records on forms supplied free by the dairy division, Ottawa. State in your letter if you want forms for weighing every day, or only on three days per month. Is there any good reason why your cows should not average at least six thousand pounds of milk? Many men are getting this, and more, but they don't do it until they keep records and know which cows should be kept and which should not.

Halter Pulling.

A. G. G., has a horse that pulls on the halter strap until it breaks. The only thing that can be done in such a case is to tie the horse with a strong rope put around its neck. For the first few times that the horse is tied with the rope one should stand beside it to be ready to untie the rope in case the animal should cast itself. Usually after it pulls a few times on the rope and cannot break it, it will stop pulling.

There is no better medicine made for colds than Chamberlain's Cough Remedy. It acts on nature's plan, relieves the lungs, opens the secretions, aids expectoration; and restores the system to a healthy condition. For sale by all dealers.

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They 51

Keep the Children Well

MRS. ALVIN ZINK,
Rose Bay, N. S.

States that she has been cured of

INDIGESTION

and Stomach trouble by the use of

Gates' Invigorating Syrup & Life of Man Bitters

after having been under the care of physicians without receiving benefit.

And although three years have passed has no returning symptoms.

She highly recommends these medicines to her friends and the public.

Sold everywhere at 50c. per bottle, $5.50 per dozen.

"Here is Your Answer;" in
WEBSTER'S
NEW INTERNATIONAL
-THE MERRIAM-WEBSTER

Even as you read this publication you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *jujutsu*. What is *white coal?* This NEW CREATION answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority.*

400,000 Words and Phrases Defined.
6000 Illustrations.
Cost $400,000.
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The only dictionary with the *new divided page,*— characterized as "A Stroke of Genius."

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Mention this publication and receive FREE a set of pocket maps

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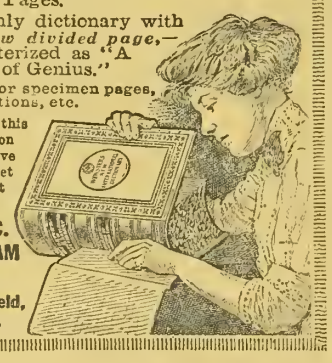


PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

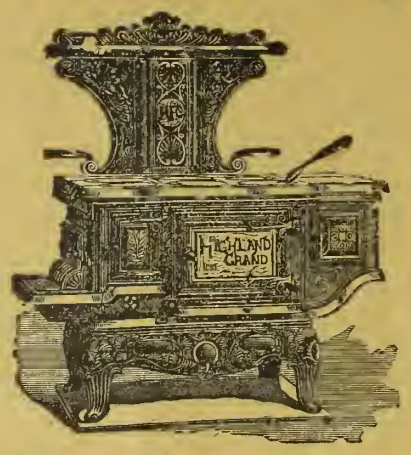
Avoidable Causes of Lameness and Disease.

It is a fact that a very great proportion of the lameness, disease, and ailments which occur among horses is brought about by avoidable causes, and could readily be prevented if a more general knowledge were displayed in regard to their origin. To commence with the horse's foot, we have, for instance, corns, and probably quite three-fourths of the cases in which this complaint occurs would never be heard of if horses were always re-shod at sufficiently frequent intervals, for corns are principally brought about through the shoe becoming embedded in the heels owing to the shoes being left on for too long a period. Equally avoidable is the other chief cause of this trouble, which consists in the shoes being made too short and fitted too closely at the heels, so that the ends are liable to press injuriously upon the so-called seat of corn. That serious disease, fever in the feet, termed laminitis by the veterinarian, and in stable parlance generally known as founder, is very often due to errors in feeding, such as providing a too stimulating or heating diet, using beans too lavishly when the work is too heavy, or overfeeding a horse with corn when it is getting only very little exercise. In the hunting season, for example, this disease is not infrequently found to develop in hunters during spells of hard frost, when they are thrown out of work, if care is not taken to guard against this by reducing the corn ration and stopping the giving of beans, as well as exercising the hunters plentifully on a straw track. Omitting to exercise horses which are standing idle in the stable is another contributory cause of fever in the feet easy to be avoided. Cracked heels, which so often occur in the winter, are in most instances the result purely of neglect, and principally from one of the following causes: Owing to the hollow of the heel not being properly cleaned when the horse is groomed; keeping horses standing on dirty and wet bedding; washing the legs; and, in the case of animals specially susceptible to suffer from cracked heels, failing to dry the heels well on the horse coming in from work with muddy and wet legs. Mud fever, another winter complaint, could also in most cases be avoided if the baneful practice of washing the legs were refrained from, and if, where there is an inherent tendency to mud fever, care were taken to see that the animal's belly, thighs, and legs are well rubbed down with wisps of straw and thoroughly dried when it returns to the stable in a muddy condition, and the legs bandaged. Thrush, or foul in the foot, again, is mainly induced by standing on dirty litter and omission to clean out the sole of the hoof, while the paring of the frog by the farrier, which is an entirely uncalled for and pernicious practice, is also a great contributory cause of the complaint.

SPRAINS. ...

Sprains of the back tendons, fet- tributable to want of care, or mis- which for the greater part it would not have been easy or possible to prevent, for, although in most cases the result of over-straining the part involved, and they would not perhaps have arisen if the horse had been used with greater care, there remains the fact that a certain amount of risk of sprain is practically unavoidable whenever horses are called upon for more than average efforts or exertion, such as jumping, fast galloping, hauling a very heavy load uphill, etc. In order to preclude such risk entirely, one would have to use horses so carefully and be so particul-

A First Rate Baker



Easy to Work With, Light on Fuel, Strong and Durable

That these features form, together, the RANGE AS IT OUGHT TO BE, is known by all housewives. In the

HIGHLAND GRAND RANGE

these important points reach highest perfection. Its fine roomy oven is extra large, well ventilated, and the heat,—under ready control,—is exactly the same on the sides, top and bottom. The HIGHLAND GRAND

Burns Either Coal or Wood

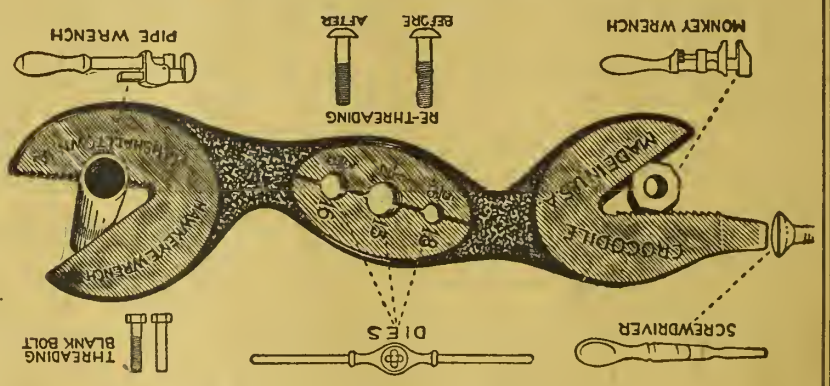
equally well. Its structural features embrace all that is best in LATEST MODERN IMPROVEMENTS—large fire-box, patent sifting and dumping grate, large convenient ash pan. Made with high closet, upper or lower mantel shelves and reservoir.

Ask Your Dealer, or Write for Catalogue

THE RECORD FOUNDRY AND MACHINE COMPANY
Manufacturers Moncton, N. B.

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wreuch, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

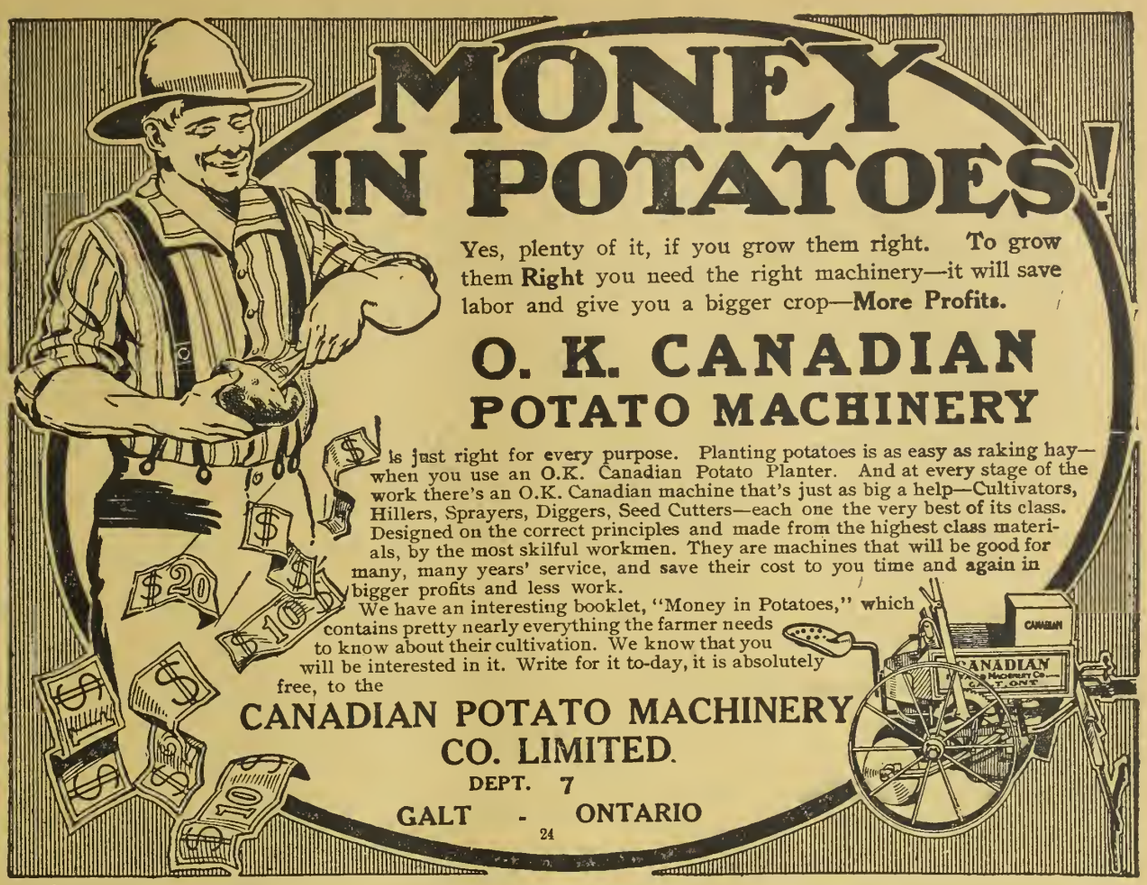
On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N.B.

ar about not putting any strain on the legs and joints, that it would be impossible to make full use of them, while all galloping and jumping would have to be abstained from. However, the likelihood of sprains occurring is greater in certain circumstances than it normally is, and their occurrence is entirely attributable to causes that could easily be avoided. For example, sprains and injuries to the hocks are most liable to result if horses are galloped or jumped much when they are in soft or green condition, or through galloping or cantering a horse on hard ground. In the case of cart-horses, their hocks often get badly injured and become unsound through making them back an excessively heavy load, which puts an in' ordinate strain upon these joints, such cases would, of course, not happen if it were not for carelessness or ignorance. Negligence, again, is not infrequently the underlying cause of capped hocks, this trouble in some cases being brought about as a result of ahorse being made to turn round in a narrow stall and hitting the points of its hocks against the stall partitions, which, if constantly repeated, is very liable to lead to their getting capped in the end. This result can easily be guarded against by backing the horse out of its stall and turning it round in the stable passage.

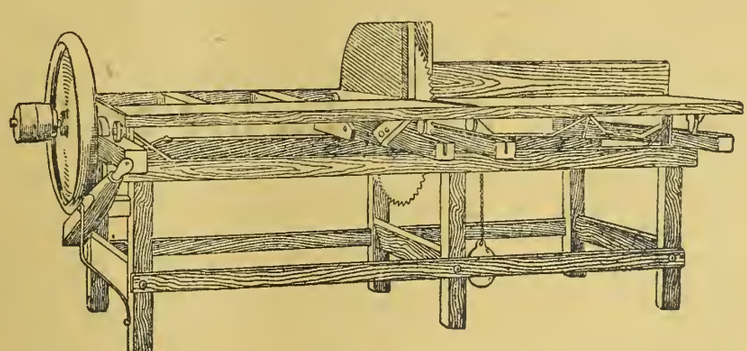
BROKEN WIND.

Many cases of broken wind are attributable to want of care, or mistakes in the management of horses. Thus, a principal cause is feeding them on damaged or excessively dusty forage, while often it is caused through driving or riding horses too fast when their stomach is much over loaded with food, or by exerting them too severely when they are not in fit working condition, and especially if they carry a big grass belly. Over-exertion is one of the chief causes of congestion, which so often is the forerunner of inflammation of the lungs. Colics, again, are principally brought about through errors in dieting or watering, while most cases of impaction of the bowels probably occur simply from the neglect to provide a sufficiency of laxative food in the dietary. Coughs and colds would not be nearly so rampant as they are in winter and early spring if stables were kept less close or hot, and if greater attention were bestowed on the question of ventilation. Poll evil is mostly the result of carelessness or rough management for the chief causes of this trouble consist (1) in in the horse receiving a blow on its head through hitting it against the lintel of the doorway—an accident which ought not to occur if ordinary care is observed—and (2) in the part being injured through the heavy cart-horse collar being clumsily and roughly put on or taken off.—Argus in Farm and Home, England.


MONEY IN POTATOES!
Yes, plenty of it, if you grow them right. To grow them Right you need the right machinery—it will save labor and give you a bigger crop—More Profits.
O. K. CANADIAN POTATO MACHINERY
is just right for every purpose. Planting potatoes is as easy as raking hay—when you use an O.K. Canadian Potato Planter. And at every stage of the work there's an O.K. Canadian machine that's just as big a help—Cultivators, Hillers, Sprayers, Diggers, Seed Cutters—each one the very best of its class. Designed on the correct principles and made from the highest class materials, by the most skilful workmen. They are machines that will be good for many, many years' service, and save their cost to you time and again in bigger profits and less work.
We have an interesting booklet, "Money in Potatoes," which contains pretty nearly everything the farmer needs to know about their cultivation. We know that you will be interested in it. Write for it to-day, it is absolutely free, to the
CANADIAN POTATO MACHINERY CO. LIMITED.
DEPT. 7
GALT - ONTARIO
24

WOOD CUTTERS

Made in Four Different Sizes



We are offering these machines to the public with the belief that they are the best wood cutting machines on the market for the money. The Frame is made of the best seasoned hardwood, and well bolted and braced. The Arbor is of the best turned steel, and runs in bearings made of the finest quality babbit. The Balance Wheel is a solid web and weighs 180 lbs. The Table is of heavy Plates and indestructable. Wood Cutters are shipped with 28 in. saws unless otherwise ordered.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

FLORICULTURE.

W. S. St.John, writes:—Please tell me what to do for a plant of asparagus which is in a large pot. It has been growing well until since the first of the year. It was repotted last spring and on emptying it out of the pot last week I discovered that the roots are full of lumps. Is this a disease, and what should be done?

The large lumps are quite natural parts of the roots. They hold a reserve supply of water for the plants. Your plant apparently needs repotting and if done at once you will probably find that it will come out all right.

Ivy, of St.John, writes:—I have two Boston Ivies that were planted last spring but owing to sickness I was unable to have them protected in the fall. They look black now. Are they killed or if only the top damaged would it be possible to save the roots if cared for now? What would be the best thing to use for covering the vines where three feet long?

The Ivies are probably all right yet as they are usually damaged in early spring. Cover at once with brush so that both roots and tops are covered a little. Strawy manure or straw alone placed about the base of the vine before the brush is put on will be a great help.

Hyderangeas required for early flowering should be started new. Water rather sparingly until foliage appears.

Early planted Freesias should be well started in bud now. Keep them well staked and water freely until done flowering, when they should be gradually dried off, leaving the bulbs in the pots, then remain dry until planting comes again next August or September.

Water carefully for the red Spider on the Palms and Rubber Plants from now on. Frequent spraying or sponging of the under sides of the leaves is a sure preventative as well as a remedy.

Pansy seed for the very early plants should be sown immediately. Buy the choicest seed only and preferably in separate colors. There is such a large list of separate colors advertised by all leading seedsmen, that one can select the colors that appeals to one's taste with the assurance that a large number of the plants will be true to name.

Plants grown from seed sown this month would require to be transplanted into boxes in the house, and again transplanted into hot beds or frames in the early spring. They thus make large plants in bloom for May planting out of doors.

Farmer Ads. will Bring Results.

ON CEENT A WORD.

FOR SALE—Cheap. Good pure bred Berkshire Boar. C. GRAY, GLENHOLME, N. S.

100 FINE WHITE ENVELOPES neatly printed with your return card, sent postpaid, 35 cents. Samples free.—HOWIE PRINTING COMPANY, Beebe, Que.

FOR SALE—Choice, large, fresh smoked Herring (kippered.) In boxes from five to twenty dozen at twenty-five cents per dozen.—MATTHEW MURPHY, Argentia, Newfoundland.

WANTED.—Experienced dairyman wants position as foreman on good dairy farm. Good references. Address C. A. LANTZ, Lower River Herbert, Cumb. Co., N. S.

FOR SALE—Two Registered Jersey heifers, 2 years old safe in calf to best bull in New Brunswick, also 3 months old Bull Calf grand breeding. Send for photos. B. V. MILLIDGE, Willow Bank Jersey Farm, St. John, N. B.

FOR SALE—Columbian Wyandotte Cock, a few hens and pullets. White Wyandotte pullets. Single Comb Brown Leghorn Cockerels, hens and pullets including first pen at Amherst. Black Cochin Bantam Cock. WOLFVILLE POULTRY YARDS, Wolfville, N. S.

FOR SALE

One Breeding Pen White Wyandottes also 25 Pullets and Barred Rock Pullets.

Apply

KENTVILLE POULTRY YARDS,

KENTVILLE, - - N. S.

KNIFE OF THE WORLD.

The greatest kitchen tool ever got out. Will peel potatoes faster than a machine; cuts Boston Chips, cold slaw, or anything; cores apples or any fruit. Sample by mail only 15c.

Continental Agency, Montreal, Quebec.

FITS CURED

Send for Free Book giving full particlars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits—Simple home treatment—25 years success. Testimonials from all parts of the world; over 1,000 in one year.

TRENCH'S REMEDIES Limited

434 St. James Chambers, Toronto, Can.

A. N. S. A. C. Graduate Secures a Good Position.

A recent issue of the Middleton Outlook says:—

"Mr. Malcolm B. Davis, who has been employed on the Sdnnyside Experimental Farm, left on Friday last for Ottawa, where he has accepted the position of Assistant in Pomology to the Dominion Horticulturist. We understand that the first work of Mr. Davis in his new relation is to be a series of addresses in the MacDonald Agricultural College, Montreal. During his stay among us Mr. Davis has given several public addresses on subjects connected with his department, which have shown him to be quite up-to-date in his knowledge and a clear and ready speaker. He has won a host of friends among us by his genial and unaffected manner, all of whom congratulate him on his promotion, and wish for him very great success. His place at the Sunnyside Experimental Farm will be filled by Mr. Morley Pike, who with his family, will arrive in due time."

Mr. Davis is a graduate of the N. S. A. C.

460 Pounds at 8 Months.

Joseph Oxener, of Lower La Have, Lunenburg Co., recently butchered an eight months old pig that, when dressed, tipped the scales at 460 lbs.

This record beats anything sent in this year. Our friend, Harry, who raises the big ones up in York county, will likely do his best to break this record next year.

Breeding and Feeding the Champion

After the winning of a grand championship for the best fat steer at a big show there is always some curiosity as to how the champion was produced. This year emphasis has been laid on the fact that Glencarnock II., champion at Chicago, was not fed very much corn. Here is the story of the steer as told by Wm. Bowman of Rugby stock farm, and father of Henry Bowman, who fed the steer.

'Four years ago last March, we arrived at Forrest. That spring Mr. McGregor had more calves than he had milk for, so he gave us three. One of them is the dam of the steer. She was two years old when the calf came. He was a very small wolly little fellow, but I was struck with his splendid outlines, so, half in fun and half in earnest, I told my boy, Harry, that he looked good enough to make a Chicago champion, and I told him to go after him, and he could have all the prize money the steer would win. So between us he was fed and developed.

"As to his feed. He sucked his dam from September 26, 1911, until June, 1912, when we got a fresh cow for him. This cow fed the calf until October, 1912. Then we gave him another cow to go to Chicago a year ago. He won first prize as a senior calf and was also champion grade calf and reserve champion calf. He was brough home and fed for Brandon Winter Fair, where he won grand champion honors. In May, 1913, he was put on another foster mother and was kept on her until he left for Chicago.

"He never was fed out of a book, but out of the hand of common sense. As to what weight of grain or roots he received as a feed, we have no idea; we don't know how to feed stock by pounds. He was always fed what he could clean up, of principally oat chop and whole oats, and some barley chop and bran. He was out for exercise almost every day, and during the warm season, at nights. He always had water before him. He has never tasted medicine or artificial foods, and perhaps a year ago he was fed a little molasses or molasses meal and oil meal. There was nothing supernatural about his feeding and care, but a constant care as to feed and comfort, Harry always directing his feed. He has not eaten 10 bushels of roots or corn."

DEALERS WANTED

The very active interest taken by farmers throughout the Dominion in better methods of fertilizing, has created an astonishing demand for Davies Special Mixed Fertilizers.

As we want to supply this demand through dealers, we are offering an attractive proposition to reliable parties in Ontarin, Quebec and the Maritime Provinces, who can handle quantities of 20 tons (minimum carloads) or more. This proposition is open to anyone, whether regular fertilizer dealers or not.

It offers a very profitable side line for Seedsmen, Implement Dealers, Flour and Feed Men, Millers, and progressive Farmers, in districts where we are not at present represented.

DAVIES SPECIAL MIXED FERTILIZERS

have an extremely good performance record, having produced remarkable results for many farmers. They are prepared by using only the highest quality materials and are mixed under the supervision of experts. They are put up in 125 lb. bags (barrels if desired).

Goods are guaranteed to be in perfect condition.

We especially recommend our factory mixed high-grade fertilizers analyzing from 6 to 10% POTASH.
This is a splendid opportunity. Write us immediately about it before all the remaining territory is taken up.

The William DAVIES Company Limited

West Toronto, Ontario.

Convincing to Ladies— This Oven Test!

PURITY

So that you may use less flour, we do what a home cook would do if she were in our place.

From every shipment of wheat delivered at our mills we take a ten pound sample. We grind this into flour. Bread is baked from the flour.

We find that some samples make more bread and better bread than others. So we keep the shipment from which the more and better bread comes. The others we sell.

You save money by using flour that bears this name. And you get better bread.

"More Bread and Better Bread" and "Better Pastry Too"

521

A COLD Developed Into BRONCHITIS.

However slight a cold you have, you should never neglect it. In all possibility, if you do not treat it in time it will develop into bronchitis, pneumonia, or some other serious throat or lung trouble.

Dr. Wood's Norway Pine Syrup is particularly adapted for all colds, coughs, bronchitis, pneumonia, asthma, whooping cough and all troubles of the throat and lungs. Three points in favour of Dr. Wood's Norway Pine Syrup are: 1. Its action is prompt. 2. It invigorates as well as heals, and soothes the throat and lungs. 3. It is pleasant, harmless and agreeable in taste.

Mrs. Albert Vait, Brockville, Ont., writes:—"Just a line to let you know about Dr. Wood's Norway Pine Syrup. Our oldest little girl is now six years old. When she was four months old she got a cold which developed into Bronchitis, and we tried everything we could think of and had two doctors attending her, but it was no good. One day I read in your almanac about Dr. Wood's Norway Pine Syrup, so I tried it, and before she had finished one bottle of it, the dry hacking cough had nearly all gone. There is nothing equal to it, and we are never without it in the house."

See that you get "Dr. Wood's" when you ask for it, as there are numerous imitations on the market. The genuine is manufactured by The T. Milburn Co., Limited, Toronto, Ont.

Price, 25c.; family size, 50c.

LET'S GET ACQUAINTED!

You have the

RAW FURS

We have the MARKET for them and the MONEY to buy them.

Why not exchange YOUR FURS for OUR MONEY. It means MORE MONEY for you. A trial shipment will prove it. Think it over.

A postcard from you will bring you our latest price list and shipping tags. References furnished. Goods held separate on repuest.

Hiram Johnson, Limited

494 St. Paul St., Montreal

Mail Dept. "F" The Raw Fur Dealers

Better Butter— Bigger Profits!

If you wish your butter to be smooth and uniform, use the

"BRITISH" Butter Worker

Adopted by the best dairies in Gt. Britain and Canada. Makes the butter firm-even-consistent all through. Results in **better butter and bigger profits!**

Sold by dealers everywhere. Three sizes — 14 in., 17 in. and 20 in. wide.

DAVID MAXWELL & SONS - St. Mary's, Ont. 4

Banish the Lice.

Between now and spring it will be a common sight to see horses, especially young stock, which is being kept in rubbing tails and neck against fences and buildings. When stock do this they have lice and are not only uncomfortable but cannot thrive. Then there is a job or two to do at once. First, clean out the stable, every corner of it, and apply a whitewash prepared as follows:

Slake half a bushel of unslaked lime with boiling water, cover during the process to keep in steam, strain the liquid through a fine seive or strainer, and add to it a peck of salt, previously dissolved in warm water, three pounds of rice boiled to a thin paste and stirred in while hot, half a pound of Spanish whiting, and one pound of clear glue, previously dissolved by soaking in cold water and then hanging over a slow fire in a small pot hung in a larger one filled with water. Add five gallons of hot water to the mixture, stir well, and let it stand for a few days, covered from dirt. It should be applied hot, for which purpose it can be kept in a kettle or portable furnace. The east end of the White House in Washington is embellished by this whitewash. It is recommended by the government for whitewashing lighthouses.

A pint of this wash mixture, if properly applied, will cover one square yard, and will be almost as serviceable as paint for wood, brick, or stone, and is much cheaper than the cheapest paint.

Next take the horses or colts and clip the hair off around the tail along the back and on each side of the mane. Then rub on a solution made by dissolving one ounce of stavesacre seeds in one and a half pints of water boiled for two hours, keeping the water up to the quantity commenced with. Of course, the clipping can be dispensed with, but the solution will be as effective and more will be required. Other parts of the body may also require treatment such as the under side of the neck and along the fore ribs.

Worms.

O. M.—Will you kindly favor me by letting me know how to get rid of worms in draught horses. It is tape worm, not bots, which is worrying me.

Prepare the horse first by fasting him a day or so on a light diet. Then give him the following:

Three drams male fern, 2 ounces turpentine, 6 drams B. Aloes, 1 pint linseed oil. Give him a bran mash the following morning and the results will be satisfactory. This is the dose for a large draught horse so you can act accordingly as to the dose for your own.

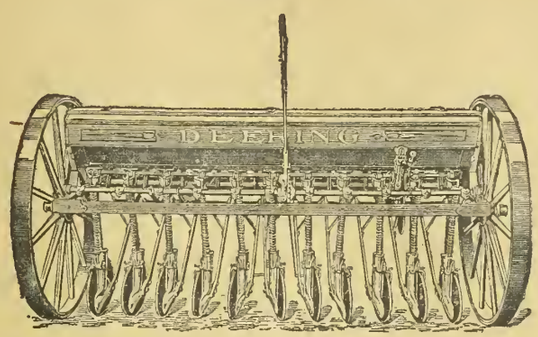
Good Rich Milk.

The critical consumer of milk may give a snap verdict on the glass of 'good rich milk' given him in the restaurant or at home, and may vaguely wonder what percentage of fat the milk is supposed to contain. Certain standards of richness are fixed by various countries, and by municipalities, while some purchasing companies and dealers also set a standard below which the milk must not fall.

The knowledge of the average test of the herd, interesting as it is, is not as valuable to the progressive dairyman as a knowledge of what each cow's milk tests. Whether it is 2.9, 3.4, 4.5, or 5.6 per cent of fat depends on various factors, and can only be asceratined after systematic sampling and testing. Such testing sometimes reveals curious facts. A pet cow whose 'good rich milk' was reserved for table use was recently disgarded by a farmer when cow testing proved to his dismay that her milk was nearly the poorest in the herd.

The average test of the herd is a vital matter to everyman whose milk is paid for at the cheese factory by the test; it is of decided importance to both creamery manager and patron when considering the by-product of skim milk for feeding, and the loaded wagon for the cream hauler. For two lots each of 16,500 pounds of normal milk may contain either 500 or 900 pounds of fat; one lot is scarcely the best for cheesemaking, while the other would be 'good rich milk.'—C. F. W.

Deering Drills



GIVE your seed a chance to produce a record crop by sowing it with a Deering drill. Deering disk and hoe construction puts the right amount of seed in the right position at the bottom of the furrow, to insure your getting a full even stand of grain.

No matter whether your ground is hard or soft, gravel or clay, smooth or rough, level or hilly, there is a Deering drill in the line that will plant your seed as it should be planted.

Examine Deering drill construction and the many features. Note the light draft, the large capacity grain boxes, the double-run force feed that handles all kinds of grain and seed, the ease of regulation to suit soil and seed—and a dozen other points to grow enthusiastic over.

See the drills themselves at the I H C local agent's place of business. Our catalogues tell you all the features of all the types. Get catalogues from the local agent, or write the nearest branch house.

International Harvester Company of Canada, Ltd

Hamilton, Ont. London, Ont. Montreal, Que.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.

These machines are built at Hamilton, Ont.

100 p. c. Increase in Crops

The French Minister of Agriculture says that farms in Europe have doubled their productiveness in 100 years, and that 70 p. c. of this is due to the use of commercial fertilizers.

Such an increase could be obtained only by using good fertilizers. "Made at Windsor Fertilizer" is not only good fertilizer, but the best fertilizer.

It is manufactured at

WINDSOR, NOVA SCOTIA

in the largest—best equipped—and most up-to-date Fertilizer Factory in Canada.

When you buy your fertilizer ask "Is this Fertilizer made at Windsor, Nova Scotia?" If the man says "Yes", you are getting the best.—If he says "No", you are not.

Write us and we will give you the name of the nearest "Made at Windsor, Nova Scotia" Fertilizer Agent.

BOX 432 - - WINDSOR. N. S.

Here is a message of hope and good cheer from Mrs. C. J. Martin, Boone Mill, Va., who is the mother of eighteen children. Mrs. Martin was cured of stomach trouble and constipation by Chamberlain's Tablets after five years of suffering, and now recommends these tablets to the public. Sold by all dealers.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

FOR SALE—Shorthorn Bulls. WALTER EATON, Upper Canard, Kings Co., N. S.

FOR SALE—Pure bred Percheron Stallion, 1 1-2 years old. LEO. A. MILLER, Linville, Car. Co., N. B.

FOR SALE — Four pure bred Holslein bull calves one to twelve months old. J. D. FRIER, Sussex, N. B.

WOULD YOU MARRY IF SUITED? Best Matrimonial Paper Published. Mailed Free. THE CORRESPONDENT, Toledo, Ohio.

FOR SALE—Ayrshire bulls from two weeks to one year ten months. One Holstein two past. JOHN. A. HUGHES, Petitcodiac, N. B.

WANTED—Good, plain Cook. Write giving references for apply personally to MRS. T. H. ESTABROOKS, 102 Mount Pleasant Ave. St. John, N. B.

FOR SALE —Five yearling Guernsey Bulls. Three sired by Imp Canada's Jethro Bass. Best milking stock. T. D BLAIKIE, Great Village, N. S

FOR SALE—Imported Clydesdale Stallion, rising four years old. exceptionally well bred, for further particulars, apply COSSAR FARM, Lower Gagetown, N. S.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton. N. B.

WANTED—A position as manager of a farm in the Maritime provinces, by an experienced married man Best of references. Apply to FARM MANAGER, The Maritime Farmer, Sussex, N. B.

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

AGENTS—MALE OR FEMALE—In every City, Town or Village in the Maritime Provinces to sell best line of Flavors, Perfumes, Powders, etc. Workers earn from $3.00 to $6.00 a day. No others need apply. Write C. C. RAND, 241 Oxford Avenue, Montreal.

SITUATION WANTED on good farm, either as foreman or would rent farm on shares with option of purchasing if satisfactory. Life-long experience in practical agricultural work.—X. Y. Z., care Maritme Farmer, Sussex.

WE WILL PAY YOU $120 to distribute religious literature in your community. Sixty days work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used.—International Bible Press, 182 Spadina Ave., Toronto.

FOR SALE

1 One 240 Egg Cyphers Incubator, price $15.00. One trio Buff Orpingtons, 2 yearling Hens and one Cockerel. Price $8.00. Also a few S. C. R. I. Red Cockerels, prices from $2.00 to $5.00. Write your wants.

W. H. HENRY,
SHUBENACADIE, N. S.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding **The Farmers Most Profitable Cow** should be sent to the Secretary of the Association.

W. A. CLEMONS, St. George, Ont.

Highland View Dairy.

Young Guernsey Bulls, also Buff Orpington and White Wyandotte Cockerels and Pullets.

R. R. BLACK, Amherst, N. S.

High Quality Builds Big Telephone Business

THIS business was organized to manafacture telephone equipment for independent and municipal systems. Right from the start our equipment made records for efficiency. It did not take long for our goods to acquire a reputation for quality and reliability. As a result, our business has grown by leaps and bouuds.

It is a well known fact that we have been securing over 80 per cent. of the new telephone business in Ontario. The business, too has been secured with less effort than business secured by competitors. The satisfaction our telephones and equipment have given under all conditions have paved the way for easy business getting.

To judge how fast our business is growing, you'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the telephone business, that we are the legitimate people to deal with. There are those in the telephone business who are interested in depreciating the success of the independeht telephone movement and the development of municipal systems. On the other hand, our business lies wholly and directly with the independent telephone systems and it is to our own best interests to look after those systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of the telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephones and equipment.

You are absolutely safe in equipping your systems with our telephones. We guarantee them as regards material and workmanship. In fact we guarantee all our equipment and materials. And in addition we offer to send our telephones for **Free Trial**, so you can test and compare them with others right on your own lines before risking a dollar.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4, describing our magneto telephones, is free on request.

Send for a Copy.

Canadian Independent Telephone Co., Ltd.

1820 Duncan St., Toronto, Can.

"Also Manufacturing Agents for the Magnaphone Co. under Mr. Geo. W. Webbs' Canadian Patents No. 123363, No. 124537, No. 131145."

FARM MANAGER WANTED

Having a small farm in Cape Breton, I wish to engage a man to look afler it. Must understand general farm work and know how and when to put in crops and see they are properly cultivated Good wages to the right man and steady employment. References required as to sobriety and ability. Man and wife could be employed. Address

H. F. BAKER,
131 State St., - - Boston, Mass.

FARMS FOR SALE

Send for FREE Catalogue; with descriptions and prices of over 1000 farms in Nova Scotia.

McCALLUMS LIMITED,
"The Real Estate Men"
Truro, - Nova Scotia

SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to

F. S. BLACK, Amherst, N. S.

Barred Plymouth Rocks

Victors again at Maritime Winter Fair, 1st and 2nd Mating Pens. 1st Breeding Pen. 1st pair of Utility Cockerels; 1st and 4th Cock; 1st and 6th Pullet; 2nd, 3rd and 6th Cockerels; 3rd and 5th hen is Record for 1913. Lusty Cockerels and Cock birds for sale. Address

CRAIG BROS., Amherst, N. S.

DURHAM BULLS

Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale.

C. C. H. EATON,
Canard, - - Nova Scotia

SPECIAL SALE

1 Barred Rock Cockerel and 3 Hens $5.00.
1 " " Cock and 3 Hens $5.00.
10 " " Utility Pullets 75c. each.
3 Buff Wyandotte Cockerels $1.50 each.
1 Columbian Wyaddotte Cockerel $1.50.
2 White Wyandotte Pullets $1.50 each.

ORCHARD HILL FARM
Brown's Flats, - N. B.

HOUDANS

The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

Jan. 1, 1914.

W. J. M. MacLeod,
Sussex N. B.

Dear Sir:—The trio of Houdans I ordered from you arrived in good shape this morning. I am well pleased with them. I think they are very fine birds and am glad to know they are of such good stock.

D. McKAY, Pictou Co., N. S.

One Cockerel the progency of last years Boston and New York Winners, and one Pullet for sale.

$5.00 takes the pair.

W. J. M. MacLeod
SUSSEX, N. B.

SHORTHORN AND JERSEY BULLS FOR SALE

I have for sale five young pure bred and registered Shorhorn Bulls, 8 to 10 months old. These bulls will be suitable for service next spring and are from the best stock that can be imported.

Two pure bred Jersey bulls 1 1-2 and 3 years old respectively.

R. O'LEARY, - - RICHIBUCTO, N. B.

Milking Shorthorns

I have for sale 5 Registered Bulls ready for service. For fifteen years I have used bulls from the best milking families in Canada.

Write or telephone

Bliss M. Fawcett,
Sackville, N. B.

FOR SALE

A fine Dairy Shorthorn Registered Bull Calf 3 months old.

E. W HEURTLEY,
P. O. Sutherland's River, N. S.

FOR SALE

Two Jersey Bulls, twelve and thirteen months old, both from heavy milking dams. Apply to

ROBT. ROBINSON,
Meadow View Farm,
Box 265 Sussex, N. B.

FARMER ADS. BRING RESULTS.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

REGISTESED TRADE MARK

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, FEBRUARY 24, 1914. Number 10.

Women's Institutes---Their Aims and Objects

The Late Honorable John Dryden regarded the organization of Woman's Institutes as the greatest work accomplished during his tenure of office and Honorable C. C. James characterizes Women's Institutes as one of the greatest achievements of the Twentieth Century

Usually when I address a meeting it takes me a few moments to decide whether there are enough men present to enable me to use the plural form and on one or two occasions I have been saved from the dire disgrace of saying "Ladies and Gentleman" by the presence of two or three small boys. However, things are slightly different tonight. Now I know the proper form of starting an address of any kind is to say something to this effect "It gives me great pleasure to have the honor of speaking to such an intelligent audience" etc. The audience is all that it should be and I admire it exceedingly but I must confess that my own feelings are decidedly mixed. I feel that the honor is almost too overpowering for one small person to carry off gracefully and as for the pleasure it is so mixed with trembblings that I can hardly tell you now whether you could recognize it as a pleasure or not. I shall be more competent to speak on that score when I finish. Public speaking is such a new thing to me that I cannot view it with that contempt that is bred of familiarity—in fact, if it was not for the fear of boring you I might use the overworked phase "Unaccustomed as I am to public speaking I come before you tonight filled with fear and trembling" but I will spare your feelings and just ask you to bear with me for a time while I tell you something of the latest work taken up by the Department of Agriculture namely—the work of Women's Institutes. As I already stated my audiences as a rule are principally made up of women and while we want to interest the women we also want to interest the men for in the end men are benefited by the Institute and they ought to know something about it.

HOW WOMEN'S INSTITUTES ORIGINATED.

Let me tell you then just how, when and where this organization came into being. It owes its existence to a group of women in Ontario who decided that the Government had been doing so much for farmers and the farms of the Province that it was just about time for them to give some consideration to the homes and the women of the Province. Information of all kinds was furnished free to the farmers, expert knowledge was given him on the proper scientific methods of improving his land and his stock, how to house and feed the latter in the most improved methods, but never a word of advice to his wife as to the best methods of providing for, housing and feeding the higher animals in the home. Not one word, the women were allowed to worry along in the old way. All for the men, nothing for the women and so even as the humble worm will turn if given provocation enough so will a woman. Why shouldn't she demand some assistance? I ask you who was doing the most important work of the Province, the man or the woman? Is feeding, housing and providing farm stock of more importance to the world than housing, feeding and improving humanity. Evidently it must have been so considered or the interests of the home would not have been so long overlooked. These few women decided that the time was ripe for the Department to do something along their lines and they requested that due consideration be given them in the duties devolving upon them as wives and farmers as mothers and homemakers. They urged that while the Department was doing fine work as far as educational work for the men of the Province was concerned nothing had been done for the women. Could the Department find something and if they could would they? The Department could and did, organizing a society distinct from the farmers associations and to be known as the Women's Institutes. Between you and me I have a suspicion that the Department thought it was only a fad and would probably die out in a year or two but in the meantime "anything to please and humor the ladies". If the Department had any idea of that kind it did not take them very long to find out that the women were very much in earnest. Judge for yourselves wnether it was a necessary thing or not for it grew beyond the hopes of the women themselves and very often the women may be depended upon to have a very clear and concise vision of the future. Fifteen years ago then, this society was brought into being and for the first year or two grew very slowly, then the women of Ontario alone realized its worth and during the past thirteen years its growth in Ontario alone has been most phenominal, as it boasts this year 800 Institutes with a membership of 25,000 an average growth of 50 Institutes per year. Last November at the annual convention they had an attendance of 700 delegates, and Ontario furnished them all.

HOW THE MOVEMENT HAS SPREAD.

From Ontario this movement spread through the Western Provinces to the Pacific coast, gaining in strength and in influence. Eastward into Quebec, into New Brunswick, this past year into Prince Edward Island and just this past summer into Nova Scotia. In Manitoba the Institute is known as the Home Economics Club and in Quebec as Women's Clubs, but they are the same thing and have the same aims and objects.

THE WORK IN NOVA SCOTIA.

Last summer we were only able to preach the gospel of the good to be derived from the Women's Institutes in parts of six counties and barely had seven weeks to do it in. We established fourteen institutes which I am glad to say are in a flourishing condition. While the short courses were being held the first of January at Truro we invited those Institutes to send in delegates to the first annual convention. Thirty enthusiastic delegates responded to the invitation and with that two of our societies were unable to send representatives. Now I am not prone to boast, it was absolutely the best convention I ever attended and I have been to a great many and all we women were most mightily pleased with ourselves, because the meetings were all good and decidedly worth while. Remember please, they are barely six months old and we held a successful annual convention. As the small boys say "Can you beat it" No, you can't. What do you think our convention will be five years from now? I am no prophet nor the daughter of one but I am quite willing to foretell several chapters on that subject and I think we will put this meeting to some trouble to keep up with us even if you have some years the start.

WHY IT GROWS.

Naturally the reason for its growth in any province is not far to seek. Its objects are those that interest a woman, for the home of a woman lies nearer to her heart than anything else. Primarily intended for the farmer's wife it has enlarged and taken into its fold every man's wife, mother, sister and sweetheart, because it appeals to every woman, not only of the rural districts but of the villages and the towns and in doing so produces a spirit of good fellowship and sociability and that is a side of the Institute that is not lightly to be thought of. If an Institute does nothing more than show to the women of a community what real friendship and neighborliness means it will have done a tremendous piece of work. Those are two things of which we can scarcely have too much of. Many people are of the opinion that the Institute is nothing but a cooking school where cooking is the chief thing discussed. Far from it. Was there ever a woman who would not prick up her ears when someone told her of the lovliest recipe as women are usually most anxious to procure a new recipe. I may add that there are few men that are not interested in the same thing, perhaps not just absorbed in the abstract receipt but are undoubtedly absorbed in the concrete result if it turns out a success and are usually very willing to give an opinion on the dish. Cooking is not the only thing discussed at the Institute but it is a necessary thing for good housekeeping, although not by any means the only thing.

Miss Jennie A Fraser
Superintendent of Women's Institute for Nova Scotia.

With Miss Fraser as a leader, we feel confident the women of Nova Scotia will co-operate with her "For Home and County" in all the phrase implies.

HOMEMAKING NOT HOUSEKEEPING.

Note that I say home-making, not housekeeping—they are

(Continued on page 352)

A Short Course in Agriculture at Woodstock, N.B.

Short Courses in Agriculture are not an entirely new thing for the farmers of New Brunswick, many of whom have attended the courses at Truro during the last few years. Those who have done so, and appreciate what a lot of useful work may be crowded into two or three weeks, will learn with satisfaction that they are now to be provided with similar opportunities at home.

The Department of Agriculture of New Brunswick is planning to open its new Agricultural School at Woodstock with a three weeks' course beginning March 9th. Its officials are now engaged in getting the necessary equipment for the work, and in the preparation of a thoroughly practical up-to-date programme. Arrangements are being made for a number of outside men, recognized as experts in their respective lines, to assist the men of the Department of Agriculture, and no effort is being spared to make the work interesting and profitable for those who attend.

Fisher Vocational School, Woodstock, N. B.

Where Short Courses in Agriculture will be conducted from March 9th to March 28th

The first week of the course will be devoted chiefly to horticulture, with special attention given to orcharding. Every aspect of this question, from the choosing of orchard sites to the marketing of the fruit, will be discussed as fully as time will permit. Practical demonstrations in planting, pruning, and grafting, and in the preparation of spraying materials, will be a feature of the work. Lectures illustrated with lantern slides will be another special feature.

Though most of the week will be spent in the study of apple growing, provision has been made for at least one or two periods to be given to the study of small fruits and vegetables.

In addition to the horticultural work it is intended to hold, during this first week a few lectures and demonstrations in bee-keeping.

During the second week the study of field crops will constitute the most important part of the program. Leading varieties of grains, grasses, clovers and alfalfas, potatoes, roots, and corn will be discussed from the standpoint of yield, and with regard to all other qualities which affect their economic importance. The students will be seated at tables upon which they can conveniently examine the samples of seed and other illustration material distributed to them as they come up for discussion. For the work in roots and potatoes we have been fortunate in securing the services of Mr. P. A. Boving, of Macdonald College, who is probably the best authority on root growing whom we have in Canada today.

Soil management in all its phases will also have an important place in the work of this week. Special attention will be given to the problems of drainage, fertilizing, crop rotations and control of weeds as they relate more particularly to this Province.

The third week of the course will be taken up with the study of live stock, dairying and poultry.

A comfortable live stock judging room is being fitted up, where good representatives of the leading breeds will be brought in for demonstration purposes. The judging work will be supplemented with lectures by qualified speakers on breeding, feeding, and management.

Four lectures in dairying have been arranged. The production and care of clean, wholesome milk and cream, milk-testing, and butter-making will all be discussed.

In the time devoted to poultry the practical problems relating to the care and management of the flock for winter egg production, as well as the selection of breeding stock and the rearing of chickens, will be carefully studied.

Evening sessions will be held on a few days of each week, and the programme of some of these, at least, will be of a popular nature. Subjects of general interest to farmers will be made special features of these evening meetings.

To encourage attendance from more distant parts of the Province the Government will, for this year, refund the cost of railway fare amounting to $2 or more to students from any part of New Brunswick who remain at Woodstock during the whole three weeks. Though students are encouraged to stay for the whole course, the programme has been so arranged that those who can afford to stay only one week can get some part of the work complete in that time. There are no fees or charges of any sort for the course. The only cost to students who have railway fare refunded will be their living expenses for the three weeks spent in Woodstock.

It should be remembered that the Department of Agriculture is going to a great deal of trouble and expense to make this course something really worth while, and any farmer or farmer's son who is anxious to increase his store of practical knowledge can hardly afford to miss the opportunity.—R. Newton, Director of Agricultural Schools.

Fertilizers--Their Nature and Use

Editor Maritime Farmer:—

There are a number of substances essential for the growth of plants which are grouped under the general term of "plant food." This term is taken to mean elements which the plant actually takes up from the soil or air and uses in its growth. Substances which may be applied to soil and so affect it that a better crop result can in some cases be used. It must be remembered, however, that these are not actual "plant foods" but, rather, are "stimulants."

Of the number of essential plant food elements the crop easily obtains from the air and from the soil all but three. These are Nitrogen, Phosphorus (Phosphoric Acid), Potassium (Potash.)

Soils are frequently deficient to some extent of these three; but as a rule are particularly lacking in one or two, depending upon the type of soil, and system of cropping and cultivation. The only really practical way of finding out the special soil requirements is by actual field experiments. Unless definite information is obtained as to these special requirements it is advisable to furnish all three plant food essentials, either in the form of barnyard manure or commercial fertilizers, or better still, a combination of both.

In stating that soils are deficient to a certain extent of the plant food substances mentioned, the word deficient is used advisably. To be of any benefit to the crop the plant food must be in solution, the fine rootlets having the power of taking up solids only when dissolved in the soil water. That being the case, an unlimited store of plant food substances in an insalible condition is of absolutely no value to the growing crop. As a matter of fact, most soils contain enough plant food to produce bumper crops for a number of years, providing that this plant food was easily available. Therefore, by stating that a soil is deficient in certain plant food essentials it is understood that the soil does not contain enough AVAILABLE plant food to meet the crop requirements.

These essential plant food elements each have their respective functions in the development of the plant. It is very important to note that one cannot be replaced by another, that the deficiency of one cannot be counteracted by the excess of another. The growth of the crop is controlled by the plant food in minimum.

NITROGEN.

Nitrogen affects more particularly the vegetative part of the plant, giving vigor and color to the foliage, materially influencing the size of stem and leaf. Its influence is, therefore, much more apparent to the casual observer than is that of the other two elements mentioned. An excess of nitrogeo, however, has serious injurious effects, such as retarding maturity, causing a sappy growth of stem or straw and reducing the set of fruit or grain. We have a concrete example of this in the case of a grain field which has received a rather heavy application of barnyard manure, thus being supplied with an excess of nitrogen. In such a case, a rank growing, weak-stemmed grain, susceptible to rust and liable to lodge is produced. With this is accompanied a low yield of grain of inferior quality.

PHOSPHORIC ASID

Phosphoric acid affects especially the reproductive parts of the crop, tending to increase the set of fruit and grain. Though this plant food does but little to increase the general growth of the plant it materially affects the quality causing a firmer growth and hastening maturity. The use of basic slag, a phosphatic fertilizer, on grain, gives us a concrete example. Usually, during the growing season, very little, if any, difference is seen in the grain which has had an application of basic slag. However, it matures several days earlier and gives increased yield of grain of superior quality.

POTASH.

Potash being essential in the formation of carbohydrates (starches, sugars, and fibre) affects both the vegetative and reproductive parts of the plant. Although affecting the general development of the crop it does not in any way cause the extreme growth which a too heavy application of nitrogen does. It influences more particularly the vigor and strength of stem and leaf, thereby tending to make the crop more resistant to disease. This is commonly observed in the case of grain. Where a sufficient supply of Potash is present a stronger straw, less liable to lodge and rust, and bearing a heavy grain of good quality is produced. Influencing the production of starches and sugars, potash is of special value in the production of fruit in increasing the yield and size and in improving the quality and color.

The value of lime, humus, and cultivation in impraving soil fertility might be mentioned. These factors are treated but briefly here, not because of lack af importance, but because of their being a little aside from the subject of this article. In fact, these factors, especially the latter two, are of the utmost importance in building and keeping up the productiveness of the soil.

THE VALUE OF LIME.

Lime is used primarily to counteract acidity in the soil. Such acidity is found in fairly light soils, as well as in the heavy and in the peat soils. The best quality of crops cannot be produced on sour or acid soils. The valuable crop of clover will not grow on sour soils. Lime is the antidote. Aside from counteracting acidity lime is indirectly beneficial through its action ou the chemical composition of the soil in rendering soluble plant food which otherwise would remain "locked up" for considerable time. It must be noted that lime does much to reduce the humus content of the soil. Thus the applying of lime frequently, without keeping up the humus or vegetable matter in the soil, soon results in conditions as bad, if not worse, than those existing when there is a lack of lime.

"Lime, and lime without manure,
Makes both farm and farmer poor."

(Continued on page 346)

The Apple Aphis and How to Control It

Address by Professor W. H. Britten, Truro, N. S. Before the N. S. F. A., at Bridgewater, N. S.

Before proceeding to the subject assigned to me, I would like to say a few words in regard to the campaign against the San Jase scale carried on by the Department of Agriculture during the past year. The report will soon be published and therefore I will only deal with the subject in a very general way.

Our inspection last year began early in June and continued until October and some fifty-seven trees were destroyed bearing the scale. Six of these trees were of 1911 planting and the remainder were 1912 and 1913 planting.

I do not wish to make any predictions in regard to this matter or to prophecy that we have wiped out this scale from the Province of Nova Scotia, but for it to be brought so nearly extermination in a country where it had gained such a foot hold, speaks well for Mr. Sanders who discovered this pest and conducted the campaign against it, for Mr. Matheson who continued the work and for Mr. Payne who increased it.

Other parts of the Dominion of Canada have this pest and still manage to make a living, but there is no doubt whatever that if we had this to contend with it would greatly increase the cost of our production. I do not wish to exaggerate the importance of this pest, and am very far from saying that its development would sound the death knell of our fruit industry, but I do say the low cost of production is one of your greatest assets, and so far as the Department of Etomology s concerned, we are going to spare no effort to keep it that way.

In regard to our future work with this pest, we are not going to drop it at this stage. We are going to continue it next year. All our efforts are being concentrated in keeping it out of the country altogether. We have a fumigation station at Digby and at Truro and are increasing our efforts in that way, so that all stock will be subjected to thorough fumigation. By these means we hope to keep the San Jose scale outside of our borders.

(Applause)

I think this same matter of the San Jose scale will give you some idea of the part that the Etomology Department plays in such a fruit country as this.

I may say that this is not the only problem that confronts us. We have the aphis and the apple maggot firmly established in this country.

I know it is customary with departments to give a lot of advance notices of what we intend to do about such things; I shall not indulge in anything of that sort on this occasion, but hope for an opportunity at this time next year to point to what has been accomplished during the year then past.

Now, coming to the subject which has been assigned to me, I hope you will not expect me to announce anything new on this subject. I believe before anything definite is given out, the whole matter should be carefully investigated under Nova Scotian conditions. I think we are all too apt to follow methods found effective in other countries, without taking into account our own local conditions. I tell you frankly that I would feel a great deal better in speaking on this subject if I had already done this in our own province. The scene of my labor with this pest is far removed from Nova Scotia. In these arid and semi-arid areas of the North West the aphis finds an ideal condition for its existence. I think in British Columbia, Oregon and Washington they are in a very much worse state than we are, but still many fruit growers no longer dread it.

I presume you are well acquainted with the life history of the orchard aphis. I will therefore confine my remarks largely to the methods used to kill it. But, to deal briefly with its life history.

The commonest and most destructive in this country is the green apple aphis, the rosy apple aphis, the green aphis and the wooly apple aphis. I presume you are mostly all acquainted with those small, black shiny oval eggs found on the trees in the winter months. Since coming here several have asked me regarding their appearance. Unfortunately I have brought no specimens with me, but if anyone wishes to become posted on their appearance, I can post samples to them as I can get all we need at Truro. Several members I see here had the opportunity at the short course of viewing these eggs in a small orchard there. These eggs hatch early in the spring and by the time the leaf buds are out practically all of them have emerged. I remember, last spring, going through an orchard before the snow was off the ground—there had been a number of warm days—and looking at the twigs very carefully we could already see some of them hatched. By the time the leaf buds are burst, practically all are hatched. This first generation of aphis are all wingless females. They become mature in two or three weeks and give birth to young ones without the intervention of the males. The second generation are winged females and fly to trees and rest there. Towards fall males and females are produced which pair in the ordinary way and the females lay their eggs on the trees in the ordinary way.

The rosy aphis is not common in this country. It goes for the fruit spurs; it goes for the fruit, causing it to become very badly gnarled. This aphis has a peculiar history. The first brood appears on the apples, and then departs to some unknown food and then reappears on the apple in the fall. The eggs are not as numerous as the green apple aphis, but they are laid on the twigs in the same way.

The green aphis appears here too. The first generation are on the apple and during the summer they breed on the grass and come back in the fall and!
and feed on the apple.

The wooly apple aphis I did not intend to sgy much about as I imagined it was not of great importance, but I have been assured that some people are troubled with this type of aphis. The wooly apple aphis differs considerably in its habits from the preceding species for whereas they are leaf feeders, the wooly apple aphis feeds on the tender tips and roots. In a good many cases this is the worst pest of all. In the spring you will find it clustered upon wounds in the bark or where you have cut off a shoot. Towards fall they move further out on the shoots to the terminal shoots. A great many open cankers will be produced in this way and in some cases small galls.

The next question is that of control. You have all noticed the ants which congregate round the aphis. The aphis secretes a sort of juice, called honey dew, and the ants come and feed on that honey dew. Some species of ants keep some species of aphis very much as we keep horses and cattle, for the sake of the honey dew. I remember I was once describing this apple aphis to a gentleman in British Columbia. He said I was wrong about the way I said the aphis spent the winter. He said, the ants took them into their nests in the winter and in the spring brought them back and put them on the apple trees. He was wrong about the apple aphis, but it is a fact that the corn aphis is kept by the ants in their nests during the winter, and actually start little tunnels for them to the corn roots in the spring.

I had another experience in Quebec I was going by a field and saw a man out there knocking something off the trees and crushing it between little sticks of wood. I climbed over the fence and asked him what he was doing. He said: ;"You see these little yellow ones here with the black spots on their wings, and these little green ones. These with the black spots on them are the mothers and these green ones are the little ones. I am killing the mothers." He was killing the lady birds which were eating the aphis eggs.

Now we will come to the most important question, that of control. The most valuable aphiscide of recent times is a preparation of nicotine called Black Leaf 40. I understand this preparation is handled here by the United Fruit Company. That is the best aphiscide and altnough it is not cheap, it is the most inexpensive to use at the present time.

In regard to the time to spray, if the aphis is hatching in large numbers, the black leaf added to the first spray is very effective; that is the first apple spray as recommended by Professor Caesar. It works very effectively with lime sulphur. Use one third of a pint to forty gallons of the lime sulphur. I think you can do better than that. Under ordinary circumstances, to the second scab spray just before the blossoms open, when they begin to show pink, at the tips, you can add the Black Leaf to that and get excellent results. There is no danger of using it too strong. If the spray is used thoroughly I do not think you will have any trouble whatever. Of course, you will understand that you have got to hit the aphis in order to kill it. You cannot prevent it by spraying, you have got to wait until it is on the trees.

There are two other sprays which I might mention, which are used for aphis. There is kerosene emulsion; if well made and properly applied it is just as good as Black Leaf 40. It has three disadvantages. It cannot be used safely and effectively with other fungicides and insecticides. By adding Black Leaf 40 to the lime sulphur, you get rid of one operation. In the second place, the cost is considerably higher. Thirdly, unless it is properly made there is great danger of burning the foliage. Therefore, I am very reluctant to recommend its general use.

There are a number of soaps—whale oil soap is good and there are other good soaps, but their cost is against them and there are other preparations which I do not mention as their cost is prohibitive.

Q. They do not get headway until the weather is warm?

A. No, they don't seem to. But there is one thing we must remember we have got to spray before the leaves are curled. You know how the aphis curls the leaves up. You cannot get at it at all if you wait until that time. The reason of much of our poor results is that the spraying is put off until this time.

Q. Can that last spray go on two or three days earlier than you have indicated, and do just as much good?

A. Just as much good. It just depends on when you are spraying for the scab.

Q. Would it be all right in Bordeaux?

A. I never used it in Bordeaux. Out where I was we never used anything but lime sulphur.

Q. Would it be very important to direct that spray so as to get to the under side of the leaves?

A. Yes. If you have a tree that is so thick headed that you cannot get the spray in on it, your efforts will be absolutely futile. I have seen some very high and overlapping trees here; I do not see how you are going to get at them.

Q. What pressure would you put on?

A. 150 to 175 pounds would be good.

I cannot close this address without saying something about lime sulphur for killing aphis eggs. A few years ago it was said that lime sulphur would absolutely kill aphis eggs. That is not true. It has been disproved all over this continent. Even if you defer the spray until the aphis are all hatched only a small proportion are killed. If you don't get all you may as well not spray at all. Lime Sulphur will not kill the aphis eggs, will not kill enough of them to make any appreciable difference. For That reason it is far better to use the Black Leaf 40 in connection with the aphis.

Q. How much frost will the aphis stand?

A. I have seen them get badly frozen two or three times after they are hatched.

Q. Do these remarks apply to aphis wherever they are found, for instance on rose trees?

A. Very largely the same.

Q. Why is it we will have years following a bad infection of aphis, when there are practically none?

A. Now, aphis are among the most susceptible insects to weather conditions as well as to the attacks of parasites. Every few years we will have a series of days unfavourable to the aphis, or the parasites will get ahead of them and absolutely clean them out.

Q. Can you control them on nursery stock by spraying?

A. Yes.

Q. Ca[illegible] it by dipping?

A. It is often found more convenient in nurseries than spraying.

Q. Would they appear again in ten days after you dipped them?

A. Yes, if you had not killed them all.

Q. If you don't find you control them with the two sprays you mention, would it be any use to continue the spray after the apple is formed?

A. Very little, but you will probably succeed before that.

Q. Are the eggs laid in bunches?

A. They are laid singly, but often very thick.

Q. Does the first spraying kill the parasites?

A. No, they are a biting insect and the aphis is a sucking insect.

Q. For farmers who are limited in means, time and help, which would you consider the best fungicide, lime sulphur or Bordeaux?

(Continued on page 330)

THE MARITIME FARMER.

And Co-operative Dairyman

Registered Trade Maak

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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FEBRUARY 24, 1914.

DATES OF ISSUE.

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FROM LOW GRADE TO PURE BRED STOCK

Not every farmer who invests money in fine or blooded stock, succeds. The treatment and handling has a good deal to do with it. Some who handle and feed stock of common types, do quite, well, but if they possess much better blooded animals they get a poor development because of improper feeding and management. It is utterly useless to buy fine and high priced breeding stock, unless the best of care is taken to make each animal grow or produce to its best ability.

Growing scrub or low grade stock is not only a personal, but a national loss, because large quantities of food-stuff is consumed without a corresponding increase in the weight of the animals. A failure on the part of the producers to furnish the largest amouut of beef, mutton or pork for the amount of food consumed, is just so much lost to the country.

Those who are apparently unconcerned in the matter of breeding stock with an eye to its general improvment, and who by the use of the common breeds are making it pay fairly well, if they will adopt pure blooded stock, and manage and feed properly, can do vastly better than they are doing, without any additional work. Any man who possesses a farm and is out of debt should by all means purchase a few purebred animals to start with and breed from, and by securing such and attending to them in the right manner, it will not take him long to change his entire stock from common to improved breeds. The pleasure and increased profit resulting from so doing will more than repay him for all trouble and outlay.

First class or purebred male animals of any kind of farm stock are really not necessary to be purchased, by every farmer to start with, as several neighbors can join in buying these, and thus greatly lessen their cost to each, and still their benefit is secured. By perseverence and a desire to improve their stock, any neighborhood of farmers can easily do so and in time possess such breeds as will give the greatest satisfaction, and realize for their trouble such remuneration as cannot fall to be altogether satisfactory to every one.

SOCIAL CENTRES

It is not good to be alone. The saddest word in the English language is loneliness. The happiest place is home. The best thing in the world is love. People are glad when they get together—sad when they have to part. Union is strength and joy. The family, the church, the fraternity, the society, the city, the nation, all are the results of the universal desire for fellowship.

The bond of all true union is a common interest. People who like the same things like one another. Those who do the same things like to be together. A pleasure shared is a pleasure doubled. When children and parents stop working and playing together the home goes to pieces. When boys and girls go to school only because they are forced to do so, education is a failure.

It follows then that a good way to make people happy is to give them something of sufficient interest to draw them together in unselfish groups, and keep them together by keeping their interest alive. The higher and deeper the common interest which unites them, the grander is the society. The bond of the family is the bond of kindred. The broader the common interest the larger will be the society. The love of kindred is necessarily narrow, as the family is a comparatively small institution the love of humanity is large, and the church and school should be universal.

Hence, we can see the necessity of the social centre activity that has advanced with such leaps and bounds within the past few years. Every neighborhood should be so bound together. The school houses shoule be thrown wide open to all useful activities. Neighborhood socials, neighborhood classes, lectures and musicals should be encouraged. As a nation, we are forgetting how to be neighborly. What has become of the old-time singing school, spelling bees, quilting parties, and Debating Societies? All are relegated to the Land of the Used to Be. Neighborhood visiting has gone out of style, and with its going has departed much of the neighborhood spirit of helpfulness.

PARCEL POST IN OPERATION

The Parcel Post system, came into operation on the 10th, inst.

The zone system apparently is adopted. First there will be a zone embracing an area within a radius of twenty miles from any given place, and there will be seven major provincial zones, corresponding to the several provinces of the Dominion, except that the Maritime Provinces will jointly form one zone. Parcels up to a maximum weight of eleven pounds may be sent, and from the published rates we have made up the following table of the postage that would have to be paid on parcels of different weights according as they are destined for points (1) within the twenty-mile radius, (2) within the Maritime Provinees and (3) between a Maritime point and an Ontario point. The last named rate is of special interest, for it represents the rates an Ontario or Quebec mail-order house would have te pay on parcels mailed to customers in the Maritime Provinces.

Lbs.	20-Mile Radius	Maritime Provinces	Ont. Points to Maritime Provinces
1	5 cts.	10 cts.	12 cts.
2	6 "	14 "	20 "
3	7 "	18 "	28 "
4	8 "	22 "	36 "
5	10 "	26 "	44 "
6	12 "	30 "	52 "
7	14 "	34 "	60 "
8	16 "	38 "	68 "
9	18 "	42 "	76 "
10	20 "	46 "	84 "
11	22 "	50 "	92 "

It will thus be seen that while the local merchant mailing a parcel of maximum weight to a customer within the twenty-mile radius would have to pay only 22 cents, his provincial competitor outside that radius would have to pay 50 cents and the Ontario and Quebec stores, 92 cents. Thus the small merchant is afforded a considerable amount of protection, and it is hardly to be conceived that mail order competition from the big city stores will be very much more felt as a result of the new system.

We can see, though, how enterprising farmers might cut into the trade of retail dealers in towns and cities by establishing a connection with consumers there to supply articles like butter, eggs, chickens and so forth, In order to compete they would have to charge a price not much less than the regular price in the city or town but their net price would be less than the market price by the cost of postage and packing and labor involved in doing up such small parcels. But if the farmer were to be wise enough to do this business on a cash basis, he would find it pay him handsomely.

Now is the time for every progressive Maritime Province firm who wishes to do a direct trade with our farm homes, along mail order lines, to get busy, advertise and let the people know that they are alive and ready to cater to the trade which they so long bemoaned as going to other sources,

An advertisement in the Maritime Farmer will popularize your goods. Yes it will!

IMPORTANT EVENTS

Several important events will transpire in the Maritime Provinces during the next six weeks.

The New Brunswick Farmers and Dairymen's Association will meet in Fredericton on March 2nd to 6th inclusive.

The programme will be found on onother page of this issue. Plan to attend and take part in the discussion.

The Dairy School will open in Sussex on March 24th and will continue until April 4th. Cheese making, Butter Making, Soft or Fancy Cheese Making and Ice Cream Making will be the subjects taught. A Domestic Science short course will be held in Sussex from March 31st to April 3rd, inclusive. Competent demonstrators will be in charge. If you are at all interested it would be well for you to write to C. W. McDougall, Dairy Supt. for circulars.

A three weeks course in Agriculture will be given in Woodstock in the new agriculturist school, dating from March 9th. See full announcement on another page.

The Maritime Horse show will be held in Amherst N, S. on April 1st, 2nd, 3rd and 4th. If you wish to soe the best ideals in the various breeds that can be found in the Maritime Provinces you well find them at Amherst on the above dates.

The Agricultural Gazette of Canada.

With the coming of the New Year there has appeared in the field of Canadian journalism a new agricultural magazine which promises to serve a most useful purpose. At no time in the history of the world has the cause of agriculture been accorded the support it now receives from legislative bodies, and in no country has the industry been more wisely or generously helped than in Canada. The Dominion and Provincial governments exercise the utmost diligence and concern in their efforts to solve the problems that confront the farmer; to this work increased impetus has been given by the coming into force of the Agricultural Instruction Act, which serves as a medium for co-operative effort.

With a view to bringing together information concerning the work of the federal and provincial Departments of Agriculture there has been launched the publication of the Agricultural Gazette of Canada, the first number of which has just now made its appearance.

While this magazine is edited and published at Ottawa its value is greatly increased by the co-operation of the officials of the Provincial Departments. The January number is evidently preparatory for what is to follow, as it is devoted chiefly to accounts of the organization and development of the several departments of Agriculture in Canada and statements of appropriations by which they are enabled to carry on their work. It contains also the full text of the Agricultural Instruction Act, the agreement with each of the provinces and a statement of the appropriations under the Act for the present year and work made possible thereby.

In his "Foreword," the Honourable Martin Burrell, Minister of Agriculture, points out that the magazine is not to enter into general circulation, but is to supply the press and those engaged in official agricultural work with facts and information relating to the educational and scientific side of agriculture. To these it is supplied free. For others, a small additional number of copies will be printed from month to month for which ten cents per copy or one dollar per year will be charged.

The magazine, which is clothed in a dignified cover, presents a very attractive appearance, being printed on high class, coated paper, which does full credit to the photo engravings of the Dominion and Provincial Ministers of Agriculture that appears in the first number.

The Growing of Mangels.

Ten pounds of mangels or twelve and a half pounds of turnips equal one pound of corn in feed value. Each one of these things—that is, ten pounds of mangels, twelve and a half pounds of turnips, or one pound of corn—may be taken as a feed unit or standard of measurement in determining the feed value of different food products.

It was something in this sort of way that P. A. Boving, of Macdonald Agricultural College, began his talk on roots.

Then he proceeded to show how a crop of roots, on the basis of measurement stated, compares in food value with some other crops. (Round figures are used; fractions omitted.)

MANGELS DOUBLE ON CORN

A crop of mangels, yielding 21 tons to the acre, gives 6,200 feed units. A crop of White Cap Yellow Dent corn yielding a little less than 13 tons to the acre, gives 3,217 feed units. A crop of Banner Oats, yielding 1,905 lbs. of grain to the acre, 2,658 feed units. A crop of mixed hay, yielding 3,000 lbs. to the acre, 2,400 feed units.

Thus, a crop of mangels giving 31 tons to the acre, contains nearly double the food value of a 13-ton crop of corn, and well on to three times the value of a crop of mixed hay giving a ton and a half to the acre, or a crop of Banner oats giving well on to 60 bushels to the acre.

TOTAL YIELD AND DRY MATTER.

Mr. Boving also gave some striking comparisons between the relative yields and relative feeding value of different kinds of roots grown at the Macdonald Agricultural College Farm (Round figures are given here aga n.)

Taking an average of five years, the prize-winning Yellow Globe gave 37 tons.

Sugar Mangels gave 36¾ tons.
Perfection Red Mammoth, 33½ tons.
Giant Yellow Intermediate, 32½.

TURNIPS.

Imperial Green Globe, 32½ tons.
White Globe, 30½ tons.
Queen, 28¾ tons.
Hall's Westbury, 27¾ tons.

There was an even more striking difference in the dry matter content of the different crops than in the total yield of the same. While Giant Yellow Intermediate gave nearly 4½ tons less of total crop than Prize Winning Yellow Globe, the dry matter content of the former was 3,719 tons per acre as against 3,336 for the Globe. And Mr. Boving considered the amount of the dry matter content in the different varieties of the roots as determining the feed value of the same.

"What is the use," he said, "of hauling nearly 37 tons of one variety of mangels to the farm when by haul ing 32½ tons of another variety you can get a little more dry matter.

A good many authorities will, however, differ from Mr. Boving on this point. As a former farm manager at the O. A. C. once said. "The liquid in roots is not water; it is root juice."

The following table shows the total average yield for five years in the different varieties of mangels at Macdonald College Farm, and the dry matter in same:

Giant Yellow Intermediate...32.658 tons Yield per acre; 3.719 tons dry matter per acre.

Sugar Mangels, 36.784 tons yield per acre; 3.610 tons dry matter per ac.

Perfection Red Mammoth, 33.459 tons yield per acre, 3.412 tons dry matter per acre.

Prize Winning Yellow Globe, 36.913 tons yield per acre; 3.336 tons dry matter per acre.

ABOUT COMMERCIAL FERTILIZER

Mr. Boving, in dealing with fertilizers, said these would pay if intelligently used, but before using them in a wholesale way it would be well to experiment with small trial plots in order to see what one's own farm needs. At Macdonald Farm, mangels on land not fertilized yielded 17½ tons per acre. Where 50 lbs. Nitrate of Soda, 50 lbs. Sulphate Ammonia, 250 lbs. Acid Phosphate and 75 lbs. Muriate of Potash was applied, a yield of nearly 26½ tons was obtained.

SEED EARLY—SOW ON THE LEVEL.

In dealing with seeding, Mr. Boving was most emphatic on two points —date of seeding and manner of seeding.

"Always sow early," he said.

"And always, save where land is badly drained, sow on the level."

An average of experiments at Macdonald Farm gave 32 tons of mangels from seeding on the 8th of May, 26½ tons from seeding on the 22nd, and 16½ tons from seeding on the 6th of June.

He also strongly recommended the growing of seed at home. "I have" he said, "bought seed in all countries in which it could be bought, and not in one single case have I secured as good an article as I have grown myself. Twenty-five mangels will grow enough seed for an acre of land."

HARROWING AFTER SEEDING.

Mr. Boving created suprise when he spoke of harrowing root crops—harrowing crosswise with the rows and with a tilted tooth harrow or a special weeder. He has harrowed mangels three or four times after seeding and has even harrowed after the plants are up. But he seeds heavily —very heavily—15 to 16 lbs. per acre. In carrots, he depends on the harrow to do the thinning. Mangels he plants in rows 30 inches apart and leaves the plants eight inches apart in the row.

The New Peat Fertilizer.

W. B. Bottomley, Professor of Botany in King's College, London, has recently discovered a method of "speeding up" the nitrogen-fixing bacteria in ordinary soil so that greatly increased crops result. It is stated, moreover, that he has taken out a patent to cover this secret process and that he is prepared to send some of the material to purchasers on receipt of the remittance.

For more than a quarter of a century it has been known definitely that certain bacteria, mainly legume bacteria, are able to fix and render available for plants the nitrogen of the air. For this reason leguminous plants such as clovers, alfalfa, peas, vetches, etc., are valuable enrichers of the nitrogen-content of the soil and are important crops in a rotation. Prof. Bottomley's researches (so the report states) have resulted in the "discovery of a medium which, when saturated with the nitrogen-fixing organisms and added to ordinary soil, brings about nitrogen-fixation in a remarkable manner. This medium is obtained by treating peat with certain aerobic soil-bacteria which break down the peat, convert the insoluble "humic acid" into soluble "humates" and change the acid peat into a neutral mass. The humate-forming organisms, having done their work, are killed off by sterilization. Then this medium is inoculated with a mixed culture of nitrogen-fixing bacteria—Azotobacter chroococcum and Bacillus radicicola—and after a few days' incubation is ready for use. When ordinary soil is mixed with this inoculated peat there is a marked increase in the nitrogen content of the soil."

In addition to its value as a medium for the growth of nitrogen-fixing bacteria, the inoculated peat is said to possess remarkable manurial properties, whether mixed with soil or used as a top-dressing. Apparently the soil may be either watered with an extract of bacterized peat, or manured with prepared peat at the rate of 1 1-5 tons per acre. In an experiment at Eton School Garden, 1 1-5 tons per acre of prepared peat are reported to have given 41 per cent. more potatoes, 25 per cent more turnips, 28 per cent more carrots, and 38 per cent more onions than 80 tons per care of farmyard manure!

The advantages claimed for the bacterized peat method are (1) It adds active nitrogen-fixing organisms to the soil under suitable conditions for nitrogen-fixation. (2) It stimulates the activities of the nitrogen-fixers already in the soil. (3) It adds direct plant food to the soil, a large amount of the organic vegetable matter of the peat being rendered soluble in the processes of treatment. (4) It directly promotes the root development of plants. (5) It improves the mechanical condition of the soil.

Numerous enquiries have already been made as to the practical value of this new peat fertilizer. We have not yet experimented with it to determine if it can do all its discoverer claims for it, and in the meantime we shall keep ourselves in an observant attitude. It would indeed be a wonderful fertilizer if one ton of it contained more fertilizing power than 80 tons of barnyard manure. It is almost too good to be true. Moreover, under present methods of soil inoculation, each legume must have its appropriate bacterial organism present in the soil before it can make normal growth, but with this new peat fertilizer it is claimed that proper conditions are obtained for luxuriant growth of all kinds of plants.

Farm Labor.

The difficulty of getting competent help is one of the conditions which are driving many people from the farm who would under ordinary conditions, prefer farm life. This condition is, it seems to us, an indication that better things are in store for the farmers of the country.

While cheap labor may be employed in some industries where most labor is under supervision and where each laborer has only limited and definite things to do, only the ablest type of labor can be used to advantage on the ordinary farm, as it is practically out of the question on the farm to give very close supervision of labor. Such labor must be trusted alone with valuable animals and machines, it must possess considerable skill in their manipulation and care. Such labor must further possess an earnest desire to do efficient and careful work without being constantly under the supervision of some overseer or foreman.

We believe that comparatively high wages must be paid before a farm laborer of suitable quality can be secured. The present scale of wages for this labor is entirely inadequate in view of the demands made upon it in comparison with requirements in other industries. For example: A fireman on a railroad engine receives from $80 to $130 per month, while no greater skill is required to fire one of these engines than to feed and manage a good herd of stock. A street car conductor receives from $75 to $90 per month, and certainly no greater skill or ability is required for such work than to handle three or four horses and a self-binder. At present from $30 to $35 per month and board, or a total of from $45 to $50 per month, is considered very good wages for farm hands.

If the business of agriculture is to compete with other industries, then agriculture must pay as good wages for the same class of work as is paid by the other industries; and the people who use farm products must pay such a price for them as will enable a farm owner to compete in the open labor market.—A. D. Wilson, University Farm.

The man who clamps a nervous heifer into a hog-tight stanchion and backs up against her when he goes to milk the cow in the next alley has a head which is the nearest approach to a gourd of anything this side of the grave. We know a farmer who tried this one placid evening on a heifer whose nerves were as sensitive as a bald-headed proofreader in fly time, and when he got about halfway through milking, the heifer made a half wheel and kicked so many crevices in his wind reservoir that he couldn't say the blessing for a week without wheezing like a nanny goat with the asthma. The tighter you tie a heifer the more horsepower she develops in her left hinh leg.

HORTICULTURE.

The Apple Aphis and How to Control It.

(Continued from page 327)

A. I never tried them side by side in the Province of Nova Scotia, but I don't think you can make any comparison in that way. Bordeaux is known to be better for some things. In the North-West we have a canker that Bordeaux gives better results for, the black spot canker; gives better results for potato blight. If you use it for gooseberry mildew, it has no effect at all, but the lime sulphur has an almost perfect control. So both Bordeaux and lime sulphur have their place.

Speaking of the cost of the different sprays I have mentioned, I figure out that for this Province Black Leaf 40 cost about 50 cents for forty gallons. If you add a pound of soap it costs 55 cents; adding lime sulphur one to ten costs $1.35; that is the two together. Professor Ceasar recommended it one to fifteen and that would make it a little cheaper. Lime sulphate, Black Leaf 40 and lead arsenate cost about $1.00. Kerosene emulsion, the same amoune costs 80 cents. Whale oil soaps cost all the way from 60 cents to $1.20. So you will see that Black Leaf 10 is the cheapest we have so far. I may say that I am very hopeful that we are going to discover some spray that will be cheauer than anything we have now. We are going to have a series of exhaustive experiments dealing with the question of the cost of sprays.

Q. With the small amount of aphis that is in the Valley this year would you spray?

A. I would watch very carefully. Black Leaf 40 wil, not deteriorate by keeping; if you don't use it one year you can use it another year.

Now, there is only one more thing I was going to speak of and that is the wooly aphis. For it you will have to use the same spray only a little stronger and they can very efficiently be killed in the fall. But you must use a strong spray, because of the wax on the back of the aphis which sheds it.

Q. What about the roots of the trees; are they on the roots of the trees? I have seen them on the roots that are sticking out.

A. I don't think that is of much importance down here, but in British Columbia I have seen a whole orchard pulled up and ninety per cent. were affected.

Some Lessons Learned at the Annual Meeting of the Fruit Growers Association.

The recent Fruit Growers' Convention was particularly a spraying session, three-qusrters of the addresses dealing in some way with the control of orchard diseases, or of insect pests. Perhaps never in Canada, certainly never in Nova Scotia was the subject so well discussed in all its different phases and aspects, and as a result, never were we quite so well prepared to fight these pests as in the coming season.

While these addresses are still fresh in our memory, it might be well to review some of the principal points brought out by the speakers, and see where their advice differs from the practices of the past.

All evidence seems to point to the conclusion that the early spray known as the dormant spray, is of little or no benefit except to kill oyster-shell bark louse. Prof. Caesar recommended that in place of this, the first spray be deferred until the leaf-buds are unfolding, and the little leaves about the size of a ten cent piece. The spores of the black spot are then just beginning to be thrown off from the dead leaves on the ground, and if the first spraying is defered until the usual time, or just before the blossoms open, it will be too late to prevent infection when there is much cold wet weather such as we had last season.

That this conclusion is correct is proved by the experience of Prof. Blair in the experiments in Falmouth, when the plots that did not receive this early spray had twenty per cent more spotted apples than the one that did. In fact this last season this early spray on about May 10th seems to have been by far the most important of the lot, Prof. Blair getting practically clean fruit or only three per cent. spotted on the plot that was sprayed May 9th, May 20th, June 11th and July 14th, while the plot sprayed only once before the blossams opened on May 20, and twice after, as the first plot, had twenty per cent of spotted apples. In this experiment it is also interesting to note that on the plots where no spraying was done before the blossoms opened, and only those on June 11th and July 14th applied, practically no benefit was received as far as the control of black spot was concerned, eighty three per cent of the apples being affected against eighty seven per cent where no spray was applied.

The addresses of Prof. Brittain on the green apple Aphis, and of Mr. Geo. Sanders on the Bud-moth were nearly as important to our fruit growers as those of Prof. Caesar on the Black Spot. Next to the Black Spot the Aphis and the Bud-moth rob us of more money than all the remaining pests taken together. Certainly no one should despise the power of little things, after seeing the millions and millions of aphis that covered every leaf and fruit of some of our orchards last summer. The great danger from the aphis comes in its enormous power of reproduction, so it is necessary to kill them as soon as they hatch in the spring, for if they once get well started, no spray can reach them where they feed in the curled up leaves.

Until the last year or two no one seemed to know definitely when to apply the poison to kill the bud-moth. Mr. Sanders in his experiments near Kentville found that the dormant spray was of little or no benefit, although we hgve been taught for years back that this was the one important. He got the best results from a spray applied about five days before the blossoms opened, but said equally good results would be got in the two sprays before the opening of the blossoms buds as recommended by Prof. Caesar for black spot. The aphis get their food by sucking the sap from the leaves through a kind of beak or tube, and can only be killed by a contact poison. Fortunately there is a preparation of nicotine called "Black-leaf Forty" that Prof. Brittain recommends to add to the lime sulphur in the spray that is applied just before the blossoms open. This Black-leaf Forty is quite expensive, and should not be added unless the little aphis can be seen on the small leaves and tips of the branches, for unlike blacl spot, it is no use to spray to prevent aphis, it is only passible to kill them after tne pest is present. Prof. Britten added that very few aphis eggs could be found on the trees in the Valley th s winter, and so it is possible they will not be in evidence next summer.

Summing up the recommendations of the three addresses on Black spot, Aphis and Bud-moth, we find we can beat the old saw of killing two birds with one stone, in that we can kill two bugs and one fungus with one spray, viz., lime-sulphur (for black spot) lead arsenate (for bud-moth) and black-leaf forty (for aphis) all applied in the same spray. Lime Sulphur and lead arsenate applied just as the leaf buds are opening, and the leaves the size of a ten cent piece for black spot and bud-moth, and lime sulphur, lead arsenate, and black-leaf forty applied just before the blossoms burst for black spot, bud-moth and aphis. Incidentally these two sprays will also kill all canker worms, caterpillars, and brown tail moth that hatch at this time.

The spray immediately after the blossoms fall was most important for the codling moth, and also got a good many of the bud-moth that escaped the other two sprays, and of course still further protected the little apples from the black spot. Any further applications according to Prof. Caesar, should be governed by the weather. Any long spell of cold rainy weather up to the middle of August would be likely to cause a new crop of spores to develop,

After listening to the addresses of J. M. Robinson on the results of the experiments carried on by the station of Kentville at Falmouth, Berwick, and Bridgetown last summer, the old controversy on which was the better spray, lime-sulphur or bordeaux, seems pretty well settled. Lime-sulphur gave just as good results as bordeaux as far as black spot was concerned, and did not russet the fruit. More No. ones in every case wer produced where lime-sulphur was the spray used, and after everything is said and done that is what we are after. Prof. Caesar made light of the idea that just as good results could not be got from the home boiled lime-sulphur as from the commercial. and said that any fruit grower could prepare his concentrated mixture with little trouble, and at about half the expense of the commercial.

Full directions on how to prepare this home boiled lime-sulphur are given in Bulletin 198 published by the Ontario Department of Agriculture at Toronto. It will be sent free to any fruit grower applying for it.

The experiences of some of our local men who were successful in growing a good crop of clean apples last year were carefully listened to, the paper of Mr. Leslie Wiltshire being especially interesting. Mr. Wiltshire applied his first spray at the time recommended by Prof. Caesar, or about May 10th, but did not spray again until the blossoms fell; still he had clean apples and a good crop on all but two rows of Ribstons that did not get the first spray: these two rows had no fruit, and the point brought out here cannot be too strongly emphasized, that spraying before the blossoms open not only means better apples, but it also means more apples, and that not only in the year in which the spray is applied, but also in the following year too, because the foliage, protected from disease is better able to perform its function of storing up plant food to make strong healthy fruit buds.

Mr. Wiltshire's method of fertilization should also be noted. He uses four or five hundred pounds of basic slag to the acre each year, and depends on a cover crop for the rest of his plant food. Only a few years ago many believed that a farm should have three acres of dyke to one acre of orchard, and that no more trees should be raised than could be fed with barnyard manure. Happily our Berwick friends have taught us that this is not the case, and many have gone to the other extreme, and like bringing coals to Newcastle, have bought large quantities of commercial fertilizers, when all the plant food necessary to grow apples for a hundred years lies dormant in their own soil, only needing a little lime and brains to render it available.

Many of our fruit growers seem slow to appreciate the great superiority of slag over acid phosphate as a source of phosphoric acid for our orchards. The cover crop is either vetches or clover, the vetches especially giving a large amount of vegetable matter to plow down in the fall, and it is alsa a good nitrogen gatherer. These clovers, however, do not do well in an acid soil, and after turning under several rank crops of green manures, the land often be-

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comes too sour for the clover bacteria. This is where the Basic Slag comes in, being from fifty to seventy per cent lime, it not only corrects the acidity caused by the green manures, and makes the clovers grow more vigorously, but it adds its full cash value in phosphoric acid to the soil.

The cover crop draws up large quantities of potash from the subsoil, and renders it available for the trees the following summer. So by following the practice of Mr. Wiltshire, and using cultivation, slag and vetches, the same or better results will be obtained as by buying the different plant foods in a commercial form, and at one tenth the cost.

The annual report of the Fruit Growers Association will be ready for distribution in April. It will contain all the addresses of the different speakers, and the discussions upon them. It should be in the library of every fruit-grower as a book of reference. All annual members are entitled to this report, and to the Maritime Farmer for one year free of charge. Any one may become a member of the Association by paying one dollar to the Secretary. Address, Port Williams, N. S.—M. K. E.

Keep More Bees.

Editor Maritime Farmer:

It is surprising to go around the country and see how few farmers keep bees.

There seems to be a general fear of getting stung—but with careful handling and good judgment no one need get stung.

Every farmer or gardener should keep two or more hives and supply his own family with one of the most delicious and wholesome sweets the earth produces.

There are tons of honey going to waste in New Brunswick yearly, for want of bees to gather it. Even if you do see a hive or two of bees kept it is usually in the old style of box hives that are half a century behind the times. Now the object of this article is to try and induce some of the readers of your paper to start keeping bees.

Commence on a small scale and the outlay will not be heavy. I think the best thing to do is this winter, (today), send for a good book on bee-keeping, and I know of nothing better than The A. B. C. on Bee-Keeping by A. I. Root, Medina, Ohio, or it can be procured from any dealer in bee-keeping supplies. Study it well this winter—read it all over and then over again. Then next spring get one or two hives of bees..

If I were going to start bee-keeping I would buy two or more swarms of bees in box hives and transfer them to movable comb hives—but it is a hard to get one just starting in to undertake to transfer them, and I will admit it is quite an undertaking and it requires some courage, but it can be done, if a person will work cgrefully and according to instructions. But if you don't feel like undertaking it, but one or two, I would advise two, hives of bees in a good movable comb hive, from a reliable dealer, and set them somewhere near the house—according to instructions in book. Now what you need will be as follows:

2 hives bees about	...$14.00
2 employ hives	5.00
1 Smoker	1.00

There are a number of other things you will need but the above will do for a start. Of course, if you only get one swarm to start with, the cost will be less. Another way is to get one or two swarms of bees in the old box hives, which can often be got for a small price and have an empty good hive to put your first swarm into. In this way a start can be made for a very small outlay. After they have swarmed you can transfer them into movable comb hives.

Whatever you do get a standard hive; don't go making your own hive unless you make them a standard size There is no better size than the Langstroth and nearly all dealers keep stock for that hive. Sometimes a man will start and make a size of his own and then if ever he wants to buy supplies he can't get them. If you should decide to make your own hives, and it can be done if you have the time, get right dimensions, as you better get a sample high from some dealer and be careful not to vary ⅛ of an inch and then your frames and fittings will all fit in any hive.

I have said nothing about surplus arrangement. When the beginners start he better get 1½ story hives for comb honey, and ¾ story supers for the hives the bees are in. Now, with a fair season, he should have suppose you start with two, 4 hives of bees in the fall, and 50 to 100 lbs. of comb honey. If the season should be unfavorable you might not have much surplus, but don't be discouraged, but expect to do better next year. Always remember you will have a lot of experience and pleasure.

Now, as regards being stung, there is no more danger than handling a cross horse, and not near as bad as a kick or bite from a horse.—S. G. Eccles, Carter's Point, Kings Co., N. B.

TALK No. 2
on the
"GEORGE" Steel Galvanized SHINGLE
FIRE! A dreaded word the world over, and especially so to the country dweller
Reduce your fire risks to a minimum, by "PEDLARIZING" your Barns and other buildings.
No danger from sparks or threshing engines. Lightning cannot effect any building equipped with Pedlar's Metal Shingles and connected to ground by conductor or wires.
Pedlar's big "GEORGE" Shingle, (24 in. x 24 in.) for barns and "OSHAWA" Shingles (16 in. x 20 in.) for houses, sheds and small buildings will absolutely protect your crops, animals and furniture from fire, flood, storm and lightning
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The All Perfect Metal Shingle—no greater cost, but greater service and satisfaction.
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OSHAWA, ONT. Established 1861
Large and varied stocks always carried at Oshawa, Montreal, Toronto, Chatham, London, Quebec, Calgary, Halifax, St. John, Sydney, Ottawa, Winnipeg, Vancouver. 242
THIS BARN COVERED WITH PEDLAR METAL SHINGLES

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You can buy good, clean seed direct. Below find present prices **freight prepaid** to your nearest Railway Station on C. P. R. or I. C. R. for an order of 180 lbs. or more. Ask for samples. Also tested seed catalogue.

Mammoth Clover $13.50 per bushel of 60 lbs. Bags Free,

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Alsyke Clover $13.75 per bushel of 60 lbs. Bags Free.

Alfalfa Clover $10.75 per bushel of 60 lbs. Bags Free.

Timothy Seed $4.75 per bushel of 48 lbs. Bags Free.

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Fine Maple Sugar and Syrup.

In the days of crude sugar bush methods there was little opportunity of learning the difference between the inferior dark products and those of fine quality, but now consumers are learning to appreciate the excellence of superior goods and to accept no other so long as these are available. This appreciation is leading to better returns for those who produce the light color, fine flavored sugar and syrup.

The up-to-date sugar maker recognizes that sap, like milk, is a very perishable product, being an excellent medium for the development of fermentative organisms. ...To make a fine sugar or syrup it is necessary, therefore, for the maker to have an equipment which will allow for the least possible contamination of the product in all stages of manufacture. Not only must thorough cleanliness be observed but transformation of the sap to the finished product must be direct and speedy.

Bulletin No. 2B "Maple Sugar" issued a few months ago by the Department of Agriculture at Ottawa deals fully with this subject and is therefore useful to the consumer in making clear what constitutes fine products and to the producer in showing how such goods are made.

DAIRYING.

Official Holstein-Freisian Record.

In the official list of seven day records accepted by the Holstein-Friesian Association from January 16th to January 31st, 1414, we find the following Maritime cows:

MATURE CLASS—Maple Grove Pattie, 9925, age 6 years-2 months-14 days, lbs. milk, 557.3; 26.07 lbs. fat the equivalent of 32.59 lbs. of butter 80 per cent. fat. Owner, Logan Bros. Amherst Point.

Piet 6th, 11578. Age, 12 years-8 months-16 days; lbs. milk, 438; 17.93 lbs. fat the equivalent of 22.42 lbs. butter 80 per cent. fat. Owner, Logan Bros.

Emma of Evergreen 2nd, 10645. Age 5 years-8 months-16 days; lbs. milk, 496.8; lbs. fat 16.17; lbs. butter, 80 per cent fat, 20.21. Owner, N. S. A. C., Truro, N. S.

JUNIOR THREE YEAR OLD CLASS—Homestead Piet Vale, 16645. Age, 3 years-3 months-12 days; lbs. milk, 323.4; lbs. fat, 14.83; lbs. butter, 80 per cent. fat, 18.54 lbs. Owner, Logan Bros.

TWO YEAR OLD CLASS.—Homestead Johanna, 13659. Age, 2 years-8 days; lbs. milk, 310.8; lbs. fat, 14.70; lbs. butter, 80 per cent. fat, 18.37. Owner, Logan Bros.

Watering Cows.

More cows fail to give a maximum yield of milk from lack of water than from lack of food. At least 85 per cent. of milk is water, and a cow that gives 58 pounds of milk a day must have at least 43 pounds (about six gallons) of water to put into the milk pail besides that needed for use in her system.

Just think of the foolishness of turning her into zero cold to drink two full pails of ice water and then expecting her to do her best in filling the milk pail. Would it not be wise to have water before her at stable temperature to drink at pleasure? Think it over.

"A merciful man is merciful to his cows." Is there any mercy in turning a cow out into a zero temperature, or below, and compelling her to drink ice water? Did you ever stand and see that poor cow shiver and shake in the stable while warming up that ice water to the temperature of her body? Don't you know that no cow ever made a drop of milk when shivering? Wouldn't it be wiser, as well as more humane, to provide that cow with water before her at stable temperature?

Think about it.—J. S. Woodward in Maine Farmer.

Is a Dairy Cow a Machine?

Public speakers and writers on dairy topics have said over and over and over again that the dairy cow is a machine. It is easy to see how such a comparison has been made; but it is good? Is the dairy cow a machine?

This is a machine age. It has been the practice in the past in large industrial plants to consider the laborers as so many machines. This attitude of mind has been responsible for many of the misunderstandings between labor and capital. It left out of account all human instincts and attributes. The modern idea is that the laborer is a human being and as such has the same characteristics of body, mind, and soul as they who employ him, and that he does his best work when these human qualities are appealed to rather than when he is driven at high speed as a machine.

Some time ago we visited a large and prosperous dairy and while there met a gentleman who had been making a close study of the modern conception of humane factory management. He was familiar with the efficiency studies and speeding up processes employed in many industrial plants and had noted the increasing results obtained where men were made comfortable in mind and body as they worked.

After spending considerable time in the barns watching operations, he said to the manager: "These cows are not machines as you have called them, they are poor, ignorant laborers and your milkers are the foremen. These cows have animal sensibilities that must be appealed to in order to get the best work from them. They must be treated as living beings capable of physical sensations and appreciation of contentment. They must like their boss, must have confidence in him and they will do their best."

We have pondered over this statement a good depl. There is nothing new in it. It is an old truth understood by every successful dairyman, but it is an old truth stated in new terms. He went on to state that he could see that every cow had her own peculiarities which the milker must recognize. He must cultivate her acquaintance io order to take advantage of these cow personalities just as the modern successful shop foreman must know the individuality of his men. This takes her out of the machine classification and endows her with an individuality which may be trained, cultivated, and directed to greater efficiency.

We are largely creatures of habit. Someone, sometime, said a cow was a machine; then someone else repeated it, and we may go on saying a cow is a machine. We do not stop to analyze the facts. In this way we make loose statements and continue their use indefinitely. Who shall say that our habits of thought are not influenced by these things. Statements which are perfectly understood by the writer or speaker are not always so understood by the reader or hearer.

If the cow is not a machine, and we do not think of her as such, why continue to call her a machine? Why not use terms that will convey the whole meaning—why not let the expression of our thought correspond with the thought? We would make greater progress if we did.

No! The cow has none of the inanimate qualities of the machine. Her only resemblance to the machine is the visible fact that we put feed in at one end and take milk out at the other. The whole process of elaboration of milk is animal and material, not mechanical. The laws of chemistry, physiology, and biology controlled by the animal and material instincts apply, not the laws of mechanics.—Hoard's Dairyman.

Canadian Jersey Cattle Club in Session

The 14th annual meeting of the Canadian Jersey Cattle Club was held in Toronto on Wednesday, February 4th. All the Officers of the Club were present with the exception of David Duncan who is, we regret to say in a very serious condition as regards his health, and Duncan O. Bull who is at present on a trip to England, the Island of Jersey and the Continent. It was the largest and most enthusiastic meeting our Club has ever held.

The proposed scale of fees was adopted. A committee of Bartley A. Bull and H. A. Dolson was appointed to make enquiries and act in any cases reported of sellers being slow at furnishing papers to customers, and for fraudulent papers, should any such arise which we are glad to say have not as yet. It was called to the attention of the meeting that some persons had been circulating reports that Jerseys were subject to bovine tuberculosis. This report was emphatically denied, many figures being quoted to show that it was absolutely wrong and officwers of the Club who had done much to have the report contradicted were commended, and asked to continue the good work. The members of the Club were urged by the Secretary to secure a tattoo outfit, and tattoo all their calves within a week of birth. Then to immediately make application for registration for the calves, putting made with the Accountant of the Live Stock Records at Ottawa that he will print this tattoo number on the registration certificate. The Secretary explained to the meeting the negotiations pending between him their private tattoo number on the application. Arrangements have been

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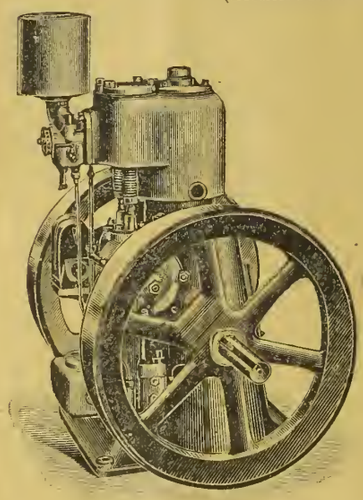

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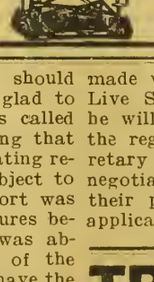

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The butter makers who win the first prizes use Windsor Dairy Salt

114

and the committee of the American Jersey Cattle Club regarding reciprocal relations. The proposed plans were endorsed by the Club almost as they stand. A step was taken to endeavor to bring more stringent legislation to bear on parties who allow bulls to run at large. It being pointed out to the meeting the great damages which had been caused by unregistered bulls and pedigree bulls of other breeds. A committee was appointed to interview the Minister of Agriculture of Ontario to have this legislation come into effect.

It was proposed by some to shorten the time of the Record of Performance from 365 to 300 days, and the period allowed between the calving at commencement of rest and calving after the test from fifteen months to 400 days. This was rejected by the meeting, but as our regulation now stands, a cow must have had a calf within fifteen months before freshening at the commencement of test. It is recommended that this time limit be eliminated.

At the annual meeting a year ago, a committee was appointed to look into the butter fat standard of milk supplied to the City of Toronto. This committee interviewed the health authorities, and found the standard was only three percent. They reported this to the Secretary, who then took up the matter, and got the opinions of forty dairy experts and the standards of at least fifty cities on this continent, and went to the Aldermen of Toronto and had the standard raised from 3 to 3.25 percent. butter fat.

A committee of Mr. Green, Mr. E. H. Duncan and the Secretary was appointed to distribute a grant of five hundred dollars among the fall exhibitions. Another committee was appointed to interview the Canadian National Exhibition board to make a separate class for Canadian bred cattle. Two prizes in each of the four classes on the Record of Performance are to be given this year the same as last year, one for the cows making the highest number of pounds milk in the year, the other for the one making the highest number of pounds butter fat in the year. Fifty dollars was set aside to purchase a silver challenge trophy to become the property of any breeder winning it three times, and the cow making the highest record in each year holding it for that year.

The Club was unanimous in endorsing the new National Live Stock, Dairy and Horticultural Show held last November.

A letter from our good old friend "Uncle" David Duncan was read by the Secretary in which Mr. Duncan resigned from the Presidency of the Club. A resolution was passed to be forwarded to Mr. Duncan, explaining how the Club regretted the illness which caused him to resign, but that he had the heartfelt sympathy of the Club at its Annual Meeting. In the election of officers which followed, Mr. E. H. Duncan moved, and Mr. Beatty seconded that Mr. S. J. Lyons who had been on the Directorate for a long time, and has attended all our executive meetings with the exception of two, for several years, be President, and that Mr. D. O. Bull be First Vice-President and F. L. Green second Vice-President with the Board of Directors as follows: R. J. Fleming, Bartley A. Bull, H. A. Dolson, E. H. Duncan, Professor Archibald, and W. H. McEachren, and Bartley A. Bull was appointed permanent Secretary.

The Annual statement showed 1155 registrations and 575 transfers. This being an increase over 850 registrations and 321 transfers in the previous year.

B. A. BULL,
Secretary.

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Winter is the time the horses need International Stock Food three times a day.

They are barned up, don't get exercise or green feed as in summer—and they must have a tonic like International Stock Food to help digestion, regulate the bowels, keep the blood clean and circulation active, and bring them through the cold weather in prime condition for spring work. 102

If you will write and tell us how many head of stock you own, we will forward to you free our $3,000. Stock Book.

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"They are easy to take care of," writes one SHARPLES MILKER user, whose name we will be glad to furnish on request. "When we get through milking we milk a pail of water through them, the machine is cleansed in water about scalding, then placed in a solution of lime water.

"The machines do not hurt the cows. We have used them eighteen months. To anyone in the dairy business I would recommend them. We are milking around seventy cows daily in an hour and ten minutes. We use five units.

"One man attends to the milkers and another man strips the cows. The cows like it better than hand milking and it does away with the labor problem. I had to keep eight and nine men on my farm, but after pay day we might have one or two to do the milking. It just made things hum for the foreman and one or two men that would be regularly on the job. Now we are under no obligations to them. Everything works smoothly and there is no friction among the men picking out the easy milkers and all those stunts."

The SHARPLES MILKER now is being used in dairies of from 15 to 700 cows. Built sturdily, its operation is absolutely reliable.

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LIVE STOCK.

The Profitable Hog.

Editor The Maritime Farmer:—

At the price obtainable for hogs during the past year there is good money in raising all the pigs one can properly attend. The trouble with most of us is that when the price of any farm commodity goes up we are all apt to jump into a bigger proposition than we can properly carry out. It is easy to get in and out of hog-raising and the great variation in the price of hog products is sufficient proof that many of us are only following the wake of the market, get nicely started when everybody is at it and drops it as quickly, when the depression comes, only to find ourselves with little to sell when the market prices again soar.

A few years ago several of our Canadian farm journals gave considerable space to a discussion on the cause of the great fluctuation in hog prices. Nearly everybody (excepting the packers), blamed the packers for the trouble and while these pork packing companies could probably do more than they have been doing to try and equalize the prices, I could never see how they could be held responsible for the extreme variation in hog prices from month to month.

Prices of most commodities are fixed by the law of "supply and demand." The hog being a class of animal that depreciates rapidly in value, after a certain age, and having to be confined and fed largely on concentrated feeds is not a suitable nar profitable animal to hold over during a glutted market season. More over, a large majority of the hogs, in this country at least, are Spring farrowed and come on the market, of necessity, at a season of the year when most of the poultry are marketed, and until farmers regulate the supply to better advantage there will always be a slump in prices except in years of light supply.

From my own experience I would say we can afford to take a much smaller price for summer, than winter raised hogs. Any farmer can raise Summer hogs with a fair measure of success, but it takes an experienced and careful hand to make any money out of raising them in winter.

Regardless of all we read about a pig being able to stand cold, and the dry feed and the dropped feed, and any other method, with or without skimmilk, I find a hog grows might slow in a cold pen, and from my observations at the attempts at hog raising on P. E. I., during the winter months, I think pork needs to be at least 30 per cent. higher in winter to pay for the disadvantage of the season. Not that I don't believe hogs can be raised in winter at a profit, but we see such numbers of cripples, runts and deformed animals resulting from the attempts that I think somebody needs to make plenty to even up.

Hogs must have dry, warm quarters, particularly dry, in cold weather and on account of the nature of the animal, the matter of keeping him properly bedded all the time is a trying problem. It is hard to get enough bedding on any farm, particularly where dairying is followed.

Before the advent of co-operative dairying in this province, few hogs were raised in winter, and seldom would a sow be carried over one year. At that time we always kept a young sow every year; the old one, after raising only one spring litter, was fattened and sold in the fall, and we used to raise good, heavy hogs, for the age, too.

But of late, nearly every one in the business, keeps a brood sow, for three years at least, if a good mother and raises fall, as well as spring litters. While an old sow may raise larger and stronger young than a yearling, I could never see much advantage in this regard. A young mother will not usually destroy so many little ones. I don't know whether aged sows grow deaf or lazy or both, but they seem to care very little whether they hear a youngster squealing under them or not. I think the trouble must be that we have grown sows much heavier than nature intended them. They seem too big for the size of their young to keep from accidentally destroying a big per cent, of them. Many sows grow too awkward and lazy to deserve being kept as breeders, yet many others are not given a decent chance to save their litters.

Under natural conditions, a sow builds herself a bed in which to give birth to her young. Some of us in our wisdom think we can show the sow a wrinkle in this and take it from her, with the idea that she will smother her offspring. I have, many a time, watched sows have litters of all numbers from 3 to 22 pigs at a time, and I find that it is better to give the sow plenty of straw and leave her alone. Nature teaches her to build a barricade completely around her and when a little one is born he can't get away from her. In fact he can get nowhere but in front of her and is kept close against her warm body, where he soon dries off and gains strength. A sow left alone under these circumstances will seldom ever get up for hours after her litter is born, but I have seen them, left with only a little chaff or hay-seed, get up and root around after every pig came, and they seem to miss their natural bed and are restless and if an attendant is not at hand, or the weather is cold, many of the little ones get chilled before they ever suckle their dam. While I like to be handy when any of my stock are having young, yet I never interfere until I am positive something is not right. Much trouble and loss are often occasioned by ignorant interference, at the birth of all classes of farm stock.

If a sow has been praperly fed durthem deliberately killing and eating ing pregnancy, there is little fear of their young. I never had a sow do so. One should give the sow, as near as possible, the treatment she would have under natural conhitions, and there is not much danger of a you sow hurting her litter, and she is always more careful not to lie on any of them.

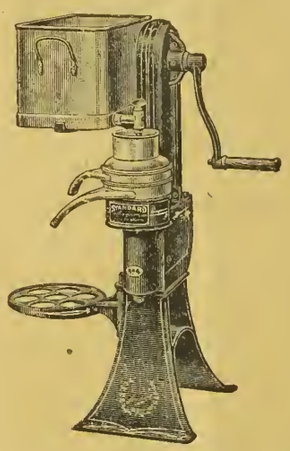
For the first twenty-four hours, a sow needs little but a warm drink. Heavy feeding at this time is dangerous. I know of a sow being killed by a big drink of milk from the separatar the day she littered. She should however, be generously fed as soon as it is safe to increase her feed. Few, very few men, seem to realize how much a sow needs and will eat of suitable feed, when sucklinh a good litter. Young pigs will average about three-fourths of a pound gain per day, if their mother is properly fed, and with a litter of ten to twelve pigs, we must furnish enough feed to produce six or eight pounds of pork. This will mean considerable feed, much more than the average sow will receive, but if we wish to make the most profit out of the litter we must feed all the sow will clean up of good milk-producing food.

I always boil food for a brood sow, and in winter, for the feeding hogs, whether or not boiling increases the feed value of grain and roots, it certainly adds to its palatibility. I always find pigs grow much faster and I think the shorter time we take getting them up to selling weight, the better.

I like to leave the litter on the sow six or eight weeks in the spring. They are then eating well with her,

Hear What Others Say About the Standard

Following are some extracts taken from letters received from owners of Standard Cream Separators. They show what others think of the Standard:



"Its skimming by our repeated tests is perfect."

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"No back straining to put in the milk and no dirty oil smeared around the machine all the time."

"It has the best oiling device I have ever seen."

"I find it a very close skimmer with the milk in any condition, and that it will deliver any density of cream with either warm or cold milk, and still flush out easily."

The letters from which the above extracts are taken are printed in full in our booklet. Send for a copy. It is interesting, instructive, and fully describes "The World's Greatest Separator," the Standard.

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and on many occasions owed his life and that of his companions of the "Minnie Maud" "to the wonderful precision and shocking power" of the .280 Ross Rifle which was his constant companion. Though "unwittingly submitted to every test of ill usage, never once did it jam, break, or become affected by the intense frost or rough usage." Mr. Tremblay's letter to us is a revelation of the hardships of a surveying expedition as well as a splendid testimonial of the value of the .280 Ross.

If you want the most powerful and most accurate sporting rifle sold, buy the .280 High Velocity Ross and the special sporting cartridges, with copper tube bullet, patented.

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N. Hallman, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

A SOIL ROBBER

He is a SO-CALLED FARMER, who has cropped and cropped, year after year, without returning a pound of plant food to the soil to replace the many hundreds he has sold off the farm. His soil has become so barren that nothing will grow decently but weeds, and these flourish indecently. SUCH A FARMER IS A MENACE TO THE COMMUNITY AND A BLOT ON HIS CLASS.

Many other farmers are trying to maintain the fertility of their farms on a limited supply of manure and find their soils becoming poorer. Every crop removes varying quantities of Nitrogen, Phosphoric Acid and POTASH from the soil. If fertility is to be maintained these must be returned, in some form, to the soil. This can be done by the use of ARTIFICIAL FERTILIZERS and by so doing a farmer will not only maintain the fertility of his soil, but greatly increase his crop production.

POTASH is an essential plant food and no soil that does not contain a readily available supply will raise a maximum crop.

MURIATE OF POTASH and SULPHATE OF POTASH can be obtained from the leading fertilizer dealers and seedsmen. WRITE for FREE copies of our educative bulletins, which contain the results of fertilizer experiments. These include:

"Artificial Fertilizers; Their Nature and Use."
"The Principal Potash Crops of Canada."
"Fertilizing Grain and Grasses."
'Fertilizing Orchard and Garden."
"The Potato Crop in Canada."
"Farmer's Companion, etc."
State which you require.

GERMAN POTASH SYNDICATE, 1102b Temple Bldg., Toronto, Ont.

Deserved Compliment Not Witheld.

A gentleman from Scotland who has travelled extensively, and who recently had occasion to use the Canadian Government line—Intercolonial Railway—between Halifax and Montreal, writes the Superintendent of the Dining Car Service as follows:—

"I was so pleased with the courtesy and attention of the Superintendent of the car by which I travelled here, that I think it only fair to mention it. The whole tone of his car and staff does him credit. Unmerited complaints you doubtless often receive. A deserved compliment should not be witheld."

Farmer Ads. will Bring Results.

and don't mind the change, particularly if we have some skimmilk and a little middlings or finely ground grain

I think we can cheapen the cost of raising a spring litter by having them come in April and turn out on clover when it has grown high enough. I never saw much advantage in keeping them in movable pens as some recommend, as they tramp down, dirty and destroy more than they eat. The clover they eat may do them good, but there is too great a waste of good feed by this method. If we have a fair sized field of clover, handy the buildings, that we can spare, we can work the pasturing of hogs and cattle nicely.

I once turned 20 hogs, between two and three months old, on a good field of clover and kept the cows in occasionally to keep it fed off the right height for them. In this way no feed was wasted and the clover was kept fresh all summer. These hogs got a mixture of milk, meal and water, twice a day, not half the amount of what would satisfy them, if kept inside, and they grew well and when pened up for fattening, proved thrifty feeders. I have no figures as to cost of this bunch, only a general estimate of the meal and milk, but I am satisfied that clover is a very cheap hog feed. We were not rearing all our calves, I would continue to grow a bunch of hogs in this way every summer. We usually have sufficient milk for all we do handle inside, though we raise and feed them both winter and summer.

Unless the pigs are farrowed before November, I leave them on the sow as long as possible. They eat with their dam and her milk keeps them growing right and in good shape and the warmer and drier their quarters the better. Heat is as important as feed. If a box stall is available, in a warm stable, it will pay to use it. I have seen some wonderful transformations in growth, from changing from warm to cold, and from cold to warm, dry quarters. If their pen cannot be kept warm, an enclosed bed may be made, where they can sleep warm and dry, and if they are given plenty of room to exercise in, will lessen the danger of them getting crippled. Once they go off their feet, its good bye to all profit. The time to take care of them is when they are right. If we have not plenty of skim milk for the newly weaned pigs, I find boiled turnips about the best substitute with a little middlings, bran or finely ground grain. I have no favorite mixture, any of our ordinary grains make good pork, together with roots. We only keep hogs to use up surplus amounts of both those crops and milk; but if we were not breeding purebred stock of other kinds, that require lots of milk, I would go pretty largely into hogs. We have no farm animal that can put on flesh so economically, or that can utilize such a varied assortment of feeds. We can get into the business quickly and the turn-over is as quickly made, but as with all other kinds of farm animals, if we wish to make profit out of the growing of them we must keep them gaining every day. A day without gain means a day's feed wasted. It is much cheaper to keep them warm in winter by providing warm quarters, than through their feed, for they must have it one way or the other, and almost every Maritime Farmer will find it profitable to keep, at least one spring and one fall litter; the former ready to market before November 1st, prices usually decline after this month of heavy delivery. If given intelligent usuage a brood sow will always be found a good paying animal whether we raise her entire litter or sell them at current prices to your neighbors.—W. M. Lea, Victoria, P. E. I.

Oliver Plows

THE group of Oliver plows built for Eastern Canada includes walking plows, three-wheel sulky plows, high and low lift gang plows, walking gangs, hillside plows, riding cultivators, and walking gang plows. Each of these is built for a certain purpose, and is the best plow obtainable for that particular purpose.

Back of the whole group is the fifty-nine years of successful plow experience of the Oliver Plow Works. This experience eliminates everything in the way of chance. You do not have to experiment with Oliver plows.

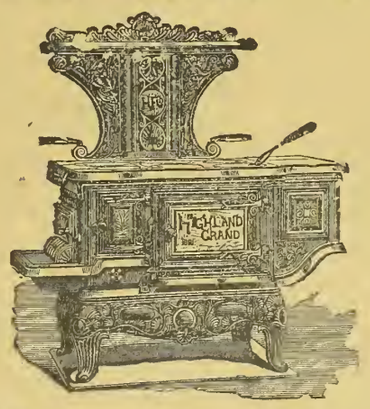
Go to the I H C local agent and tell him what kind of plowing you have to do, and he will sell you an Oliver plow built to do that kind of work and do it in the best possible manner. You can get catalogues and full information of the entire Oliver line from him, or, if you prefer, write the nearest branch house.

International Harvester Company of Canada, Ltd

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

Oliver plows are built at Hamilton, Ont.

A First Rate Baker



Easy to Work With, Light on Fuel, Strong and Durable

That these features form, together, the RANGE AS IT OUGHT TO BE, is known by all housewives. In the

HIGHLAND GRAND RANGE

these important points reach highest perfection. Its fine roomy oven is extra large, well ventilated, and the heat,—under ready control,—is exactly the same on the sides, top and bottom. The HIGHLAND GRAND

Burns Either Coal or Wood

equally well. Its structural features embrace all that is best in LATEST MODERN IMPROVEMENTS—large fire-box, patent sifting and dumping grate, large convenient ash pan. Made with high closet, upper or lower mantel shelves and reservoir.

Ask Your Dealer, or Write for Catalogue

THE RECORD FOUNDRY AND MACHINE COMPANY

Manufacturers Moncton, N. B.

THE HORSE.

Beware.

At a recent meeting of the Record Committee, the following resolution was passed:

"That whereas animals bred, owned or imported by certain foreign breeders or importers, are denied registration in the Canadian National Records, Canadian importers, before purchasing animals abroad, should ascertain by communication with the Canadian National Record Office whether such animals are entitled to registration in Canada and thereby be entitled to entry into Canada free of duty."

How to get Rid of Bots.

In case it is believed the horses are troubled by bots, a very effective treatment which will remove them within two to 48 hours is as follows: The day preceding the treatment, a small amount of hay and a moderate amount of oats is given in the morning; in the evening, food is withheld and a purgative given—say six ounces of raw linseed oil. The day of treatment, at six o'clock in the morning, give one dram of carbon bisulphid in a gelatin capsule; at seven o'clock, repeat the dose in the same manner; and at eight o'clock give the third and last dose, making in all three drams of carbon bisulphid in three gelatin capsules.

If properly administered, the gelatin capsule reaches the stomach intact, but soon dissolves, and the carbon bisulphid rapidly evaporates, suffocating all bot larvae and other parasites with which it comes in contact, but not injuring the horse. Worms are quite often expelled as well.

This remedy has been used by the Department of Agriculture, with a large number of animals, and has proved successful.—Horse World.

A School for Horse-Shoers.

"What next?" We hear some of our readers say impatiently as they read the title of this article. Yet such a school is being conducted at Cornell University in New York State and Cornell prides herself on being a very practical institution. When we first heard of it we asked a prominent horse-breeder if there was any need for improvement in the art of shoeing horses. He instantly replied that there was a decidedly great need for better horseshoers for more horses are ruined by improper shoeing than by hard work or poor feeding.

This school at Cornell is of the nature of a practical Short Course for so-called experienced horse-shoers and is conducted by a graduate of the Dresden, Germany, School for Horseshoers. The course deals with the anatomy of the horse's foot, the treatment of diseased foot conditions, movement and remedial shoeing.

It is a well-known fact that much greater attention is given to this important matter in Europe than in America. It is to be hoped that such a school will soon be organized in the Maritime Provinces, for as we have said, proper horse-shoeing is a matter of importance to all owners and lovers of horses. Too long have we been entrusting the feet of our hores to inefficient shoers, with the result that diseased hoof conditions and ailments are very common.

Stallion Enrolment.

The law relating to stallions for service in Ontario says that—

No stallion shall be offered for service until enrolled and a certificate of enrolment issued;

All certificates of enrolment are to be renewed annually;

Stallions may be inspected if desired and report of inspection shall form part of certificate;

Certificates are issued in four forms:

Form I.—For pure bred, sound and inspected animals;

Form II.—For pure bred, sound and blemished;

Form III—For enrolled, pure bred, but not inspected;

Form IV.—For grade stallions.

It is now proposed to make this act more stringent, and it was with a view of securing popular endorsation in advance for the doing of this that stallion enrolment was made a subject of discussion at the Fair.

In opening that discussion, Drf Grenside said that in all the Provinces of Confederation, with the exception of Quebec, some form of stallion enrolment is provided for. Most of the States of the Union also have legislation bearing on this subject. Among the States having such legislation are Wisconsin, Illinois, Colorado, the two Dakotas, Vermont, New Hampshire, New Jersey, Massachusetts, Iowa, Kansas, Nebraska, Pennsylvania, Michigan, Utah, and California.

TO MAKE INSPECTION COMPULSORY.

"Up to the present," said Dr. Grenside, "inspection has been optional with Ontario stallion owners. It is proposed to ask the Legislature, at the forthcoming session, to make inspection compulsory. At present, too there is no machinery for the enforcement of the act, We propose to ask for the appointment of inspectors whose duty it will be to see the act enforced."

R. S. McVitty, of Muncey Institute said something more than this was required. "A man," he said, "may have two purebred stallions, and both sound, yet one, by reason of faulty conformation, may be nothing better than a scrub, while the other may be worth $1,500. Still both animals, under present legislation, are able to command precisely the same form of certificate from the Government examining board. The law should be changed so as to provide, in the case of pure bred, sound animals for No. 1, 2 and 3 standing, according to quality, with anything below No. 3 ruled out altogether."

Jno. Bright, Dominion Live Stock Commissioner, said it was proposed to obtain legislation next session to provide for this.

OBJECT TO ANNUAL ENROLMENT

Thos. McMichael, of Seaforth, raised other objections. "The law at present provides for annual enrolment, and the payemnt of an annual fee therefor," he said. "Why should an annual enrolment be provided for while the animal remains with the same owner? The only man in one section who had a horse inspected was a man who had the beginning of a bog, and he hoped, if he could get that past the inspector, to sell the horse on the strength of the inspection. Now that horse, simply because it was inspected, obtained a number two form of certificate while other horses because they were not inspected although they were sound, as this animal was not, would only get form 3. That is unfair."

AN INSUFFICIENT REASON

Mr. Bright said the reason a purebred animal, even if blemished, was given a higher standing than other purebred, free of blemish, was because the owner of the first had cooperated in the carrying out of the Act by offering his animal for inspection."

Mr. McVitty moved that inspection be made compulsory in all cases, and that provision be made for grading even purebred and sound animals according to quality, as shown by conformation.

WHO IS TO PAY COST?

Some of the breeders expressed the opinion that the cost of inspection should be borne by the Government, but Hon. Mr. Duff pointed out that the Government had passed the law in the first place at the request of the breeders.

Mr. Bright said that n his judgment grade stallions should be put out of business altogether, and asserted that if breeders were unanimous they could get legislation providing for this or anything else they might ask.

THIS YEAR'S INSPECTION

Dr. Greenside said that this year it is intended to have the work of inspection begin on the 17th of February. This year, too, instead of asking stallion owners to bring their animals to a central point, inspectors will go right to the stables of owners.

In the Maritime Provinces we have a Compulsory Stallion Enrolment Act. Owners of stallions may as well make up their minds early as late that ere long the public will demand compulsory inspection and the prohibition of the standing for service of scrub sires. Get ready for it. It's coming.

DR. J. WOODBURY'S HORSE LINIMENT

WILL BUILD UP

RUN DOWN HORSES

SOLD ON IT'S MERITS ALL DEALERS PRICE 25c.

Ring-Bone

There is no case so old or bad that we will not guarantee

Fleming's Spavin and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound. Indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists,
41 Church Street, Toronto, Ont.

ABSORBINE STOPS LAMENESS

from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.00 a bottle delivered.

Horse Book 9 K free.

ABSORBINE, JR., antiseptic liniment for mankind. Reduces Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, heals Old Sores. Allays Pain. Will tell you more if you write. $1 and $2 a bottle at dealers or delivered. Book "Evidence" free. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Can.

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

18k Rolled Pendants, worth $3.00, our price..... ....99 cents

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36

Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

There is an increase of sixty per cent. in the attendance at

FREDERICTON BUSINESS COLLEGE

for the Fall Term of this year as compared with last year.

Our

NEXT TERM

opens on Monday, January Fifth.

Send for catalogue. Address

W. J. OSBORNE
PRINCIPAL
Fredericton, N. B.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Adjusting Bandages.

Linen, flannel, or Newmarket bandages should be first tightly and evenly rolled, with the strings or tapes used for tying gathered up inside. The next is to make what is called the "point of attachment" by placing a fold of the free end of the bandage round the limb at the fetlock. The bandage is then carried downward so as to include the lower pastern and heel, if this is desired, and then upwards until the roll is exhausted, when the end is secured by the tapes which are sewn on to it. Each succeeding fold should overlap its predecessor to the extent of half the width of the bandage, and care be taken that the pressure is moderate, and, above all, even, and that the strings are not tied so tightly as to cut the limb, while being sufficiently secure to prevent slipping down, with consequent disturbance of the whole arrangement. One grave error, common in most stables, is leaving the bandages on too long. The longest period during which baodages should be allowed to remain on without removal is between late night and early morning stables, and before they are reapplied the limbs should be well hand-rubbed to re-establish the circulation, especially if during the time the bandages have been on they have become tight owing to swelling of the legs. This is very apt to occur in the case of animals that have become weak from disease, that are suffering from debility, or where there is any dropsical tendency. Due allowance needs to be made for this swelling of the legs during the night, and this is one of the reasons why the pressure should be no more than moderate. It is in cases where there is a tendency for the legs to "fill" that bandages are especially useful, as they support the circulation and tend to prevent, to a large extent, the effusion of fluid to which the swelling is due. As a rule, the swelling disappears on exercise, the movement exciting absorption, and the time to apply the bandages in these cases is as soon as the horse has been cleaned down on coming in from work, and while the legs are still "fine." It is in case of this kind that it is necessary that the pressure be firm, even, and regular, without being so tight as to cause discomfort or constriction if any swelling takes place.

PREVENTION OF WINDGALLS.

Another class of cases in which regular bandaging is calculated to prove of great service is in the prevention, and to a limited extent the cure, of windgalls. These "lumps" or soft swellings in the neighborhood of the fetlock joints of horses do not contain air or wind, as the old-fashioned farrier thought and taught, but are merely enlarged bursae, and their contents are fluid. The even pressure or regular bandaging tends to prevent the filling of these bursae after exercise has caused their partial or complete disappearance, in much the same way that pressure acts beneficially in cases where there is a tendency to "stocking" or "filling" of the legs. There are many cases of enlargement in which pressure is useful in the direction of promoting absorption, but when local pressure is required it generally has to be directed to the spot by special means, and of this form of pressure the spring trusses and elastic bandages used in cases of bog-spavin and thoroughpin are examples. The so-called "charge" applied to enlargements and sprained tendons causing lameness is a form of bandage, and there are a great many who still look on firing in this light, but the notion has long since been exploded, and whatever benefits are derivable from the use of the actual cautery, the manufacture of a "natural bandage" is not one of them. Surgical bandaging for the treatment of lameness is, however, no part of our subject, and what we wish to impress is the use of the ordinary bandage in preventing swelling of the legs and bursal enlargements about the fetlocks, and generally keeping the legs fine.—Veteran.

Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
PARASITES.

REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINARY REMEDY

Always Reliable. Sure in Results.

None genuine without the signature of *The Lawrence-Williams Co.*

Sole Importers & Proprietors for the U.S. & CANADAS. } CLEVELAND, O.

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE. Berkeley, Ont.

Sole Agents for the United States and Canada.

The Lawrence-Williams Co.

TORONTO, ONT. CLEVELAND, OHIO.

KENDALL'S SPAVIN CURE

The Horseman's Friend
—Safe and Sure.

If you have a lame horse, get Kendall's Spavin Cure. If you have a horse that you can't work on account of a Sprain, Strain or Bruise, get Kendall's Spavin Cure. If you have a horse, that even the veterinary can't cure of Spavin—or any Soft Bunches or Swellings—get Kendall's Spavin Cure.

Be sure you get KENDALL'S. Two generations—throughout Canada and the United States—have used it and proved it.

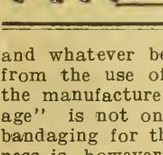
TRAVELERS' REST, P.E.I.,

"I have been using Kendall's Spavin Cure for the last 20 years, and always find it safe and sure." HUBERT P. McNEILL.

$1. a bottle—6 for $5. Write for a copy of our great book "Treatise On The Horse." It's a mine of information for farmers and horsemen, who want to keep their stock in prime condition. Mailed free. 93

DR. B. J. KENDALL CO.,
ENOSBURG FALLS, VERMONT, U.S.A.

Bickmore's Gall Cure



The old-time remedy for keeping horses free from sores. Don't lose the services of your high-priced horses. Bickmore's Gall Cure cures Galls and Sore Shoulders while the horse works. Approved remedy for Cuts, Wounds, Scratches, etc. Money back if it fails. Be sure to ask at the store for Bickmore's Gall Cure. Gray Horse trade mark on every box. Sample and 84-page horse book sent on receipt of a stamp for postage.

WINGATE CHEMICAL CO., Canadian Distr's, 8110 Notre Dame St. W., Montreal, Can.

POULTRY.

How the 292 Egg Hen was Produced

Several issues ago the following article, under the caption "Nova Scotia Hen Holds World's Record," appeared in our columns:

"Rev. W. B. Crowell, of Arcadia, has a pullet of the Barred Plymouth Rock variety, which has beaten the world's record in laying the largest number of eggs in one year. Her product during the time specified was 292 eggs.

"Rev. Mr. Crowell sent to the American Poultry Journal attested state-

Lady Morley

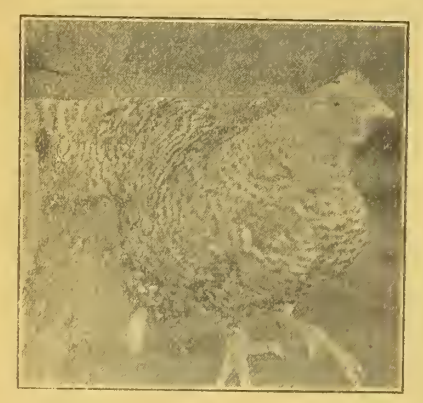
ment of her day by day record, which was acknowledged by Dr. Prince T. Woods, managing editor, who sends the following with its acknowledgement:

"It looks as if "Lady Morley' (his pullet's name), is world's champion to date. Oregon Experimental station is a close second with a cross-bred hen with 291 eggs to her credit.

"Mr. Crowell has a flock of sixteen pullets of the same variety, each of which produced 205 eggs in an average of 283 laying days this year."

We wrote Mr. Crowell for an article on how this hen was produced and cared for, and following is his reply:

"As the reports sent out by the experimental stations, like Oregon and



No. 304 Lady Morley

Missouri, have a tendency to discourage the amateur, because they have the money and appliances whereby they can produce such astonishing results and, as a rule, the amateur begins with a little capital and hopes to reap a profit from the beginning; I have therefore, at your invitation, jotted down a little of my experiences in order to demonstrate to the average poultry keeper the possibilities there are in poultry, even when one has only a little to begin with and little room in which to keep poultry. I know that the amateur can do equally as well as they have done in the experimental stations.

When I began four years ago I knew very little indeed about poultry. I subscribed to some of the best poultry journals, got all the bulletins I could from the Stations in Canada and U. S. Read what books I could borrow or buy and scanned every fortnight, the columns of the Maritime Farmer.

The barn connected with the parsonage, measures 18x20 feet. I made an opening 4x17 feet in the south side of it and covered it with chicken wire. I made waterproof curtains to keep out cold and storm. After a year, I gave up closing them in the winter and leave the opening uncovered day and night. One I have taken down, the other is used when the snow drifts. There are no curtains in front of the roosts. I cannot speak too strongly for the open front. There has never been any sickness frosted combs, dampness or odors in the house. It is the first essential for health. The floor is covered with straw, a foot or more in depth, and all grain is thrown into it. This makes the hens exercise all day long, and is a large factor in the heavy egg production that I get every winter without fail.

I believe that breed does not count as much as egg-laying strain. I was fortunate in being able to get some of Prof. Gowetts B. P. Rocks, before

Rev. W. B. Crowell, Arcadia, N. S. and his pets

Note Trapnests and other labor saving centrivances.

his farm was sold. In the autumn of 1910 I purchased a hen with a pullet record of 178 eggs, and another with a record of 217 eggs and a cock, whose dam had a record of 223 eggs. I had several pullets of the Wm. E. Bright strain and these composed my breeding pen in 1911. That year I raised 21 pullets some of which began to lay in October. All were trapnested and all drones and indifferent layers were killed. That year all that laid less than 175 eggs were thus disposed of. Only nine survived this culling, but they averaged 243 eggs, and Lady Morla had laid 283 and a half-sister, 281 eggs each in the year. From this pen, I raised 31 pullets and 15 from other sources.

Some of these began to lay as early as September in 1912. The same methods were followed and only 16 survived. These averaged 222 eggs. Lady Morley headed the pen with 292 eggs for her year's laying. This record, accompanied with a duly attested day-by-day record sheet, was published in the American Poultry Journal of Chicago, and Dr. Woods, the editor, editorially declared it to be a world's record. She is a daughter of the imported ben with the pullet record of 217 eggs, which was three years old when this chicken was hatched. Her sire was a son of the imported cock. I raised only 21 pullets last year, but by Christmas, 20 of them were laying.

The following records holds out the hope that the work of last year will be excelled. This laying up to Feb. 4th is:

*No. 301	in 134 days has laid	104 eggs
No. 302	in 91 days has laid	67 eggs
*No. 304	in 80 days has laid	71 eggs
No. 305	in 72 days has laid	57 eggs
Na. 308	in 71 days has laid	57 eggs

Progressive Jones says:

"Get Bumper Crops from Worn-Out Soil"

Scores, yes hundreds, of my farmer friends have got bumper crops from soils they thought were worn out. They now swear by

Harab FERTILIZERS

One of them, A. Robinson of Rosemount, tells me that he used Harab Fertilizers on potatoes and turnips without any manure on the land which was very old and poor. He got a bumper crop and is more than satisfied. Another man, D. J. Ferguson, got a grand crop from very light land that had been hard run by tenants.

Friend, if you have some poor land, some worn-out soil, don't be discouraged. Harab Fertilizers will make that soil yield bumper crops, and make you happy, or my name isn't Progressive Jones.

Harab Fertilizers are natural Fertilizers, manufactured from blood, bone, trimmings, etc., of animals slaughtered at the immense Harris Abattoirs. To these are added Potash and just enough quick-acting Nitrates and Superphosphates to start the plant off with a vigorous growth.

The cost of using Harab Fertilizers is small. The results are big. Write to The Harris Abattoir Co. for their booklet. It gives the information you want to know.

Yours for bumper crops
Progressive Jones

The Harris Abattoir Co., Limited, Toronto

11

BENN & TURNEY CO., LIMITED,

General Agents in New Brunswick for Harab Fertilizers.

RED ROSE TEA "is good tea"

*No. 309 in 65 days has laid 53 eggs
No. 316 in 50 days oas laid 38 eggs
No. 318 in 44 days has laid 36 eggs

Those marked with an asterisk (*) are daughters of Lady Morla, which in her pullet year, 1912, laid 283 eggs.

No. 304 is 9 eggs ahead of Lady Morley, the 292 egg hen in the same number of days. Five of the pullets have exceeded her record in the same number of days. Two other pullets she has only exceeded by one egg.

Doubtless many readers are asking themselves "what is his secret of feeding?" Really I have none and consider the open air front and deep litter of more consequence. I have fed wheat, barley, corn and oats in the litter, but this year oats being so poor and barley not appealing to me, I have used only whole wheat and corn. Wheat is feed in the morning, corn at night, a palm full of grain to each hen. Wet mashes are very infrequently used, only when I wish to give them some of French's Poultry Mustard, which is the best stimulant obtainable, because of no bad after effects. A dry mash composed of bran, chopped wheat, cornmeal, gluten meal, crushed oats and a small portion of linseed meal was always before them. But since this year's flock showed little liking for the dry mash, I do not use much. In other years sprouted oats, turnips and mangel beets were fed. This year I have none. Thus far the average production of eggs has been maintained and it may be that green food is not as essential as it is claimed. Still I prefer to use it, although I found little value in alfalfa. There are two things that I do use a great deal of: namely, fresh cut bone and skim and buttermilk. Duriog the winter the milk almost altogether takes the place af water.

In the summer all the pens are turned into one flock, the cocks being kept separate. Two yards, each 30x 70 feet are attached to the barn. When the flock is in one yard, the other is seeded down in grain. In six weeks time, the flock goes into this yard, and the other is then sown. Thus they alternate all summer long, and in the early autumn, are in good laying condition.

Thus from these statements it is seen that anyone, without a great amount of labor, can successfully raise heavy layers. There are three things to be observed, open air, plenty of exercise and simplicity in management, for simplicity is the great law of poultrydom.—W. B. Crowell, Arcadia, N. S.

Annual Show of the Carleton County Poultry and Pigeon Association.

The seventh annual show of the above association was held in the Forrester Building, Hartland, Jan. 28th, 29th and 30th. At this show, although the smallest of any in the history of the association, were to be seen a comparatively small collection of birds, but the stock was excellent and in fine shape, while the display of dressed stuff, namely poultry and ducks, was a revelation to many of the visitors, and furnished a base of argument and illustration for those in charge, to enlarge on and emphasize the great and evident improvement in the fattening and dressing of fowls at present, as compared with such work a few years back, before the interest in better poultry, alive or dressed, was created by the poultry association. Certainly a great revolution has been accomplished in this industry in which almost every family in the county is more or less engaged. During the early history of this association great interest was shown and a large number of exhibitors were present every year with good exhibits, and crowds of interested visitors were a certainty. Interest began to lag, however, and although there are more bird fanciers than ever in the county and much more and far better stock, public spirit seems to be lacking and for the last two or three years only strenuous efforts by a few faithful optimists saved the association from complete failure.

The tide is beginning to turn again and during the coming year certain changes will be possible that will place the association on a different footing and the show for 1915 will be the biggest and best in the society's history.

Among the exhibitors were the following, Hartland Poultry Yards with a large exhibit, and with winners in the following breeds, vis., Barred Rocks, White Rocks, Buff Wyandottes Golden Wyandottes, Rhode Island Reds, both combs; Light Brahma, Black Langshan, S. G. Dorking, Brawn Leghorn S. C., White Leghorn S. C., Black Orpington, S. P. Hamburgs, Houdan, Anconas, White and Buff Turkeys, Toulouse, Embden, Chinese and African Geese, Rouen, Ayesbury, Indian Runner and Mallard Ducks, Pigeons and Dressed Stuff.

Mrs. Ethel Kidney, Hartland, won prizes on Barred Rocks, Buff Rocks, White Rocks, Buff 'Dottes, Golden 'Dottes, R. I. Reds, both combs; Light Brahma, Black Langshan, S. G. Dorking, Brown Leghorn, S. C.; White Leghorn S. C., Black Orpington, White Orpington, S. P. Hamburgs, Houdan, Ancona, Black and White Turkeys, Rouen Ducks and Dressed Poultry.

Dr. L. DeC. McIntosh, Hartland, won on the following: Dark Brahma, Buff Cochin, White Langshan, Black Minorca, Bronze and Black Turkeys, Cayuga and Indian Runner Ducks.

Chas. E. Shaw, Victoria, N. B., won on Rhode Island Reds, S. C.

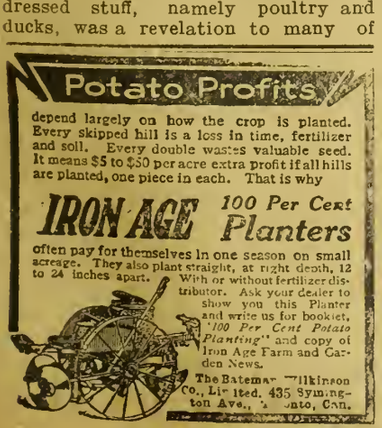
The Deep Creek Poultry Yards of H. L. Kennedy, Hartland, had winners in White Wyandottes, Buff Orpingtons, White Rocks, Anconas.

Mrs. Albert Hovey, East Brigton, as usual was out to win with Barred Rocks, Rhode Island Reds, S. C.; White Leghorns, Buff Orpingtons, White Orpingtons, Toulouse Geese, Pevin and Rouen Ducks and a large display of dead stuff. This exhibitor was the winner in the egg-laying contest conducted by the local agricultural department under the supervision of Mr. Seth Jones, her two entries taking first and second place, against the province.

Mrs. W. J. Davis, Waterville, showed some excellent birds and won a fair proportion of blue favors, she being particularly strong on White Rocks, Rhode Island Reds, both combs: Pekin and Muscovy Ducks, also a big winner in the dead classes.

Shaw Bros., Highland Farm, Victoria, were successful exhibitors in Rhode Island Reds, both combs, and Bronze Turkeys.

Frank A. Aiton, Hartland, showed some excellent specimens of White Wyandottes and was the only exhibitor and consequently a big winner in Andalusians.—Chas. M. Shaw, Secy. C. C. P. & A. Association.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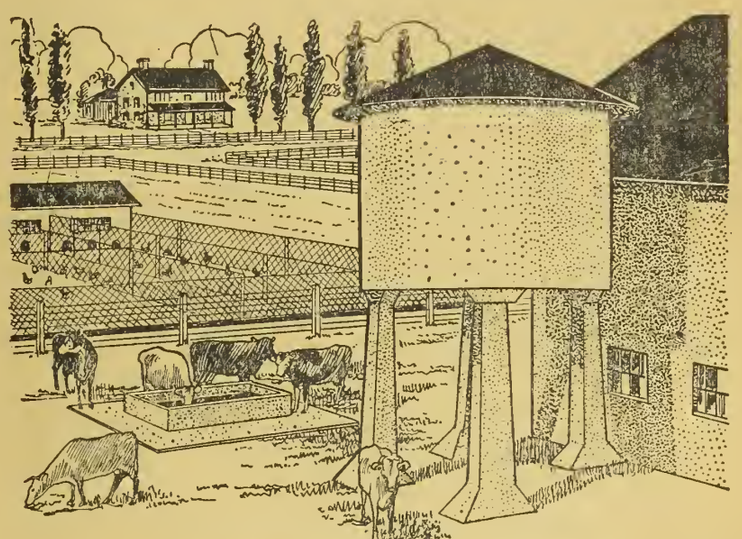

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David Copperfield.

By Charles Dickens.

"Oh, indeed, you must excuse me Master Copperfield! I am greatly obliged, and I should like it of all things, I assure you; but I am far too umble. There are people enough to tread upon me in my lowly state without my doing outrage to their feelings by possessing learning. Learning ain't for me. A person like myself had better not aspire. If he is to get on in life, he must get on umbly, Master Copperfield."

I never saw his mouth so wide, or the creases in his cheeks so deep as when he delivered himself of these sentiments; shaking his head all the time, and writhing modestly.

"I think you are wrong, Uriah," I think there are several things that I coulh teach you, if you would like to learn them.

"Oh, I don't doubt that, Master Copperfield," he answered; "not in the least. But not being umble yourself, you don't judge well, perhaps, for them that are. I won't provoke my betters with knowledge, thank you. I'm much too umble. Here is my umble dwelling, Master Copperfield!"

We entered a low, old-fashioned room, walked straight into from the street, and found there Mrs. Heep, who was the dead image of Uriah, only short. She received me with the utmost humilityi and apologized to me for giving her son a kiss, observing that, lowly as they were, they had their natural affections, which they hoped would give no offence to any one. It was a perfectly decent room, half parlor and half kitchen, but not at all a snug room. The tea things were set upon the table, and the kettle was boiling on the hob. There was a chest of drawers with an escritoir top, for Uriah to read or write at of an evening; there was Uriah's blue bag lying down and vomiting papers; there was a company of Uriah's books commanded by Mr. Tidd; there was a corner cupboard; and there were the usual articles of furniture. I don't remember that any individual object had a bare, pinched, spare look; but I do remember that the whole place had.

It was perhaps a part of Mrs. Heep's humility, that she still wore weeds. Notwithstanding the lapse of time that had occurred since Mr. Heep's decease, she still wore weeds. [illegible] in the cap; but otherwise she was as weedy as in the early days of her mourning.

"This is a day to be remembered, my Uriah, I am sure," said Mrs. Heep, making the tea, "when Master Copperfield pays us a visit."

"I said you'd think so, mother," said Uriah.

"If I could have wished father to remain among us for any reason," said Mrs. Heep, "it would have been, that he might have known his company this afternoon."

I felt embarrassed by these compliments; but I was sensible, too, of being entertained as an honored guest, and I thought Mrs. Heep an agreeable woman.

"My Uriah," said Mrs. Heep, "has looked forward to this, sir, a long while. He had his fears that our umbleness stood in the way, and I joined in them myself. Umble we are, umble we have been, umble we shall ever be," said Mrs. Heep.

"I am sure you have no occasion to be so, ma'am," I said, "unless you like."

"Thank you, sir," retarted Mrs. Heep. "We know our station and are thankful in it."

I found that Mrs. Heep gradually got nearer to me, and that Uriah gradually got opposite to me, and that they respectfully plied me with the choicest of the eatables an the table. There was nothing particularly choice there, to be sure; but I took the will for the deed, and felt that they were very attentive. Presently they began to talk about aunts, and then I told them about [illegible]; and about fathers and mothers and then I told them about mine; and then Mrs. Heep began to talk about fathers-in-law, and then I began to tell her about mine;; but stopped, because my aunt had advised me to observe a silence on that subject. A tender young cork, however, would have no more chance against a pair of corkscrews, or a tender young tooth against a pair of dentists, or a little shuttlecock against a pair of battledores, than I had against Uriah and Mrs. Heep. They did just what they liked with me; and wormed things out of me that I had no desire to tell, with a certainty I blush to think of; the more especially as, in my juvenile frankness, I took some credit to myself for being so confidential, and felt that I was quite the patron of my two respectful entertainers.

They were very fond of one another that was cereain. I take it, that had its effect upon me, as a touch of nature: but the skill with which the one followed up whatever the other said, was a touch of art which I was still less proof against. When there was nothing more to be got out of me about myself (for on the Murdstone and Grinby life, and on my journey, I was dumb), they began about Mr. Wickfield and Agnes. Uriah threw the ball to Mrs. Heep, Mrs. Heep caught it and threw it back to Uriah. Uriah kept it up a little while then sent it back to Mrs. Heep, and so they went on tossing it about until I had no idea who had got it, and was quite bewildered. The ball itself was always changing too. Now it was Mr. Wickfield, now Agnes, now the excellence of Mr. Wickfield, now my admiration for Agnes; now the extent of Mr. Wickfield's business and resources, now our domestic life after dinner; now, the wine that Mr. Wickfield took, the reason why he took it, and the pity that it was he took so much; now one thing, now another, then everything at once; and all the time, without appearing to speak very often, or to do anything but sometimes encourage them a little, for fear they should be overcome by their humility and the honor of my company, I found myself perpetually letting out something or other that I had no business to let out, and seeing the effect of it in the twinkling of Uriah's dinted nostrils.

I had begun to be a little uncomfortable, and to wish myself well out of the visit, when a figure coming down the street passed the door—it stood open to air the room, which was warm, the weather being close for the time of year—came back again, looked in, and walked in, exclaiming loudly, ;'Copperfield! Is it possible?"

It was Mr. Micawber! It was Mr. Micawber, with his eye-glass, and his walking stick, and his shirt-collar, and his genteel air, and the condescending roll in his voice, all complete!

"My dear Copperfield," said Mr. Micawber," putting out his hand, "this is indeed a meeting which is calculated to impress the mind with a sense of the instability and uncertainty of all human—in short, it is a most extraordinary meeting. Walking along the street, reflecting upon the probability of something turning up, (of which I am at present rather sanguine), I find a young but valued friend turn up, who is connected with the most eventful period of my life; I may say, with the turning-point of my existence. Copperfield, my dear fellow, how do you do?"

I cannot say—I really cannot say—that I was glad to see Mr. Micawber there; but I was glad to see him too, and shook hands with him heartily, inquiring how Mrs. Micawber was.

"Thank you," said Mr. Micawber, waving his hand as of old, and settling his chin in his shirt-collar. "She is tolerably convalescent. The twins no longer derive their sustenance from Nature's founts—in short," said Mr. Micawber, in one of his bursts of confidence, "they are weaned—and Mrs. Micawber is, at present, my travelling companion. She will be rejoiced, Copperfield, to renew her acquaintace with one who has proved himself in all respects a worthy minister at the sacred alatr of friendship."

I said I should be delighted to see her.

"You are very good," said Mr. Micawber.

Mr. Micawber tben smiled, settled his chin again, and looked about him.

"I have discovered my friend Copperfield," said Mr. Micawber genteelly, and without addressing himself particularly to any one, "not in solitude, but partaking of a social meal in company with a widow lady, and one who is apparently her offspring—in short," said Mr. Micawber, in another of his bursts of confidence, "her son. I shall esteem it an honor to be presented."

I could do no less, under these circumstances, than make Mr. Micawber known to Uriah Heep and his mothers; which I accordingly did. As they abased themselves before him, Mr. Micawber took a seat, and waved his hand in his most courtly manner.

"Any friend of my friend Copperfield's," said Mr. Micawber, "has a personal claim upon myself."

"We are too umble, sir," said Mrs. Heep, "my son and me, to be the friends of Master Copperfield. He has been so good as take his tea with us, and we are thankful to him for his company; also to you, sir, for your notice."

"Ma'am," returned Mr. Micawber with a bow, "you are very obliging; and what are you doing, Copperfield? Still in the wine trade?"

I was excessively anxious to get Mr. Micawber away; and replied, with my hat in my hand, and a very red face, I have no doubt, that I was a pupil at Doctor Strong's.

"A pupil?" said Mr. Micawber, raising his eyebrows. "I am extremely happy to hear it. Although a mind like my friend Copperfield" to Uriah and Mrs. Heep; "does not require that cultivation which, without his knowledge of men and things it would require, still it is a rich soil teeming with latent vegetation —in short," said Mr. Micawber, smiling, in another burst of confidence, "it is an intellect capable of getting up the classics to any extent."

Uriah, with his long hands slowly twining over one another, made a ghastly writhe from the wrist upwards, to express his concurrence in this estimation of me.

"Shall we go and see Mrs. Micawber, sir," I said, to get Mr. Micawber away.

"If you will do her that faver, Copperfield," replied Mr. Micawber, rising. "I have no scruple in saying in the presence of our friends here, that I am a man who has, for some years, contended against the pressure of pecuniary difficulties." I knew he was certain to say something of this kind; he always would be so boastful about his difficulties. "Sometimes I

A WOMAN'S MESSAGE TO WOMEN.

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have risen superior to my difficulties. Sometimes my difficulties have—in short, floored me. There have been times when I have administered a succession of facers to them; there have been too many for me, and I have given in, and said to Mrs. Micawber, in the words of Cato, 'Plato, thou reasonest well. It's all up now. I can show fight no more.' But at no time of my life," said Mr. Micawber, "have I enjoyed a higher degree of satisfaction than in pouring my griefs (if I may describe difficulties, chiefly arising out of warrants of attorney and promissory notes at two and four months, by that word) into the bosom of my friend Copperfield."

Mr. Micawber closed this handsome tribute by saying, "Mr. Heep, Good evening. Mrs. Heep! Your servant," and then walking out with me in his most fashionable manner, making a good deal of noise on the pavement with his shoes, and humming a tune as he went.

It was a little inn where Mr. Micawber put up, and he occupied a little room in it, partitioned off from the commercial room, and strongly flavored with tobacco smoke. I think it was over the kitchen, because a warm greasy smell appeared to come up through the chinks in the floor, and there was a flabby perspiration on the walls. I know it was near the bar, on account of the smell of spirits and jingling of glasses. Here, recumbent on a small sofa, underneath a picture of a race-horse, with her head close to the fire, and her feet pushing the mustard of the dumb waiter at the other end of the room, was Mrs. Micawber, to whom Mr. Micawber entered first, saying, "My dear, allow me to introduce you to a pupil of Dr. Strong's."

I noticed, bye-the-bye, that although Mr. Micawber was just as much confused as ever about my age and standing, he always remembered, as a genteel thing, that I was a pupil of Dr. Strong's.

Mrs. Micawber was amazed, but very glad to see me. I was very glad to see her, too, and, after an affectionate greeting on both sides, sat down on the small sofa near her.

"My dear," said Mr. Micawber, "if you will mention to Copperfield what our present position is, which I have no doubt he will like to know, I will go and look at the paper the while, and see whether anything turns up among the advertisements."

"I thought you were at Plymouth, ma'am," I said to Mrs. Micawber, as he went out.

"My dear Master Copperfield," she replied, "we went to Plymouth."

"To be on the spot," I hinted.

"Just so," said Mrs. Micawber. "To be on the spot. But, the truth is, talent is not wanted in the custom house. The local influence of my family was quite unavailing to obtain any employment in that department, for a man of Mr. Micawber's abilities. He would anly show the deficiency of the others. Apart from which," said Mrs. Micawber, "I will not disguise from you, my dear Master Copperfield, that when that branch of my family which is settled in Plymouth became aware that Mr. Micawber was accompanied by myself, and by little Wilkins and his sister, and by the twins, they did not receive him with that ardor which he might have expected, being so newly released from captivity. In fact," said Mrs. Micawber, lowering her voice,—"that is between ourselves—our reception was cool."

"Dear me," I said.

"Yes," said Mrs. Micawber. "It is truly painful to contemplate mankind in such an aspect, Master Copperfield, but our reception was, decidedly, cool. There is no doubt about it. In fact, the branch of my family which is settled in Plymouth became quite personal to Mr. Micawber, before we had been there a week."

I said, and thought, that they ought to be ashamed of themselves.

"Still, so it was," continued Mrs. Micawber. "Under such circumstances, what could a man of Mr. Micawber's spirit do? But one obvious course was left. To borrow of that branch of my family, the money to return to London, and to return at any sacrifice."

"Then you all came back again, ma'am;" I said.

"We all came back again," replied Mrs. Micawber. "Since then, I have consulted other branches of my family on the course which it is most expedient for Mr. Micawber to take—for I maintain that he must take some course, Master Copperfield," said Mrs. Micawber, argumentatively. "It is clear that a family of six, not including a domestic, cannot live upon air."

"Certainly, ma'am," said I.

"The opinion of those other branches of my family," pursued Mrs. Micawber, "is that Mr. Micawber should immediately turn his attention to coals."

"To what, ma'am?"

"To coals," said Mrs. Micawber. "To the coal trade. Mr. Micawber was induced to think, on inquiry, that there might be an opening for a man of his talent in the Medway Coal Trade. Then, as Mr. Micawber very properly said, the first step to be taken early was, to come and see the Medway. When we came and saw I say 'we,' Master Copperfield; for I never will," said Mrs. Micawber with

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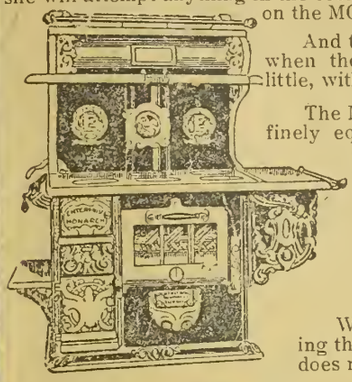

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Constant baking success comes as a matter of course from flour bearing this name

PURITY

"More Bread and Better Bread" and "Better Pastry Too"

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c ct on, "I never will desert Mr. Micawber,"

I murmured my admiration and approbation.

"We came," repeated Mrs. Micawber, "and saw the Medway. My opinion of the coal trade on that river, is, that it may require talent, but that it certainly requires capital. Talent, Mr. Micawber has; capital, Mr. Micawber has not. We saw, I think, the greater part of the Medway; and that is my individual conclusion. Being so near here, Mr. Micawber was of opinion that it would be rash not to come on and see the Cathedral. Firstly, on account of its being so well worth seeing, and our never having seen it; and secondly, on account of the great probability of something turning up in a cathedraol town. We have been here," said Mrs. Micawber, "three days. Nothing has, as yet, turned up; and it may not surprise you, my dear Master Copperfield, so much as it would a stranger, to know that we are at present waiting for a remittance from London, to discharge our pecuniary obligations at this hotel. Until the arrival of that remittance," said Mrs. Micawber with much feeling, "I am cut off from my house (I allude to lodgings in Pentonville), from my boy and girl, and from my twins."

(Continued in next issue)

Acute Rheumatism.

Acute rheumatism is rarely immediately fatal, but very often leaves the victim with difficulties which, sooner or later, terminate his life. This occurs whenever the heart becomes affected by the disease, which not infrequently happens. It does not result from a change of the seat of the malady from the joints to the heart, as is sometimes thought, but by an extension of the disease to the lining membranne of the heart. In consequence of inflammation, the valves of the heart become quickened and contracted, so that valvular organic disease of the heart results—rheumatism, indeed, is the most common cause of this form of heart disease. The extension of the disease to the heart is indicated by the occurrence of acute pain in the left side, disturbance of the pulse, increase of fever, and increased frequency of respiration. Either one or all the joints in the body may participate in the inflammation. The joints are generally affected symmetrically; that is, the ankles, wrist, knees, elbows, or shoulders will be affected on both sides at the same time. When this is not the case, analogous joints upon the same side are likely to be affected, as the ankle and wrist, the knee and elbow, the hip and shoulder, etc. Sometimes the disease appears to be very fickle, changing constantly from one joint to another, without any apparent cause, the change taking place within a few hours.

It is now generally conceded by medical authorities that acute rheumatism or rheumatic fever may be caused by a number of different micro-organisms. It has also been noticed that inflammation of the joints resembling rheumatism frequently occurs in connection with various infectious diseases, such as scarlet fever, spinal meningitis, and dysentery. It has also been noted that attacks of rheumatism frequently occur in connection with tonsilitis. Many cases have been reported in which a liability to rheumatic attacks seem to disappear with the removal of the tonsils, which are subject to frequent attacks. Rheumatism differs from most other infectious diseases in the fact that one attack is no protection against a second attack, but rather the opposite. predisposition to rheumatism seems also to be transmitted by heredity. There appears to be a close relation between acute and chronic rheumatism in that acute rheumatism is sometimes followed by the chronic form of the disease. So-called rheumatic nodules, which frequently occur, especially in cases of rheumatism in children, are likewise found in persons suffering fram migraine, also in rheumatic gout. Meat-eating, beef-drinking, the use of tea and coffee excessive eating, exposure of the body to prolonged chilling when perspiring or in a state of fatigue, and neglect of the bowels, are among the most potent predisposing and active causes of the disease.

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A very little effort on your part—just a few minutes conversation with a few of your friends—will help us in this work and can gain for you one of these magnificent complete 97-pieee dinner sets. This offer is absolutely unique in the history of Canadian journalism.

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The wonderful thing about "EVERYWOMAN'S WORLD" is that this great magazine is sold at a subscription price of only 50c. per year.

Just think—only 50c. for 12 whole months' subscription.

This Free Sample Copy for You

If you want to gain one of these beautiful dinner sets, write to us to-day and we will send you postage paid, absolutely without charge or obligation, a copy of the current number of "EVERYWOMAN'S WORLD," which we ask you to read over carefully and prove to yourself that it is all we claim for it—the greatest magazine value in Canada. Then take it among your friends and neighbors, show it to them and let them see what a magnificent magazine they can bring into their homes for an expense of only 50c. a year. Get their opinions on it. We want you to tell us what they say about "EVERYWOMAN'S WORLD," and we will send with your copy some very interesting literature telling of many big features that "EVERYWOMAN'S WORLD" will give its readers during 1914.

To qualify for the awarding of one of these magnificent dinner sets we ask that you secure us eight yearly subscriptions to "EVERYWOMAN'S WORLD" from among your friends at 50c. each and remit to us the $4.00 you will have obtained for same.

From your own opinions and the conversations and experienee you have when getting your eight subscriptions, we will ask you to answer a set of questions we have compiled giving us your advice and suggestions on improvements in "EVERYWOMAN'S WORLD" which we have under consideration for 1914. **HERE ARE A FEW EXAMPLES OF THE QUESTIONS WE ASK YOU TO ANSWER.** We send you a printed list of them. You will, of course, understand them much better when you have read a copy of the magazine.

"Should we publish more or less short stories?"

"Should we publish long or serial stories, giving an installment each month, or do you think a month too long to wait between each installment?"

"Would you like to see more or less new fashions published in "EVERYWOMAN'S WORLD"?"

"Do you find any advantage in a pattern service through which you can secure patterns of the fashions shown?"

"'EVERYWOMAN'S WORLD" publishes an original sheet of music each month. Do you think this page could be better given to a story or article of more general interest?"

"Do you approve of the family doctor department, which gives subscribers the free privilege of writing to the physician in charge for advice on matters of family health, hygiene, dieteties, and so forth, or do you consider that it would be better to encourage women to consult their family physicians on such matters?"

"Should we give more advice on household management and publish more articles on cutting down the cost of living? Do you think women like to receive advice of this kind which may be the very opposite to their own methods of doing things?"

"Do you find that men read a magazine like "EVERYWOMAN'S WORLD," which is published primarily for women?"

There are 17 questions in all, of a similar nature to the above, that we want you to answer for us. You know we cannot go among our people when they subscribe and ask them what they like best in "EVERYWOMAN'S WORLD," or what they would like to see us publish, so we ask you to do it for us. Thus by telling us just what you think and your friends say about "EVERYWOMAN'S WORLD" you will help us to keep it in its position of household favorite.

You can easily give us the information we seek after having spoken to and secured eight new subscribers, for which we at once reward you handsomely, with your choice of several useful and costly gifts, and it is for the value of these suggestions and your advice to us that these 150 magnificent 97-piece dinner sets are being awarded. Bear in mind that Canada's greatest magazine, a journal with over 50,000 subscribers in all parts of Canada, is behind this offer. There are no strings or conditions of any kind attached to it. A photographic reproduction of the complete set will be mailed to you with your sample copy and the 150 complete 97-piece dinner sets, exactly as represented, will be awarded to the ladies sending us the best suggestions and answers to our questions.

This offer is open only to householders—married ladies who are at the heads of homes. Write to-day and get your free copy of "EVERYWOMAN'S WORLD," together with the questions we want you to answer about the new features we will bring out during 1914. You take no risk and incur no obligation. You cannot fail to find eight ladies among your friends and neighbors who will be glad to have "EVERYWOMAN'S WORLD" every month for a subscription of only 50 cents a year. Enelose a two-cent stamp to pay postage on your copy and sign your full name (as Mrs. Frederick J. Brown or Mrs. Leouard T. Dawson, &c.) and give complete address.

We will pack each set in a strong case without charge, and prepay at Toronto, all freight and delivery charges. Write for your sample copy and further particulars of this great offer to-day. Address fully as below and mark corner of your envelope "CIRCULATION MANAGER."

"EVERYWOMAN'S WORLD" Dept. 95 16—18 Sheppard St, TORONTO, ONT. 10

Osler and other eminent authorities agree that medicines have little or no effect in shortening the course of this disease. It has been shown that a person suffering from rheumatism with rest and proper care usually recovers without any treatment. But there can be no doubt that many things can be done for the patient that will tend greatly to shorten the course of the disease and allow very great relief from the suffering incident to the painful malady.

A rheumatism patient should first of all be provided with a suitable bed. This should consist of a soft, smooth hair mattress. He should be further provided with woolen night garments. Linen or cotton sheets should be replaced by woolen sheets so that the patient will be less likely to chill after prespirating. It has been noted that in this disease there is apparently an overproduction of lactic acid, much of which is excreted by the skin, causing the perspiration to become acid. The tendency to perspiration should be encouraged by frequent sweating baths. The affected joints should be kept as quiet as possible. In case the knee or elbow joints are affected, it is a good plan to place the limb upon a splint and so avoid motion of the painfal joint. Hot fomentations applied over the affected joints also give great relief. The joints should be kept constantly enveloped in warm applications. Moist heat may sometimes be changed for dry heat, in the form of bags filled with salt or some similiar substance as hot as can be borne. Hotwater bags constitute the best methods of applying dry heat in these cases. The patient should be allowed an abundance of drink. Lemonade, with a very little sugar, is one of the best drinks, as the juice of the lemon seems to have some influence upon the disease in some cases. Warm sponge baths often add to the patient's comfort.

The diet of the patient during the attack should consist wholly of simple preparations of fruits and grains. Meat of all kinds, as well as beef-tea, should be wholly avoided. The use of meat after convalescence is begun is a frequent cause of relapse, hence flesh should be wholly discarded.—Good Health.

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During nearly thirty years Herbageum has been tested without failure and it is known to be the best thing on the market for horses, cows, sheep, pigs, poultry and especially for calves. If it is not for sale where you deal write to The Beaver Mfg. Co., Ltd., Galt, Ont., Canada, sole manufacturers of Herbageum. They will send you by parcel post any quantity to any address in Ontario, Quebec, or Manitoba, at 60c. per 4-lb. package. In the Maritime Provinces, Saskatchewan or Alberta, at 70c per 4-lb. package, and in British Columbia at 80c per 4-lb. package And they will deliver at any railway station in Canada freight prepaid, 100 lbs. for $14.00. In all cases the cash with your order.—F.18-w2mos.

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Farm House Food.

Beef hot-pot.—Ingredients: 2 lb. of shin of beef, 1 lb. of potatoes, two small carrots, one small turnip, two onions, a bunch of herbs, some haricot beans boiled until nearly soft, pepper and salt, stock.

Method: Cut the meat into neat pieces, season to taste with pepper and salt, and prepare and slice the carrots, turnips, onions, and potatoes, having the latter cut into pieces about half an inch thick. Put a layer of the mixed vegetables into the hot-Pot first, then a layer of meat, and repeat this until the dish is nearly full, putting the herbs in about midway. Moisten well with stock, put a layer of potato-slices at the top, put a greased paper over the top, then the lid of the hot-pot, and cook in a slow oven until quite tender. Serve very hot with a serviette pinned round the dish.

Mutton hot-pot.—Cut the best end of a neck of mutton into neat joints. At the bottom of the hot-pot put a layer of sliced potato, carrot, and onion, a sprig of parsley, and some cooked rice; then add a layer of meat. Repeat this process until the hot-pot is nearly full, and then moisten with stock, into which a little red-currant jelly has been stirred. Put a thick layer of rice on the top, and bake in a slow oven.

Aberdeen hot-pot.—Cut up about 2 lb. of neck of mutton into neat pieces At the bottom of the pot put a good layer of sliced carrot, chopped leeks, and onions, parsley, chopped celery, and thinly sliced turnips. Now put in the meat, add an ounce of pearl barley, and cover with a layer of the mixed vegetables. Moisten well with broth, into which has been mixed smoothly half an ounce of patent barley. Cover, and bake slowly and gradually.

Rabbit hot-pot.—Ingredients: Two young rabbits, 1 oz. of butter, red-currant jelly, sliced potatoes, sliced tomatoes, stock, one tablespoonful of chopped shallot, salt and pepper, chopped herbs, a little grated lemon-rind.

Three Weeks Course in AGRICULTURE At Woodstock Agricultural School March 9 to 28, 1914

SUBJECTS OF STUDY

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SOIL MANAGEMENT—Cultivation; drainage; fertilizers; crop rotations; control of weeds.

3rd Week

LIVE STOCK — Breeding, feeding, management and judging of horses, cattle, sheep, and swine.

DAIRYING—Milk production; cream separators; Babcock testing; butter-making.

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Outside men of high standing will assist the men of the Department of Agriculture.

SPECIAL NOTICE—To encourage attendance from more distant parts of the Province the Government will, for this year, refund the cost of railway fare amounting to $2 or more to students from any part of New Brunswick who remain at Woodstock during the whole three weeks. Get a receipt from the railway company when buying your ticket.

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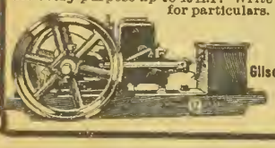

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The Maritime Farmer
SUSSEX, N. B.

What Women Have Accomplished in Ireland.

F. X. Cullen writes from Ireland to one of our Canadian newspapers:

"The Woman's National Health Association has just published in a diagram showing in a startling manner the good effect of its campaign against tuberculosis, which I suppose you know is the chief scourge under which Ireland suffers. This campaign is now being carried on in every town and village in Ireland and the sanitary education of the people is progressing wonderfully. The death rate for 1910 has just been announced. It is 2.3 per 1,000, the lowest figure since the registration af deaths was introduced in 1864. High water mark was reached in 1900 and 1904, in both of which years the death rate from tuberculosis rose to 2.9 per 1,000. This means that while in 1900 and 1904 about 12,000 persons were carried off by the scourge, last year only about 10,000 persons succumbed to it. It is estimated that for every death there are seven or eight persons suffering from the disease, so the figures indicate that there are about 16,000 fewer persons in Ireland suffering from consumption now than there were in 1904.

"It may be expected, too, that as time goes on the number of deaths will drop much more rapidly, for a good many of those who are suffering and dying now must have contracted the disease under the old bad conditions which are disappearing. The new generation will grow up free from the tuberculosis taint, and after the present generation of sufferers dies off we may expect a big drop in the death rate.

"All this is due to the voluntary work of the Women's National Health Association. Travelling lectures are employed, many of whom travel from village to village in vans which are used to give free exhibitions of the danger of unventilated and overcrowded living rooms. I have seen cottages recently which until a few years ago never had a window that could be opened, fitted with large sunny windows thrown open to the fresh air in all weather. There is hardly a village now that cannot show the traveller a consumptive who has been cured by the fresh air treatment."

Some Maple Sugar Sweets.

To keep the body well adjusted and efficient, one needs to eat a certain amount of sugar, and there is no other manufactured that fills this want so completely, when taken with moderation and at the proper time, as maple sugar. Especially is this the case with growing children, when some sweet is absolutely necessary to keep the daily menus well balanced. The housekeeper, too, who must cater to the appetites of her household with the grocery store three or four miles away, or depend on the uncertain visits of the supply-man who calls at her door, is never at a loss for a substitute when her sugar runs low, if she has a goodly supply of maple sugar on hand; like her resourceful forebears she can turn, with equal satisfaction, to this pure wholesome home product for her sweetening. In fact, she finds the flavor of many of her desserts, as well as other dishes, greatly improved by its use. Among the recipes given here are some new preparations that are well worth testing.

Vermont maple waffles are delicious when served nicely buttered and piping hot. To make them, soften one cupful of finely shaved maple sugar in three cups of milk. Sift one quart of flour with three teaspoonfuls

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of baking-powder and one saltspoonful of salt, then rub in one tablespoonful of softened butter. Beat the yolks of four eggs until light, then add the milk and sugar, and stir gradually into the flour; beat thoroughly, fold in the whites of eggs beaten stiff and dry, and beat again. Bake in well-greased and heated waffle-irons.

Maple nut biscuits are especially nice served with fresh fruit, or for the children's school lunches. Chop one-half cupful of walnut meats, and mix with one cupful of finely shaved maple sugar; this will be more satisfactory if put through the meat chopper. Sift one quart of flour with four teaspoonfuls of baking powder and a little salt three times, then add two tablespoonfuls of softened butter or lard, and sufficient sweet milk to make a soft dough. Turn out half the dough on a floured board; knead lightly and quickly; roll out in a thin sheet and cut with a small biscuit cutter; brush over the top of each with a little milk or white of egg, and spread with a layer of the maple mixture. Roll out the remaining dough and cut out in the same manner; place one on each of the first and stand the biscuit in a baking-pan, far enough apart that they do not touch during the baking. Brush the tops with white of egg, and bake twenty minutes in a quick oven. A small lump of maple sugar, on a perfect half of a nut meat may be added to the top of each if one likes.

Some Causes of Dampness in House.

1. Dampness may be due to the location of the house.

2. If the flow of the surface water is toward the house, it may cause dampness. If there is a choice of three heights for the location of the house, a high, a low, or a medium site, the highest is always safest.

3. Ground water may cause dampness in house or yard. A knowledge of the character of rock or soil underlying a house-site is necessary before a location be chosen. The ground water is the water that has filtered through the soil until it has struck some impervious substance such as rock or clay. It is found in different places at different intervals. The height of water in a well shows the level of the ground water For building, it is best to have the ground water far from the surface of the ground. If the ground water is near the surface, the cellar and yard will be damp.

4. If there is a choice of soils for buildings, a gravel or sandy soil is best as water will quickly filter through a porous soil, hence such a soil dries out quickly after a rain. Clay holds moisture and water will not pass through it quickly. People living in a house built on a soil of clay often suffer from rheumatism because of the excessive dampness.

5. If many trees surround the house there is danger of dampness. Leaves hold moisture and prevent the light and sun from entering the dwelling.

6. A verandah or roof overshadowing all the windows of a room will cause dampness.

7. The windows in a room sometimes are not of sufficient number or are not opened enough to keep the house dry.

8. A house is oftentimes damp because the shades are drawn during the sunny hours of the day, in order to protect the furniture and hangings from the light. It has been aptly asked which is better, "Faded furniture or faded lives?"—Grace F. Smiley, Colorado Agricultural College.

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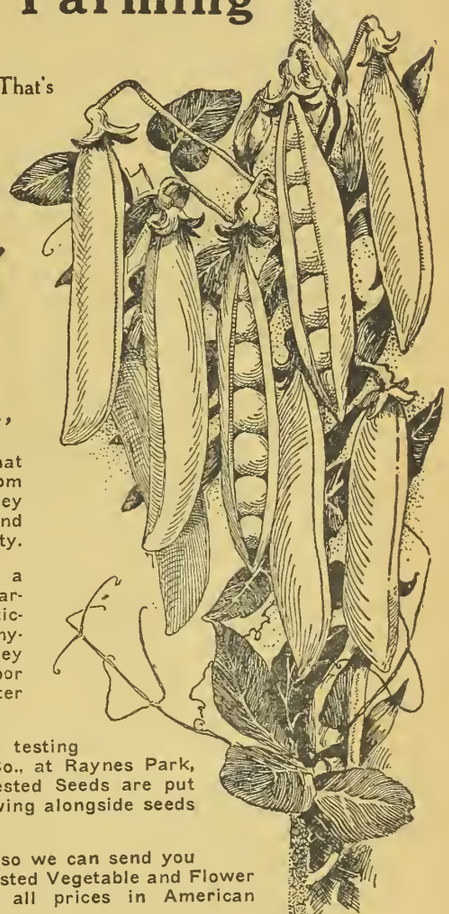

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MENTION WHAT YOU INTEND TO BUILD

Fertilizers Their Nature and Use.

(Continued from page 326)

By keeping up the humus, or decaying vegetable matter content of the soil, and by proper cultivation, much can be done to increase the fertility of the soil. Through these means the soil has a greater power of absorbing and retaining moisture and become more friable, hence more easily worked or cultivated. The changing of the insoluble compounds of the soil to available plant food under these conditions is much more rapid and better results are obtained from commercial fertilizers. Briefly, cultivation and humus are of the utmost importance in improving the soil as a medium for the production of crops.

It has been emphasized that plant food to be absorbed by the plant must be in a soluble condition; that each element has a particular function; that one plant food cannot be substituted for another; and that, by keeping up the humus content of the soil and by proper cultivation, better results are obtained from the use of commercial fertilizer.—E. M. Lads, Truro, N. S.

Potato Growing in York Co.

Editor Maritime Farmer:

Perhaps you or your readers might be interested in what is being done in one branch of farming in this part of the Province, that is potato raising.

My son, J. Murray Murch, concluded he would try potato raising on a small scale, he arranged with Geo. F. Burden, ex-M. P. P., to work part of his farm, which joins our own, and from which Geo. F. Burden had moved some sixteen years ago, and taken the hay and grain growth on it away without putting any manure or fertilizers back on the land, of any description. Part of it had been plowed, a crop of oats grown, ground reseeded again. It had got so poor for grass in places, that it was not worth cutting, although the field was smooth, no one would cut it on any share being given them for the cutting.

What grew on the land was yellow top mostly. The soil was a light, sandy loam, on one end of the field; the other and smaller end was a rotten limestone, mixed with clay. Began plowing about the middle of May Plowed eight acres, then harrowed it with springtooth and disc harrows, until he got it quite mellow. Then he began to plant with planter about the 26th of May, but the superphosphate had been out in a heavy rain, was damp, and did not work well, kept clogging machine and made slow progress. Came a rainy spell, quit planting for a few days, could not get more than six hundred pounds to the acre of the phosphate. After waiting for dryer weather he planted more of the piece, finishing the eight acres the 7th June. While waiting for suitable weather for planting. He plowed another piece of about 2½ acres separated from the pieces he had planted, by a little brook. He served one acre of this same as he had the first and planted one acre of potatoes, using about 600 lbs. superphosphate to the acre. Finished his planting the 11th June. About the time the potatoes were breaking the ground he put in with the planter 800 lbs. more of phosphate to the acre, making 1,400 lbs. in all, to the acre. Variety planted were Delawares, except 1 barrel Golden Coin, from which he had 33 barrels. He used in all for the 9 acres, 32 barrels. Cultivated them with cultivator and horse hoe. Sprayed them with Bordeaux mixture several times till they got so rank and stout that you could not drive through them. Dug them with a potato digger had in all 1205 barrels from the nine acres, af which 160 barrels were small, cut with the digger, or rotten. Most of them are here in the cellar now, waiting for the embargo to be taken off, or Canada to accept the Reciprocity with the U. S. that she refused a year or two ago.

I have another son, who works the home farm. He generally plants about four acres each year to potatoes. Last year he planted the usual sized piece, one acre of which had been a cow yard the year before, and very rich. He also manured two acres more with barnyard manure heavily. The remaining acre we had done nothing with for years, it being the top of the slope to the River St. John, and steep, it was hard working it. We put more superphosphate on it, probably 300 lbs. or more to the acre. Very few of them rotted. We also used the Bordeaux mixture. Our neighbors on the other side of us has been using the Bordeaux mixture for years, did not use it last year and his crop was as good as ours. Only the line dividing the two farms between the two pieces. So it seems Bordeaux mixture does not always help the potato.

This part of York County is full of potatoes, nearly every farmer has from 100 to 1500 barrles for sale. We have in our cellar 1,000 barrels now. The price is too low to suit the farmers. You might ask why we did not sell before the embargo was put on. Until the ground froze, farmers were too busy to spare the time and our nearest railway station is Keswick, 15 miles away and a hilly, hard road to haul; 11 barrels being a hard haul for a good team. We usually sell to haul in March, when we can haul on the river as we can take a double quantity then. They are also building the St. John Valley R. R.. They are putting up the stel bridges and laying the track this winter. They may get so they can take a few cars of potatoes this spring; but to be of any benefit to us here on the east side of the river, would have to do it before the ice gets bad in the spring. But we have another chance, after the river opens and the logs begin to run we pick up the floating logs make a bottom, put out potatoes on it and take them to Fredericton. We often take 250 to 300 barrels on one raft.

We have shipped potatoes to Montreal, but generally it is not so satisfactory as to Boston. In Montreal, about every man you meet talks French half the time to you. You also have to sell in 90 lb. bag lots. Boston is the same as our own.— J. H. Murch.

Annual Meeting N. S. Poultry Association.

The Annual Meeting of the N. S. Poultry Assn. took place at the Agricultural College on Thursday evening, Jan. 15th, 1914. Representatives were present from nearly all the poultry clubs in the province. The minutes of the organization meeting held a year ago were read and approved. The Secretary gave a brief outline of the Act which was passed by the Governos. Council and Assembly on the 13th day of May, 1913. Mr. Frank Jackson spoke briefly of the success of the shows held by the C. B. Poultry Assn. and stated that poultry had improved in quality and quantity as g result of the shows. He also stated some of the difficulties which were met with in financing the show. Mr. Cook of Yarmouth, also stated that the Yarmouth people would not patronize

Crops with the Guesswork Left Out

"They Weighed, they Measured, and they Knew"

TWO brothers, market gardeners in Kent County, Rhode Island, planted 3 acres of sweet corn with Bowker's Stockbridge exclusively, and 6 3-5 acres on a competing brand of fertilizer. The corn from the Bowker gave them $104.76 per acre and the 6 3-5 acres on the competing brand gave them $35.65 per acre. The difference was $69.11 per acre. If they had used

BOWKER'S FERTILIZERS

on the whole acreage these figures indicate that they would have been $456.13 better off.

The Bowker part yielded 76 per cent of No. 1 corn, while the competing brand gave but 59 per cent. The proportion of fodder produced by the Bowker acres as compared with that grown on the competing brand was as $28 to $12. One of the brothers writes, *"I know, as we sold it by the ton and had it weighed."* This is characteristic of the whole experiment,—they weighed and they measured and they *knew.*

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are preferred by those who weigh, measure and *know* their results, whether they grow sweet corn or any other crop. They are rich in available forms of plant food. They start crops growing and keep them growing through to maturity, for they supply crops *what* they want *as* and *when* they want it.

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the show as much as they had expected, and as a result they were somewhat handicapped for funds to carry on the work in future. He, however, stated the poultrymen were enthusiastic and believed that they would find a way to make their show a success in the future. Rev. Miles Tompkins spoke of the organization in Antigonish County, of a poultry club and looked forward to a successful show being held there in the near future. Mr. W. W. Osborne spoke for the poultry club in New Glasgow, and stated that their show had been a success. This year they had much better success financially than the two years previously, owing to the much more favorable weather which they had had. He also stated that they had put in other attractions besides poultry to induce the general public to attend. They, however, were very sanguine as to the results from their efforts. He spoke particularly of the results in the improvement of the poultry in Pictou county. Mr. Pierce, of Kings Co., spoke of the organization of a club in that county and believed it would result in the impropement of the quality of the poultry in having an organization and an annual show. Mr. McIsaac, of Inverness Co., suggested that the Poultry Association should petition for more assistance to carry on the work. Prof. Cumming, Honorary President of the Association, spoke at some length, advising the members to pay close attention to the improvement of their stock, and to stand together for the best interests of their industry. He also said he was favorable to these organizations which had for their object the improvement of the live stock of the province.

Considerable discussioo followed in regard to what should be done in cases where two or more clubs should organize in a county. After listening to several in regard to this matter it was decided to leave the matter in the hands of the secretary to make the best arrangements possible to carry out the work of the club in every county.

The following officers were elected:

Pres.—W. W. Osborne, New Glasgow.

Vice-Pres.— I. C. Craig, Amherst.

Sec.-Treas.—J. P. Landry, Truro.

Executive Committee—E. E. Frehill, New Glasgow; W. A. Godfrey, Yarmouth; Frank E. Jackson, North Sydney; W. H. Henry, Shubenacadie; C. H. Wisener, Pictou; C. O. H. Webster, Pictou; Geo. Thompson, Halifax

Meeting adjourned.

Field Crop Competition in New Brunswick.

The Field Crops Competition started in New Brunswick in 1910 and the work was carried on in five counties only. Since then the work has grown till in 1913 the entry list has almost doubled in each county and two more counties have been added to the list. The counties which have had the enterprise to take up this work are: Kings, York, Victoria, Northumberland, Westmorland, Kent and Carleton.

The last two mentioned have come into the competition for the first time this year and have entered into the work so enthusiastically that their entry lists have rivaled any of the others.

The results so far have shown marked improvement in the quality of the seed sown and also in the methods of handling and cultivation. In fact, some of the farmers have got so many new ideas that they are actually starting a private seed business—for example—one farmer in Northumberland County sold all his competition oats for 75c per bushel, and could have sold more.

In judging fields in the same counties for successive years, one is constantly coming across exceptional fields of grain and is invariably informed by the owner that the seed sown had been procured from the winning field of the previous year.

The crops in the competition vary in the different counties and include wheat, oats, barley, buckwheat, potatoes and turnips.. In the southern part of the province very little wheat is raised on account of the difficulty in getting it properly milled. But it is possible to raise good wheat anywhere in the Province. The favorite variety is White Fife, Red Fife and White Russian coming in r equal popularity. Oats are in competition in all the counties and Banner Oats head the list. In the matter of Barley, six-rowed gives most satisfaction, but in general the barley grown is not up to what it should be. Competition work in turnips is converting the care of that crop from a drudgery into a pleasure.

The Potato Competition is of the greatest importance to the Province of New Brunswick at the present time. New Brunswick potatoes are destined to win a world wide reputation. The best field visited averaged eighteen (18) maketable potatoes to the hill. This field was in Northumberland County, where the competition is carried on according to methods recommended by the Canadian Seed Growers' Association. The buckwheat competition is peculiar to York County.

It is worthy to note that in Kings, York and Carleton the winning fields of oats were grown from registered seed of the Banner variety.

So far, a large sum of money has been paid out in prizes and so far, no case has been found where a farmer has refused his prize money.

The success of the movement throughout the province has been due to the untiring efforts of Mr. S. J. Moore, who is in charge of the competitions for the Maritime Provinces.—F. M. Fiske, Florenceville,

Maritime Cows in the Official Records.

In the list of fourteen day official records completed between January 1st to 15th, 1914, we find the following cows:—

Mature Cows.—Wilhelmina Van Voran, 9468, age 5 years, 11 monehs, 27 days; milk, 440.5 lbs; lbs. fat, 14.11 lbs. the equivalent o, 17.63 lbs. butter, 80 p. c. fat. Owned by Lea & Clark, Victoria, P. E. I.

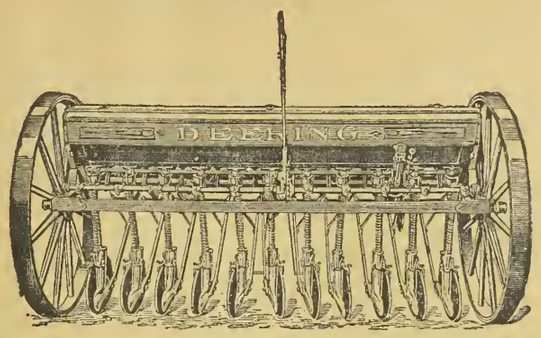
Junior Three-Year-Old Class.—Miss Rooker Posch, 14895, age 3 years, 3 months and 13 days; lbs. milk 402.7; :bs. fat, 12.92; the equivalent of 16.15 lbs. butter, 80 p. c. fat. Owned by Lea & Clark.

Senior Two-Year-Old-Class—Beauty Rooker, 18451, age 2 years, 10 mos. and 2 days; lbs. milk, 322; lbs. fat, 12.11, the equivalent of 15.14 lbs. butter, 80 p. c. fat. Owned by W. M. Lea, Victoria, P. E. I.

Nettie Rooker, 18453, age 2 years, 11 months; lbs. milk, 299; lbs. fat, 10.57, the equivalent of 13.22 lbs. butter, 80 p. c. fat. Owned by W. M. Lea

A meeting of the four co-operative fruit companies in Berwick was held in Forresters' Hall recently. Addresses were delivered by A. E. McMahon and A. E. Adams. Many questions were asked. The meeting was one of a series now being held amongst all companies of The United Fruit Companies, Ltd. These meetings, so it is reported from the sections in which they are held, are all of a most encouraging nature. Full advantage is taken of the opportunity given to individual members to become acquainted with the work of the central organization.

Deering Drills



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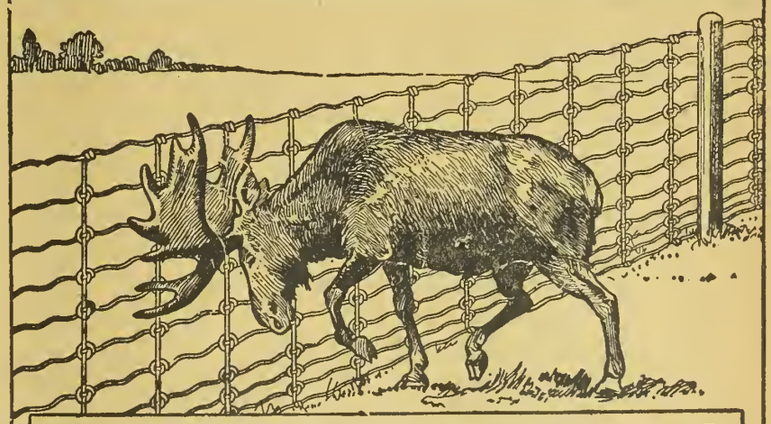

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Programme of the 38th. Annual Meeting of the Farmers' and Dairymen's Association of N. B., F'd't., March 2. 3, 4, 5, 6, 1914.

MONDAY, MARCH 2nd

8.30 p. m. (City Council Chamber)—President's Address. Address of Welcome, His Worship Mayor Hooper. Reply by H. H. Smith. Address by Hon. J. A. Murray, Minister of Agriculture. Appointment of Finance and Resolution Committees.

TUESDAY, MARCH 3rd

9.30 a. m. (Exhibition Building)—Classes Judging Dairy Cattle by Score Card, by Andrew Elliott. Discussion led ay Nelson Eveleigh.

2.00 p. m.—Classes Judging Beef Cattle by Score Card, by Andrew Elliott, Discussion, Requirements of New Brunswick Meat Market, led by W. Searle.

8.00 p. m. (City Council Chamber)—Reports of County Vice-Presidents. Alfalfa for New Brunswicki by Andrew Elliott and C. W. McDougal,.

WEDNESDAY, MARCH 4th

9.30 a. m. (Exhibition Building)—Classes Heavy Horse Judging by Score Card, by C. W. Bell. Discussions.

2.00 p. m.—Bee Culture, by H. B. Durost.

3.00 p. m.—Fertilizers and Soil Cultivation, by A. R. Wetmore, W. W. Baird and Andrew Elliott.

8.00 p. m. (City Council Chamber)—Agricultural Exhibitions, by J. B. Daggett and Andrew Elliott.

9.00 p. m.—Road Making. Open Conference, led by President.

THURSDAY, MARCH 5th

9.30 a. m.—Visit to Experimental Farm.

2.00 p. m. (Exhibition Building)—Field Crop Competitions and Benefits by M. A. McLeod.

8.00 p. m. (City Council Chamber)—The Place for Silo and Ensilage on the Farm, by Andrew Elliott and W. W. Hubbard. Report of Resolutions Committee and Financial Report. Election of Officers. General Business.

FRIDAY, MARCH 6th

9.30 a. m. (Exhibition Building)—Placing Awards in Seed Exhibits, by S. J. Moore and Robert Newton. Potato Culture, Robert Newton and C. Fred Fawcett.

11.00 a. m.—Potato Diseases, by R. P. Gorham. Discussion.

2.00 p. m.—Classes in Seed Judging, by Robert Newton and S. J. Moore.

Rabies in Cattle.

Veterinarians are very frequently asked as to the danger from milk, blood, or saliva of rabid cattle. The experience and observations of many authorities indicate that there is slight, or almost no risk from milk consumed in the ordinary way. It is conceivable that milk from a rabid cow might produce rabies in case of a distinct injury or abrasion of the mucous membrance lining the mouth, stomach, or intestines. It might be possible, also, for such milk to prove dangerous to very young infants, on the theory that the mucous membrane lining the digestive tract of the infant is less resistant to germ infection than in case of older people.

Actual experience shows, however, that such infections, either from milk in connection with an abraded mucous membrance or when given young infants, must be exceedingly rare.

It has been shown by experiments, that dogs may be fed the brain of a rabid dog, or milk from a rabid cow, without harm; but if broken glass for example, be mixed with the feed so as to scratch the lining membrane

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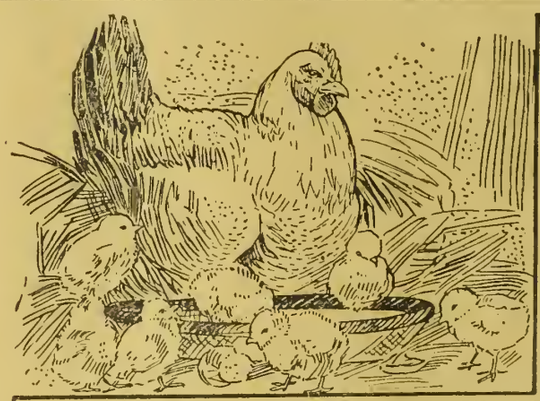

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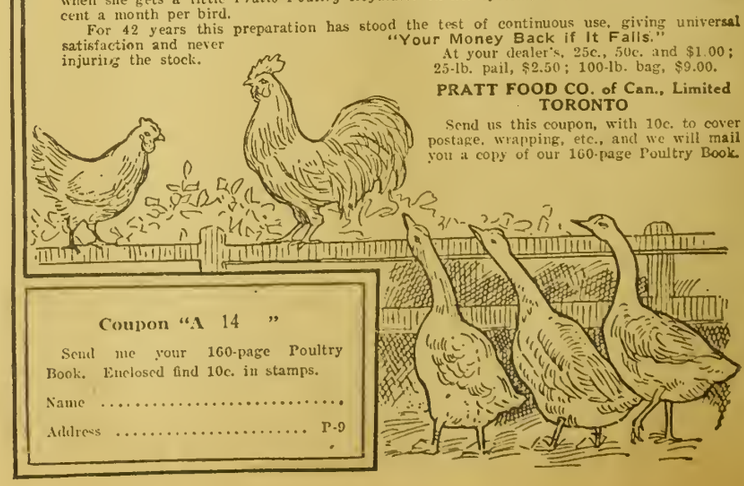

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HAD INDIGESTION

For Over

Ten Years.

Weakening the body will never remove dyspepsia or indigestion, on the contrary, all efforts should be to maintain and increase the strength.

Burdock Blood Bitters will do this, and at the same time enable you to partake of all the wholesome food required, without fear of any unpleasant after results.

Mr. Henry P. White, Surretteville, N.B., writes:—"I have been troubled with Indigestion for more than ten years; tried several doctors, and different medicines, but all without success. Having heard of the many cures effected by Burdock Blood Bitters, I decided to give it a trial. I have taken one bottle, and I feel that I am cured at last. I can now do the same hard work I could before I was taken sick."

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MRS. ALVIN ZINK,

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States that she has been cured of

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Gates' Invigorating Syrup & Life of Man Bitters

after having been under the care of physicians without receiving benefit.

And although three years have passed has no returning symptoms.

She highly recommends these medicines to her friends and the public.

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Do you know that more real danger lurks in a common cold than in any other of the minor ailments? The safe way is to take Chamberlain's Cough Remedy, a thoroughly reliable preparatian. and rid yourself of the cold as quickly as possible. This remedy is for sale by all dealers

then rabies may be produced in the dog by such feeding of either brain or milk. Sanitation officers are quite generally agreed in the view, that the danger from consumption of milk is not of much practical importance. It happens occasionally that people use milk from a cow that is developing rabies, before they know what is wrong with her. Of course, no one would use milk from a cow that was evidently rabid.

Experiments have shown that the danger from virulent blood is exceedingly variable. If thoroughly dried for two or three days, it loses virulence to such an extent that it is probably not dangerous. However, if blood or brain substance in any considerable quantity remains frozen, it will retain virulence for a long time. It is found that such material does not retain dangerous virulence at room temperature more than two or three days after it has been thoroughly dried.

There is ordinarily little or no danger from saliva around the cow yard or straw pile, because the virus is destroyed by the sun, or dried by the wind, and because the chance of infection by inoculation is so slight.

Saliva may become virulent from four to ten days before the animal shows symptoms.—M. H. Reynolds, Veterinarian, University Farm, St. Paul.

Clip the Udder.

It is not uncommon among dairy cows to find the udder covered with a dense growth of long hair which, although they may be of some protection to the udder, nevertheless, from the standpoint of sanitation and comfort to the cow during milking are a detriment. Under ordinary farm conditions they are generally covered with filth and even in the best kept dairies, unless clipped, collect some dust and filth. Furthermore, because of their location, it is highly probable that some of them will find their way into the milk pail during milking. In order that such conditions may not occur these hairs should be clipped close once or twice each year, thereby preventing collection of filth and permitting greater ease in washing the udder.

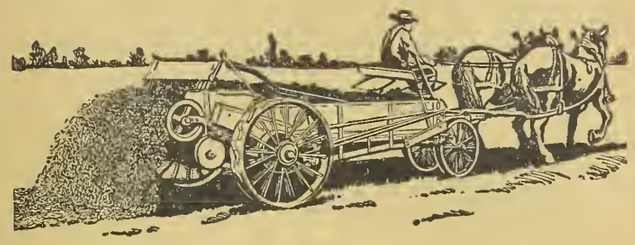
It has been my experience that "kickers" are also developed when breaking heifers to milk because of these long hairs. When the milker grasps the teat during milking, the surrounding hair is included, and with each stream drawn the hairs are given a good vigorous pull. Is it any wonder that the heifer kicks you pail and all, into the gutter?

A common pair of horse-clippers are best suited for the clipping of the hair. If a large herd is to be clipped, a hand-power machine should be provided. The clipping should extend over the flank and thigh on the right side, as this will make it easier to keep the side above the milk-pail clean. In the production of special or certified milk, this precaution should always be observed in addition to the customary washing of udders. In ordinary milk production it will help to eliminate much filth, which means better milk, and better milk eventually means better prices.—H. E. Dvorachek, Colorado Agricultural College.

Don't overlook an untruth, yet weigh carefully between untruthfulness and a vivid imagination. It is often a hair-splitting task, but no mistakes should be made.

Don't correct your child in the presence of others. You yourself would find this very hard to brook, so why regard this little being as less sensitive?

International Harvester Manure Spreaders



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STEEL frame on steel wheels—that is the lasting basis on which International manure spreaders are built. All parts, including box, beater, spreading mechanism, apron, are built by experts, using best materials, from careful designs based on field tests.

Every detail is strong and durable, built for long life and ease of draft. Among the features that will interest you are these: Simple protected beater driving mechanism, all of steel; load carried on rear axle, insuring traction; reversible gear and worm; low, easily loaded box, with ample clearance underneath; end gate, preventing clogging of beater while driving to the field; etc.

All styles are in the I H C spreader line, high and low, endless and reverse apron, and various sizes for small and large farms. Our catalogues will tell you more. Write for them and let us tell you also where you may see I H C manure spreaders.

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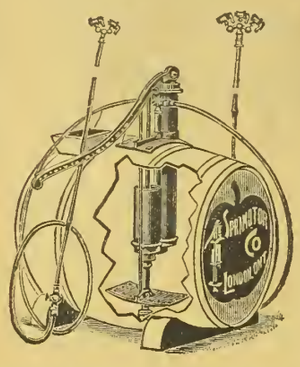

The strongestclaims we may make for the **Spramotor**, supported by the guarantee we give with every machine and its undoubted record of supremacy wherever used, may fail to convince some men.

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Department of Agriculture, Victoria, B. C.
Department of Agriculture, Fredericton, N. B.
MacDonald College, Ste. Anne de Bellevue, P. Q.
St. Boniface College, St. Boniface, Man.
J. A. Couture, Quarantine Station, Quebec P. Q.
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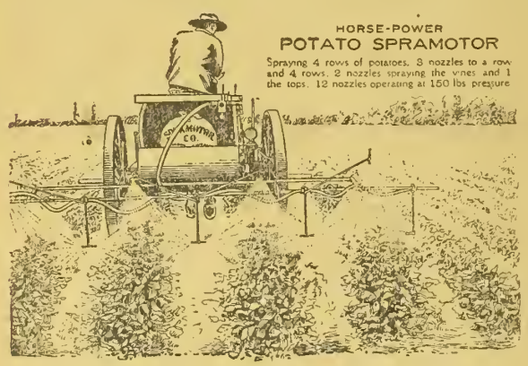
The above are mostly institutions to whom money is no object—colleges and government departments who **must** have the best on the market. As a rule they do not spray for profit so much as for purposes of experiment. They have to find out **for the benefit of agriculture in general,** how best to combat pests, parasites and diseases affecting trees, plants, vegetables and grains. In order to do this, all have chosen the **Spramotor** as being capable of the most effective work.

You can get the advantage of their intimate knowledge of the subject by writing one or several of them. These institutions will gladly tell you where the **Spramotor** stands as a pest killer, weed exterminator and for spraying purposes generally.

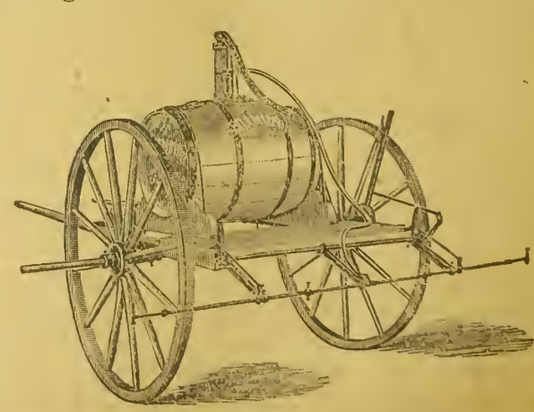

HORSE-POWER
POTATO SPRAMOTOR
Spraying 4 rows of potatoes, 3 nozzles to a row and 4 rows, 2 nozzles spraying the vines and 1 the tops. 12 nozzles operating at 150 lbs pressure

We Make Over 50 Styles and Sizes

There is a machine in the **Spramotor** line that will exactly fit your needs, whatever they may be. We sell a Hand **Spramotor** for as little as $6. This style will do all the work on a small farm. Then we have machines mounted on hand carts or on trucks, others horse-drawn, still others horse-operated. (the horse doing all the work except direct the spray) and finally we build the peerless model "C", a gasoline-power outfit for large farms and orchards.

Most of these outfits are interchangeable, that is, they can be adapted to tree spraying or row crop work by simply changing positions of the nozzles, They will also apply paint to barns, stables and out houses at half the cost of hand work in a tenth of the time. Dairymen find the **Spramotor** a money-maker when used to give milch cows relief from stinging and biting insects during fly time, as it will apply any fly repellant in a fine mist spray and give the animals that rest and comfort which means bigger yields of milk.

FREE By writing us stating your requirements in the way of spraying, you will get by return mail a copy of our valuable booklet on Crop Diseases, dealing with every known insect, scale and disease affecting trees, vegetables and grains. We will also forward full particulars of a **Spramotor** best suited to your needs, without any obligation whatever to you. Do it today!



The London Spramotor,

1722 King St. E.,

LONDON, CANADA.

Annual Meeting Maritime Poultry Association.

The annual meeting of the Maritime Poultry and Pet Stock Association, was held in the Board room of the Winter Fair Building, Amherst, Wednesday, December 10th, at 10.00 a. m. About thirty poultrymen were present. The president, Mr. Seth Jones, spoke of the improvement in the poultry show and the improved conditions of the industry in the Maritime Provinces. The minutes of the last meeting were read and approved The report of the Secy-Treas. was received and showed a balance on hand of $129.51 not including the returns of the show held this year. Mr. L. H. D. Foster reported for P. E. I., and stated that great progress was made and in particular the results of the egg circle movement was very gratifying to the farmers and poultrymen.

Mr. D. G. Stewart, of Dalhousie, stated that in New Brunswick things were coming better for the poultrymen. He paid a compliment to the management of the Winter Fair in the manner in which the show had improved, its cooping accommodations for fowls. J. P. Landry reported for the prize list committee and suggested to the members that the judges be supported in their system of disqualifying specimens of inferior quality in order to improve the quality of the poultry exhibited. It frequently happens that an exhibitor becomes dissatisfied if he does not receive a premium where there is no competition, when the specimen is in the opinion of the judge o, inferior quality. Mr. Seth Jones spoke in support of these suggestions and stated that the exhibitors should not place the blame on the judges but upon their own judgment in bringing birds of inferior quality to the show. The prize list was discussed at some length and it was moved by Mr. Craig and seconded by Geo. Callbeck, that in the dressed poultry class the section A. O. V. be changed to read "any other pure breed." Mr. Watson, the judge of the open classes complimented the exhibitors on the improvement in the show and stated that the exhibitors should give a little more attention to properly preparing their birds for the show, their exhibits would compare very favorably with those shown at Boston in many classes, particularly in the White Wyandotte and Rhode Island Red Classes. Mr. Reid, judge in the utility and open classes, stated that the show at present compared very favorably with the exhibit of poultry at Guelph, and gave a very interesting address on the different classes of poultry and the proper methods for preparing them for exhibitions. He stated that we were not in the Maritime Provinces, as keen in preparing our poultry for shows as the exhibitors were in Ontario. He believed, however, that poultrymen of these Maritime Provices would soon become as proficient in this as the Ontario exhibitors.

T. A. Benson, Dom. Govt, Supt. of Poultry for P. E. I., congratulated the Maritime Poultry Association on their show and strongly recommended that the fancy and utility breeds improve in unison, as there could be no separating the vigorous birds from those of weak constitution, if poultrymen were to succeed. Unless a specimen showed first all evidence of robust constitution it should not under any circumstances be awarded a premium. He also spoke very encourageingly of the work of organization and gave some samples of the results in Ontario and P. E. Island, which followed the organization of egg circles and poultry clubs. He deplored the fact that our farmers were too easily satisfied with the indifferent method of marketing the poultry products which largely prevails in the Maritime Provinces at present.

A discussion followed in which a good number of poultrymen took part as to whether it were profitable to breed purely exhibition poultry. A great many stated that it was a mistake to stick too closely to the standard without having regard to vigor and strong constitution.

The election of officers resulted as follows:

President—Seth Jones, Sussex, N.B.

Vice-Pres. for N. S.—Wm. Fanning, Amherst.

Vice-Pres. for N. B.—D. G. Stewart Dalhousie.

Vice-Pres. for P. E. I.—Geo. Callbeck, Summerside.

Director for N. S.—Thos. Munn, of Leitche's Creek.

Director for E. B.—Watson Lutz, Moncton.

Director for P. E. I.—L. D. H. Foster, Marshfield.

Prize List Committee—J. P. Landry, Seth Jones, L. H. D. Foster.

Delegate—I. C. Craig.

Substitute—L. H. D. Foster.

Before adjourning, a resolution was proposed and passed that in future all cross-breds be left out of the prize list.

Meeting adjourned.—J. P. Landry, Secy.-Treas.

Jersey Heifer in Record of Performance

The following three heifers have qualified for the Canadian Record of Performance yearly test: "Brampton Goldmont Jess" No. 806, owned by B. H. Bull & Sons, Brampton, Ont., bred by W. R. Spann, Dallas, Texas, age at commencement of test, two years two hundred and twenty seven days, total production, 6753 pounds of milk, 299 pounds of fat, equivalent to 347 pounds of butter. While making the test this heifer travelled the show circuit, being a winner at Toronto, Ottawa, etc. "Lady May of Pender" No. 1846, bred and owned by A. H. Menzies, Pender Island, B. C., age two years, produced 8177 pounds of milk, and 413 pounds of fat, equivalent to over 480 pounds of butter. "Priocess Flo of Edgeley" No. 1603, sire "Brampton Blue Beam" dam "Sunbeam of Edgeley" a Record of Performance cow, bred and owned by James Baggs, Edgeley, Ont., age three years one hundred and twenty days, produced 10838 pounds of milk, and 598 pounds of fat equivalent to over 696 pounds of butter.

Good Poultry in P. E. I.

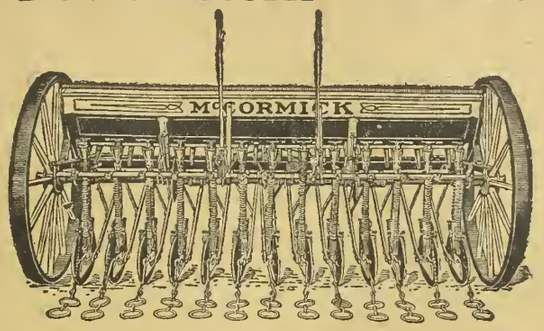
Mr. T. A. Benson, Dominion Poultry Representative when forwarding the reports of the P. E. I. Poultry Show, which appeared in our last issue said.

"As requested by your favor of Dec. 23rd I am sending you a full prize list of the Prince Edward Island Poultry Show, and also a little write up which I think justly describes the show without exaggeration.

"I was present at the show the previous season and was certainly struck with the wonderful improvement shown in all classes this year.

"As you may know I am representing the Dominion Department of Agriculture in poultry interests in P. E. Island and I was particularly pleased to see that some of the members of the fourteen egg circles which we have organized here were successful in carrying off a large proportion of the prizes, I must admit that although I have been around the country fairly well now, I was somewhat surprised at the excellent quality of these utility birds."

McCormick Drills For Eastern Canada



A McCORMICK drill prepares the best possible seed bed, and McCormick drills are longest-wearing. Any man who owns one of these implements will assure you that these are facts. When you buy a drill, buy a McCormick.

McCormick single disk and hoe drills have continuous axles, strong, light, thoroughly braced frames of angle steel, and durable, wide running drive wheels. They have a double run force feed which adapts them perfectly to the sowing of all kinds of seed.

Bearings are simple, as nearly as possible dust-proof, and easily oiled. Grain boxes are of large capacity, and they are too firmly supported to allow sagging.

See McCormick drills at the nearest I H C local agent's. All their features are explained in our catalogues. Get catalogues from the dealer, or drop a line to the nearest branch house.

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Soft and Fancy Cheese Making,
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Ice Cream making.

Domestic Science Short Course

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Competent demonstrators, Accomodation enlarged and improved. Improved equipment.
Circulars free.

C. W. McDougall, Supt.
SUSSEX, - - N. B.

Women's Institutes.

(Continued from page 325)

totally different things—housekeeping is an important part of homemaking but a good housekeeper may not possess the first fundamental idea of homemaking. Housekeeping is the art of keeping a house clean, tidy and of serving good meals and probably someone will say there is nothing more. But that is not all. Have you ever gone into a house where you were afraid to sit back in a chair in case you would put a dent into a cushion that was intended for show and not for comfort, where you felt that you could not move a chair one inch out of place in case your hostess would give you a reproachful glance, when everything was so painfully neat that it hurt; where you would never be asked to take pot luck but everything must be prepared beforehand ere you are asked to break bread with the family. The son cannot ask his friends in because they bring in mud and the daughter seeks her friends' houses for amusement but never thinks of asking her friends to her mother's house as for the man of the house if he does not take a glass for comfort occasionally can you blame him? That's housekeeping but not homemaking which is so vastly superior to you that you know a home whenever you enter the door. It does not need to be an untidy house but there is an air of welcome and every article of furniture is intended for use and you are given just what the larder affords even if it be only tea, bread and butter, but it is served with such true hospitality that you prefer it to a turkey dinner at the first house. Way back in the Old Testament times, that wise old king, Solomon, knew the difference between homemaking and housekeeping and gave his decision in favor of homemaking when he said: "Better a dinner of herbs where love is than a stalled ox and hatred therewith."

Housekeeping is not all of homemaking but the two should work together in harmony to turn a mere structure of stone or wood into the nearest glimpse of Paradise we are given on earth, a home.

FOR HOME AND COUNTRY.

The first and principal work of the Institute is home work. Its motto is "For Home and Country." There are many reasons why it should have work come first and I would like to tell you a few of them. These are not my opinion only but of men and women who have made a life long study of agriculture and were therefore competent to speak on the matter and these are some of their statements:

"That half a million lives are cut short and five million people are made ill by "preventable diseases" every year. With universal knowledge of hygiene and sanitation nearly all deaths and illness from such causes could be prevented. That six hundred thousand infants under two years end their little spasm of life yearly, while millions of children fail to reach their best physical development because their fathers and mothers do not understand how to care for them in the light of science. That the upbringing of children demands more study than the raising of chickens but very often the chickens get more care, with more knowledge, at least, than half the number of babies and the physical standard raised immeasureably. That thousands of homes are wrecked and lives are ruined and hundreds of thousands are made unhappy because the homemakers of our country have no training in the greatest of all professions, the profession of home making and only through such education can present domestic difficulties be solved and the modern home contribute all that it should to happiness and well being. That all must live in some sort of home; that everyone finds his chief happiness there; that character is developed there; that no great advance, spiritual or material, is possible which does not begin with the home; that the homemakers of Canada have the making of the Nation. That on the breadth and strength of the base depends the height of the pinnacle, on the home of foundation, we rear the pinnacle of all that is good in state and individual."

QUALIFICATIONS OF HOME MAKER.

There is one sentence there that I would like to enlarge upon "The homemakers of our country have no training in the greatest of all professions." How many of you would take the sick of your household to a man that was not qualified and did not possess the necessary Doctor's degree. You demand a certain period of apprenticeship or technical training from any man before you give him a responsible position; you see to it that he is fit for the work he undertakes. Now just as much as a man requires training for this life work does a woman require training for hers and much more because her work is more important. But the average young woman does not get any training which is necessary and too often she enters married life with a vague idea that dinners must be provided and the house cared for and she cherishes a vain hope that a knowledge of such matters will come somehow by instinct, intuition or happy accident. Would you men trust a valuable horse to a man who assured you that he never had shod a horse but his father was a good blacksmith and so was his grandfather and he guessed he could shoe any old horse alright. If you would, then you are no horseman and any old horse is the kind of horse you deserve to own. Lucky horse if his feet survived amateur shoeing and I say lucky woman if she reaches the shoes of knowledge of all that pertains to home making without wrecking all her hopes of earthly happiness. She will finally realize that the responsibilities of health and happiness, life and death are in her incompetent hands. The duties handed down from mother to daughter are not sufficient day needs. Let me tell you a few of the things a woman needs to have some idea of to manage a house. She should know how to spend money wisely because the wisdom of her management of the money disbursed depends upon the financial prosperity of the family. She should have a knowledge of the laws of health; an understanding of the sanitary requirements of the house; she should know a great deal about the value it affords as to cost and nutrition. Did you ever hear of balanced rations in relation to the proper feeding of stock in your barn. The principles underlying the balanced rations can be and should be applied to the proper feeding of the human stock in your home. The diet makes a lot of difference in your daily attitude towards mankind. The proper selection and preparation of food has more to do with the welfare of mankind both mentally and physically than we think. "We eat and live" is the correct attitude all right but if we are forced to maintain life by eating things that do not agree with us life seems a very indifferent thing. We view our neighbor and the people in general with a distorted vision and the whole world is out of joint. It isn't the poor old world at all it is just because the mother, wife or sister who runs the particular spot where we hang our hat chance to have a dish for the last meal that didn't agree with us and as a conse-

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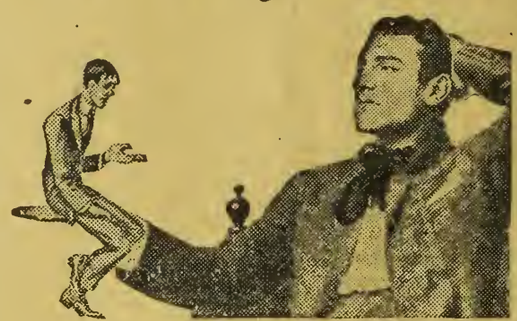
MY DEAR READER:

In the handsomely printed little book or private pocket compendium for men (containing 8,000 words and 40 half-tone photo reproductions), which I publish and gladly forward by mail, free, sealed to any man anywhere in the world who sends me the free coupon below. I have included certain parts that contain some very important advice or suggestions of a strictly personal nature which, I believe, cannot be found in any of the Private Hygiene books for men that are now sold at high prices all over the country. It will thus be seen I have endeavored, through the medium of my free book, to give my readers absolutely free of cost really MORE, in some respects, than others offer and make a large charge for. All you have to do to get this free book of mine is to use the coupon below, or if in my neighborhood, I extend an invitation to you to call at my office. Please remember that this free offer involves absolutely no obligation on your part, and there is nothing whatsoever for you to pay and nothing whatsoever for you to buy in any way, unless you should decide at some time in the future that you would like try one of my mechanical VITALIZERS (described below). but that rests entirely with yourself. Over a million of these little free books have now been sent to men who wrote for them as I want you to do, and who live in all parts of the globe. I publish this free book in English, Swedish, Danish, Finnish, German, French and Polish, bnt I always send the English edition of course, unless otherwise instructed. Kindly use the little coupon.

SANDEN, AUTHOR.



MANLY, VIGOROUS MEN RULE THE WORLD

In reference to manly strength, I believe it is now more generally acknowledged than ever before that the manly man stands back of all that makes for progress, development and achievement in the world, a truth which any of us can easily verify if we but look about us with impartial eyes.

As a matter of fact, the man who is debilitated, unstrung and enervated cannot, for perfectly obvious reasons, expect to approach those real and masterful attainments which seem but a natural and easy accomplishment for him whose nerve force, brain power and manly strength are perfectly normal. Hence, we acknowledge the debilitated, weakened man to be handicapped in every walk of life where real manhood counts, yet it would indeed be cruel of me to here so state the fact in public print were I not of the honest opinion that there is every hope for the unmanly man to restore himself to a state of health and vigor, if he but clear his mind of abnormal fear, and then make a fair, square effort to redeem himself.

There are two specimens of humanity for which I have no earthly use. One is the man who, though now strong and vital, yet plunges into dissipation and excess with the certain knowledge of his unmanly fate. The other is the man who, though knowingly debilitated and enervated, makes no effort to get away from his life of dissipation and wrong practices. As a matter of fact, there is no hope for either of these unfortunates But for him who acknowledges his errors, who may come to me and say, "I have paid the penalty of my past follies, but I am THROUGH with my life of dissipation, and I am going to make a manly effort to restore myself," to such a man, I carea not what his physical condition may be, I can say in all truthfulness, "You, my friend, are on the right road to new strength and new manhood", for he really is, and there is no doubt about it.

I make a little appliance that I call a VITALIZER, which I designed to aid just such men who seek manly strength. I am not offering this VITALIZER here for sale, but merely suggest that you, reader take this opportunity to learnall about what this little appliance is doing today everywhere throughout the world; then, if in the future you want to use one yourself and will so write me, I will gladly make some liberal proposition whereby you may have one to try. The VITALIZER is fully described in one section of the free book which the coupon below entitles you to.

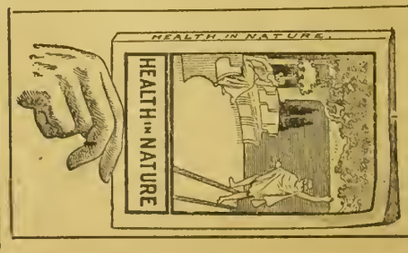
The VITALIZER is made up in a very light form weighing only several ounces, and you wear it on your body all night. It generates a great, soft, pleasant FORCE which I call VIGOR, and which flows in a continuous stream into your nerves. organs, blood and muscles while you sleep. I am satisfied in my own mind that I have access to a great POWER in this little VITALIZER which in the future will be more and more relied upon all over the world in the treatment of debilities and nerve weaknesses.

With special attachments which carry the FORCE of the VITALIZER to any part of the body, it may be used by women as well as men for he treatment of rheumatism, kidney, liver, stomach, bladder, disorders, nervousness, lack of energy, etc. Therefore, please send for the book today, or if you happen to live in or near this city, I should be very glad to see you in person. Office hours, 9 to 6.

WHAT THE FREE BOOK TEACHES YOU

The little free illustrated book of special private information, referred to above, is meant really to be a self guide for all men through the years before and after marriage and onward to a ripe old age. It is written in perfectly plain language, entirely free from technical terms, so that any one may easily grasp the full power of its good advice from two or three careful readings. It attempts to point out a safe road to new manhood or new manly strength, and as such is dedicated to mankind generally. One part of this book fully describes my little VITALIZER referred to above.

Remember, as soon as the coupon below is received I agree to forward to you one copy of this illustrated booklet, absolutely free of charge and in a plain, sealed envelope, so that it will come to you privately, just as you receive any sealed mail.



DR. M. F. SANDEN CO.,
140 Yonge St., Toronto. Ont.

Dear Sirs Please forward me your book, as advertised, free, sealed.

NAME .....

ADDRESS .....

Was Troubled With Weak Back.

Weak back is caused by weak kidneys, and it is hard for a woman to look after her household duties when she is suffering from a weak and aching back, for no woman can be strong and well when the kidneys are out of order.

Doan's Kidney Pills go right to the seat of the trouble, cure the weak, aching back, and prevent any and all of the serious kidney troubles which are liable to become deep rooted into the system if not attended to at once.

Mrs. Augustus Jinks, Demorestville, Ont., writes:—"For several years I had been troubled with weak back and kidneys. I had terrible dizzy headaches, and could not sleep at night. A friend of mine asked me to try Doan's Kidney Pills, and I did so, and in a short time was cured."

Doan's Kidney Pills are 50c. per box, 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

If ordering direct specify "Doan's."

quence we suffer and cannot be comfortable alone so being of a generous disposition we pass on the uncomfortableness and make it general. I am afraid I have strayed from the list of things. I was going to tell you what woman needs to know before she is really competent to manage a house so as to make it a home. They are simply endless. She has to be a doctor, a lawyer, a minister, a nurse, a cook, a housemaid, a stocker, a plumber, a carpenter (and that's all nonsense about a woman not being able to drive a nail straight) and she will do more odd jobs around the house with a hairpin than you ever dreamt of; probably the most of them she asked you to do and you said you would send the carpenter or the plumber or whichever particular one of the trades was required for the job, then you forgot, so the hairpin with the assistance of the poker and a three pronged fork did the business and it never cost you a cent and that's all there was about it. Well there is hardly any trade or profession that the real homemaker does not know something about but one is usually all you men can master. Now in the Institute we want to discuss all these various phases of work, bring new light and knowledge to bear on them and minimize them and make them as interesting as possible; to make them easier and simplier by utilizing methods and modern utensils and introducing machinery to do some of the work that tired and overworked hands have done in the past. I remember once that if women were forced to leave their homes for a few weeks and the men had to do the work the women would return to find the men sitting on the fence smoking while the housework was being done by machinery. I believe that if men had to sweep carpets and rub up all over the house there would be sudden demand for vacuum cleaners and many other modern improvements would suddenly be regarded as actual necessities and not as extravagant luxuries. After all the value of any article depends upon the point of view; yours or mine, or just what particular toe the shoe pinches hardest. While the Institute aims to help the homemaker who has perfected the conditions in her home so they are best suited to the growth, development and happiness of its inmates she is not going to allow the conditions in the community surrounding her home to be anything but the best.

INSTITUTE INFLUENCES.

You would hardly think that the Institute formed some six months ago in Nova Scotia would have accomplished any work but the reports read at the Convention the week before last were little short of marvelous. One Institute tidied up a cemetery that had long been in need of it and is now busy considering ways and means of providing the village with sidewalks. Another provided all the schools within a radius several miles with sanitary drinking fountains. Another gave a Hallowe'en entertainment and presented a hospital in a neighboring town with a nice little sum of money. Another held two special meetings at which many useful garments were made of material furnished by Institute members and at Christmas these were distributed with toys and books among the less fortunate in the district and boxes containing cake, fruit and small gifts were sent to the County Poorhouse. There were many small things done by other Institutes quite as important and quite as helpful, but I am only mentioning the outstanding achievements. When so much has been done in such little time what will the Institutes do in the years to come when they have had time to develop number and strength. Now just a word more — The Institute is strictly non-sectarian and non-partizan and any woman is welcome from the age of fifteen up there is no age limit. The oldest woman in the community and the youngest may belong and meet on common ground in the interests of the home and country.

There are a few things we would like the men to do—there are times when a man is a handy thing to have about and sometimes he is very useful. We ask for your interest and co-operation and would beg you to tell your women folk when you go home about this new society so that when we come to your district if there is not an Institdte organized there already, we may find that someone has spoken a kind word on our behalf. If need be we ask for something more than kind words, an interest of a more substantial nature. I feel sure we will not ask in vain and I think you will find a renewed interest in the Agricultural Societies will follow the introduction into any district of a Woman's Institute.

Eureka Potato Planter

Catalog sent free

No matter whether you grow large or small quantities of potatoes we have a size of planter that is just what you need. The Eureka line of Potato Planters is the largest manufactured. This machine takes only *one* man to operate it. That means less trouble and expense for *you.*

Opens the furrow—drops the seed any distance or depth required—puts on fertilizer (if desired)—covers up—marks for next row.

It's an easy machine to operate. The steel and malleable iron construction mean lightest possible weight and increased life of machine. Your repair bill will be practically nothing. Plants uniform depth at *all* times because plow is directly under the axle. Dropping mechanism in plain view of driver. Does not injure seed.

We supply planters in three sizes, for one or two rows—with or without Fertilizer Attachment.

For 15 years the Eureka Potato Planter has been successfully used throughout the world.

We also make Eureka Potato Cutters and the Eureka Mulcher and Seeder—a mulcher, smoothing harrow, cultivator, weeder, seeder.

Write today.

Sold by
FROST & WOOD CO., Ltd.
St. John, N. B.

EUREKA MOWER CO.
Box 745 Utica, N. Y.

A Big Help in the Milk House

When it comes to quick, easy cleaning of milk cans, pans, pails, cream separators and churns,

NOTHING DOES THE WORK SO THOROUGHLY

as Old Dutch Cleanser,

Wooden benches, tables and shelves are quickly freed of milk stains, grease and cream clots.

MAKES EVERYTHING SWEET AND SANITARY

No hard rubbing nor tedious scrubbing,

Many Other Uses and Directions on Large Sifter Can—10c

DON'T BE WITHOUT IT

Make Your Stock and Poultry Pay Better with Royal Purple

STOCK AND POULTRY SPECIFICS

At a cost of less than a cent a day per head of stock, it will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases. Tones up run-down animals so that they quickly gain weight and vigor. Increases the yield of milch cows three to five pounds a day, besides enriching the quality of the milk.

ROYAL PURPLE is not a food. It is a conditioner—the best ever so'd. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not pamper them with soft predigested mush so that after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do.

ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared foods."

Try It On a Poor-Conditioned Animal

If there is a run-down, poorly nourished beast on your farm, see what **ROYAL PURPLE SPECIFIC** will do for it. A 50-cent package lasts a cow or horse 70 days. The cost is so trifling that no farmer in Canada has any excuse for having out-of-health stock around his place. Try it on the poorest-conditioned animal you have and we know you'll be surprised at the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of $1.50. Steers treated in the same way cost no more than $1.00 each to put in prime state for market. **ROYAL PURPLE SPECIFIC** fattens and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 50c, and air-tight tins, $1.50.

Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens

Do you know that **ROYAL PURPLE POULTRY SPECIFIC** makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If **ROYAL PURPLE** does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give **ROYAL PURPLE POULTRY SPECIFIC** a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and $1.50 air-tight tins.

WE ALSO SELL

Royal Purple Cough Specific for cough and distemper. (Will cure any ordinary cough in four days). 50c, by mail 60c.

Royal Purple Sweat Liniment for lameness, rheumatism, sprained tendons, etc. 50c, by mail 60c.

Royal Purple Worm Specific for animals; removes the worms, also their larvae. 25c, by mail 30c.

Royal Purple Disinfectant, in 25c, 50c and $1.00 tins.

Royal Purple Lice Killer for poultry and animals. 25c and 50c, by mail 30c and 60c.

Royal Purple Gall Cure for scratches, harness scalds, open sores, etc. 25c and 50c, by mail 30c and 60c.

Royal Purple Roup Specific for roup, pip, diphtheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry. 25c, by mail 30c.

Free TO STOCK AND POULTRY RAISERS

We will mail for the asking our new revised 80-page book on common ailments of stock and poultry. Tells how to feed light and heavy horses, colts, mares, cows, calves, steers, hogs; also how to feed and keep poultry so that they lay winter and summer. Cover lithographed in six colors, showing farm utility birds in their natural colors. This is a book that should be in every farmer's possession. IT'S FREE. Write for your copy today.

31

W. A. Jenkins Mfg. Co. London, Canada

Try an ad in the Maritime Farmer—It will pay you

Halifax Market Prices

A fair amount of business is moving in the wholesale produce trade at the present time, and prices are firm.

Potatoes have had an advance of 90c per half bag.

Another month or so will see this market practically bare of apples. No 1 apples are now worth $5.00 a barrel while it is probable that any offerings in the latter part of March will bring $6.00 per barrel.

GRAIN.—Oats, bulk, 47c 50c; Peas, $7.00.

FEEDSTUFFS.—Bran, $26 to $27; Shorts, $27 to 28.; Middlings, $28 to 29.00; Linseed Meal, 40.00 to 42.00; Cottonseed Meal, 37.00 to 39.00; Gluten Meal, 32.00 to 34.00; Corn Meal, 1.65 to 1.70.

GRASS SEEDS.—Timothy, 8c to 12c; Com. Red Clover, 19c to 24c; Mam. Red Clover, 20c to 21c; Alsike, 19c to 22c.

DRESSED MEATS.—Beef (carcass), 7c to 12½c; Hogs, 9c to 12c; Mutton, 8c to 9½c; Veal, 8c to 10c.

HORSES.—Drafters, 250.00 to 300.; Roadsters, 200.00 to 250.00; Carriage, 175.00 to 200.00.

DAIRY PRODUCE.— Creamery Butter, 31c; Dairy Butter, 28c; Cheese, 16c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 30c; Fowl, 15c to 18c; Chickens, none offering; Ducks, 18c to 20c; Geese, 17c to 20c; Turkeys, 22c to 24c.

FRUIT.—Apples, 2.50 to 5.00; No. 1 Baldwin, 5.00; No. 2 Baldwins, 4.00; No. 3 Baldwins, 2.50; No. 1 Spy, 5.00 No. 2, Spy, 4.25; No. 3 Spy, 2.50; No. 1 Golden Russet, 5.00.

MISCELLANEOUS— Hay 16.00 to 17.00; Wool, 25c to 27c lb.; Beef Hides, 12c to 13c; Calf Skins, 18c to 20c lb.; Sheep Skins, 75c to 1.50.

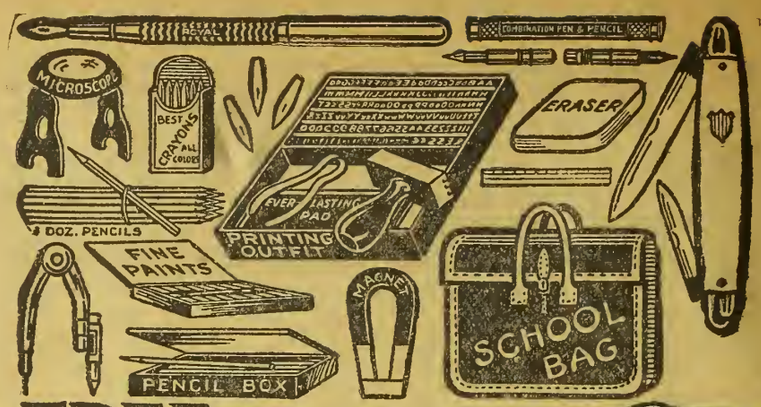
VEGETABLES—Carrots, 2.50 bbl.; Potatoes, half bag, 90c; Turnips, bag 1.25; Onions, bag 3.00; Parsnips, bbl., 2.00; Cabbage, doz., 1.00.

Bred to, or Served by.

Which is the proper statement to make concerning a cow you sell, that she is bred to a certain bull, or that she has been served by that bull? I have just sold two heifers that were mated with my bull in December, and as yet I am not sure they are with calf. Which is the safe way?

Reply: To be absolutely safe in the case of mating your cow with a bull it will be best to say that she has been served by that bull on a certain date. The American Jersey Cattle Club on their transfer certificates, in stating condition of cows at time of transfer, refer to them as having been or not served. The term bred to, as scientific reasoning contemplates it, guarantees the cow to be with calf by that bull at the time of transfer. This in many cases can be determined pretty well, but in the case of recent date of service we have no assurance that the cow is holding to the service and is in reality bred to that bull. The mere mating of cow and bull does not guarantee that she is bred, and in that case to be safe it is best to state that the cow was served on that date by that bull.—Jersey Bulletin.

Making every acre more profitable, making every acre yield a larger crop is the solution of increasing the size of the farm.



FREE Grand 28-Piece Scholar's Outfit and a Dandy Big Camera

THE GREATEST PREMIUM IN CANADA—EASY TO GET

BOYS AND GIRLS—We want to give you, without a cent of cost, this magnificent scholar's outfit, so complete and handsome that you will be the pride of the school. **JUST READ WHAT EACH OUTFIT CONTAINS**—One high-grade largest size English school bag, one fine Royal fountain pen with three extra gold finished nibs, one all steel, silver-finished pen knife, one combination safety pen and pencil, a big, complete printing outfit with six rows of type, one dozen (12) high-grade lead pencils, a fine pencil box with lock and key, a microscope or magnifying glass, one box of fine crayons, one tin box of fine paints containing 26 colors, one horse-shoe magnet, one school compass, one 12-inch ruler, and last, but not least, a fine eraser. This is just simply the chance of your life to get the finest scholars' outfit that was ever offered, 28 big costly articles, as easy as can be.

Now if you want this wonderful outfit, and a fine big Ensign camera as well, write us today and get by return of mail, just **32** Hearts of Flowers, the great **PARISIAN PERFUME**, to sell among your friends at only 10 cents each. They go like hot cakes. Everybody wants this delightful new perfume — eight delicious odors, Beauty Rose, Lily of the Valley, Wood Violet, Carnation, etc., and our big ten-cent size will perfume more articles than a dollar's worth of ordinary perfume. It won't take you five minutes to sell them all. Then return our **$3.20** and the Complete Scholar's Outfit—every piece exactly as you see it above—will be sent to you complete. We want to introduce this great new perfume to every lady in the land, and are sparing no expense to do so. When you get your beautiful Scholar's Outfit show it to all your friends. Get only four of them to sell our grand perfumes and earn our premiums as you have done, and we will also give you this beautiful, big, genuine Ensign Camera as an extra present. We arrange to stand payment of all transportation charges. Don't miss this chance. Write today. Be first. Address

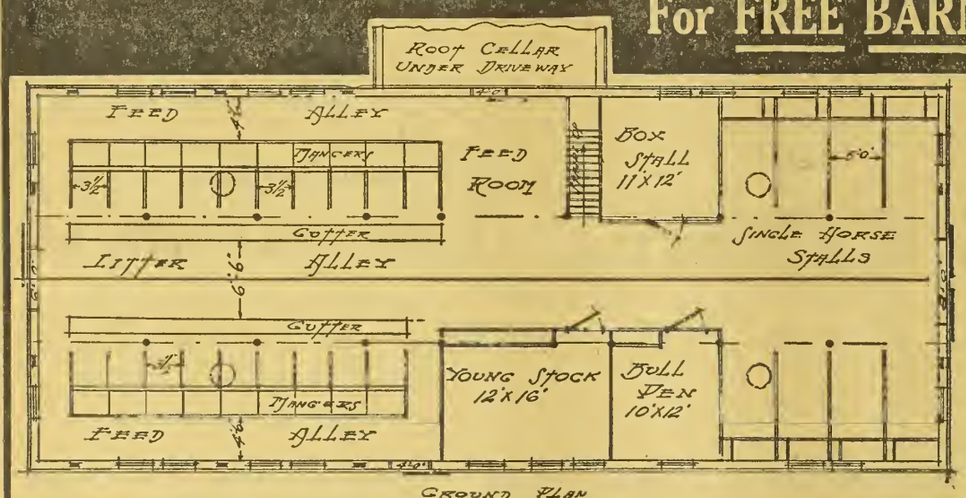
THE REGAL MANUFACTURING CO. DEPT. O. 46 TORONTO, ONT. 31

All the editors are telling you to sell the boarder cows, but a great many forget to tell you that you ought to find out for sure whether your cows are boarders or not. Many boarders would pay a profit if the keeper would just simply give them a chance.

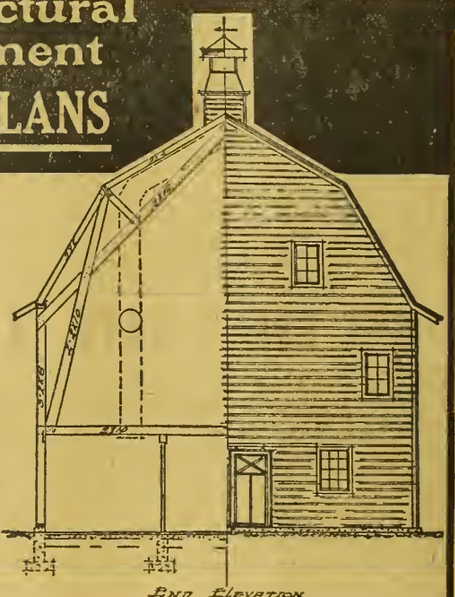
The hog house should be well ventilated and it should have an abundance of sunshine. These two things are very important but they have been overlooked in many of the buildings that have been put up in the past.

Get in touch with the **LOUDEN** Architectural Department

For FREE BARN PLANS



GROUND PLAN



END ELEVATION

WE do not publish a book of barn plans, but we do supply complete plans appliable to your particular requirements.

From these Louden Plans you can build your barn at the least possible cost, and to give the greatest amount of service.

Bear in mind, the plans are prepared by experienced barn architects, and they are free. The acceptance of a set of plans does not place you under any obligation to buy our goods. If you use Louden plans, you will use Louden equipment, because good service in one line secures consideration for our other lines. **To consider Louden Equipment is to Buy it.**

Fill out this Coupon and mail to-day to—

LOUDEN MACHINERY CO. - Dept. 18 GUELPH (1)

SUPPLY me with a set of plans, for which there is no charge, and for which I herewith give the necessary information :

Are you building a new barn?.....
Are you re-modelling your stables? .....
What size barn? .....
Plank or timber frame? .....
How many horses and cattle?.....
Name .....
Post Office.....

"Everything for the Barn"

Stable Equipment, Feed and Litter Carriers, Hay Carriers, Barn Door Hangers.

24¢ PER ROD HEAVY WIRE FENCE PER ROD 24¢

FREIGHT PAID — FREIGHT PAID

48 INCHES HIGH—ALL BIG WIRES

... farmer, you cannot afford to overlook these prices for Wire Fence which include the freight charges to our nearest railroad station in Quebec or the Maritime Provinces. The quality of our fence is unsurpassed and is sold to you under the EATON Guarantee, "Goods satisfactory to you or money refunded including shipping charges. NO EXCEPTIONS." Think of the cash saving which our low prices afford you, but don't stop there—make out your order and send it to us to-day.

POPULAR FENCE 40c PER ROD

These Fences are a splendid value, and excellent general purpose fencing. They will turn either poultry or animals. Read below the close spacing of line wires and uprights, and by stretching single strands of wire above can be made as high as desired.

70-384. Height 48 inches, 14 line wires, uprights 8 inches apart, top and bottom wires No. 9, line wires No. 12, stays No. 13. Price, per rod, freight paid.. **40c**

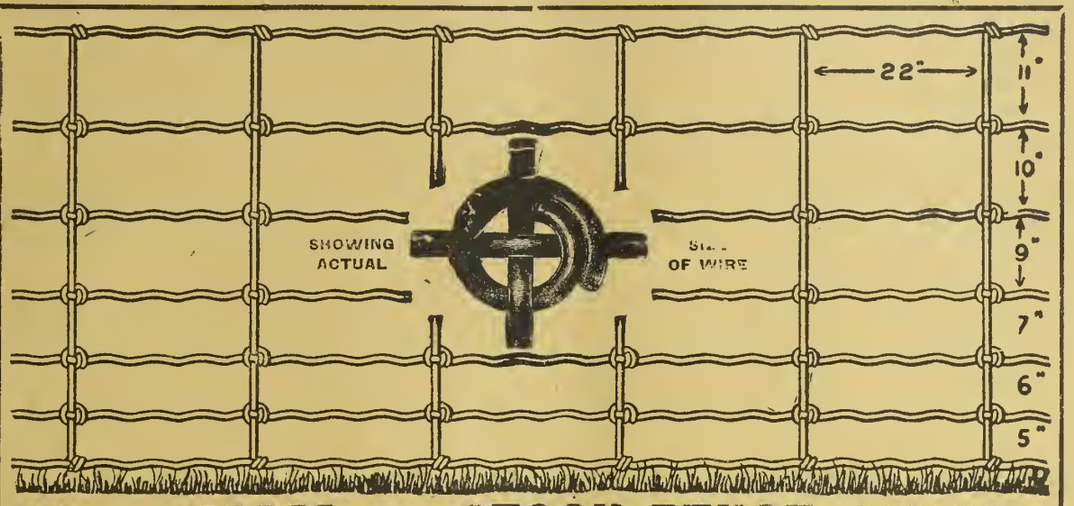
70-385. Height 36 inches, 10 line wires, uprights only 6 inches apart, or 33 to the rod, top and bottom wires No. 9, line and stay wire No. 13. Price, per rod, freight paid..... **34c**

SOLD IN 20, 30 AND 40-ROD ROLLS.

HOG AND SHEEP FENCE 26c PER ROD

It is a hog-tight fence, with the upright stays 12 inches apart. Height of fence is 34 inches. It has 8-line wires. Top and bottom wires are No. 9, with No. 12 filling, heavily galvanized. Sold in 20, 30 and 40-rod rolls.

70-360. Price, per rod, freight paid..... **26c**



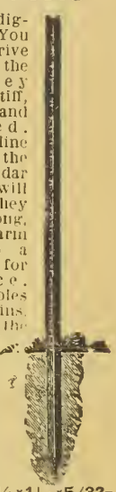
24c PER ROD FARM AND STOCK FENCE 7 LINE WIRES 48 INCHES HIGH

A strong and serviceable fence, a popular height, and easy to erect. Is made of No. 9 hard steel wire, fully galvanized and tightly interlocked. This fence is heavy enough for general purposes, and tight enough to turn the worst animal. Stays are rigid, and 9 to the rod, being 22 inches apart. Sold in 20, 30 and 40-rod rolls.

70-367. Price, per rod, FREIGHT PAID ANYWHERE IN QUEBEC OR MARITIME PROVINCES..... **24c**

STEEL FENCE POSTS

They save digging holes. You simply drive them in the ground. They are made of stiff, tough steel, and are pointed. A splendid line post, taking the place of cedar posts, and will last longer. They make a strong, neat job of farm fencing, also a fine post for garden fence. They have holes punched 2 ins. apart to fit the spacings of any fence and are painted. Wires are fastened by a loop of soft wire put through holes and twisted back of post.



70-399. 1¼x1¼x5/32-inch, 6 feet 8 inches long. Price **33c** Heavier, and longer posts.

70-400. 1½x1½x3/16-inch, 7 feet 2 inches long. Price **47c** Freight paid in lots of ten or more.

20c PER ROD 42-INCH HEAVY FARM FENCE

An extra heavy and strong fence. It is high-grade, reliable fencing at a very low price. The knots lock the stays so tightly to the line wires that they cannot slip or spread, and the line wires cannot move up or down. This fence will turn the ugliest and strongest animals. Wire is all hard steel, No. 9, and heavily galvanized. Stays are 22 inches apart, or 9 to the rod. Read fence information below. Sold in 20, 30 and 40-rod rolls.

70-355. 5-line wires. Height 42 inches. Per rod..... **20c**
70-356. 8-line wires. Height 47 inches. Per rod..... **29c**
70-357. 9-line wires. Height 51 inches. Per rod..... **34c**

Same Heavy-weight Farm Fence, with closer stays, being 16½ inches apart.

70-353. 8-line wires. Height 47 inches. Per rod..... **32c**
70-359. 9-line wires. Height 51 inches. Per rod..... **37c**

Freight paid to your station anywhere in Quebec or Maritime Provinces.

MEDIUM WEIGHT CLOSE FENCE, 23c PER ROD

This is a most serviceable and popular style of fencing. It is thoroughly and completely galvanized, and we use a No. 9 wire for top and bottom lines, with a No. 12 wire filling. There are 15 stays to the rod, being only 13 inches apart, making it a close mesh for general use. A durable and tight fence. Sold in 20, 30 and 40-rod rolls.

70-371. 6-line wires. Height 40 inches. Per rod, freight paid..... **23c**
70-372. 10-line wires. Height 50 inches. Per rod, freight paid..... **35c**
Staples, 1¾ ins., galvanized. About 65 in a lb. Sold only in bags of 10, 25 and 50 lbs.
70-368. Price, per pound..... **3½c**
Brace Wire of soft, pliable steel, galvanized, No. 9 size, sold only in 25 and 50-lb. coils.
70-387. 25 lbs..... **85c** 50 lbs..... **1.70**

FREIGHT PAID ON STAPLES AND BRACE WIRE IF BOUGHT WITH FENCING.

12-FOOT STEEL GATE, 3.95

Freight paid anywhere in Quebec or Maritime Provinces

Strong Farm Drive Gate, the frame is heavy tubular steel, perfectly welded by electrical process, and the filling is No. 9 galvanized wire. The frame is rigidly braced, and painted black. Latch and hinges are supplied with gate. Freight paid to your station.

70-362. 3 -foot Walk Gate, 48 inches high. Price..... **2.25**
70-363. 3½-foot Walk Gate, 48 inches high. Price..... **2.50**
70-364. 12 -foot Drive Gate, 48 inches high. Price..... **3.95**
70-365. 13 -foot Drive Gate, 48 inches high. Price..... **4.60**
70-366. 14 -foot Drive Gate, 48 inches high. Price..... **5.10**

IMPROVED FENCE STRETCHER

A "Dreadnought" Fence Stretcher, a heavy duty steel stretcher for all kinds of woven wire fencing. Stretcher has clamp, chain and tightening device of latest type. The pull is positive and to the limit.

70-374. Each, freight paid to your station..... **6.90**
70-408. Lighter, but powerful Stretcher, for average use. Price, freight paid..... **5.40**

READ THIS

Wire is made in sizes such as 8, 9, 10, 11, etc. These gauge numbers run higher as the size of wire is smaller. For instance: A No. 10 wire is smaller than No. 9. Most of the wire used in this country is imported from the United States and England, and the gauges are different in each country. These gauges vary enough to confuse the sizes of wire, though hardly noticeable unless measured with a micrometer. An English No. 9 is smaller than American wire of same gauge, and an American No. 10 is equivalent to No. 9½ Canadian size, the Canadian No. 10 being smaller. But no half sizes are stated on the scale of gauges, and half sizes are not recognized by the customs officials. There is no uniformity in wire sizes. The conditions of manufacture also are such that the dies through which wire is drawn are made smaller when new to allow for wear, and the wire varies in size as the die wears. We mention these facts to show that an exactness in fence wire does not exist. We insist on our fence wire being as uniform as possible, and not smaller anywhere than half the gauge difference, and we do not use any No. 10 wire at all in our heavy fence. We use what is known as No. 9, and we stipulate that this must not be smaller than No. 9½ at any point. This makes a farm fence that is heavy and very strong in every part of it, and up to a definite standard. The strength is in this heavy, hard, steel wire, and the life of the fence is in the galvanizing on the wire. Our fence is thoroughly galvanized with an even coating. We will send a sample piece of wire upon request.

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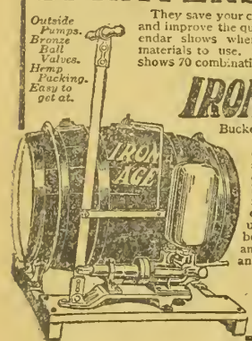

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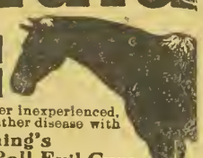

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Here is a message of hope and good cheer from Mrs. C. J. Martin, Boone Mill, Va., who is the mother of eighteen children. Mrs. Martin was cured of stomach trouble and constipation by Chamberlain's Tablets after five years of suffering, and now recommends these tablets to the public. Sold by all dealers.

Preventing Sows from Eating Pigs.

A sow is very often induced to eat her pigs through a craving for protein which is not being supplied in sufficient quantity in her ration and which is present in a high degree in the body of the pig. Over-feeding just before or after farrowing may develop a feverish condition resulting in an abnormal appetite which causes the sow to eat her pigs. If pig-eating has become a habit about the best thing to do is to dispose of the sow. On the other hand, one can usually prevent a sow from developing such a habit by proper feeding. One offence cannot said to be a habit, and it may be possible to prevent the sow from eating her pigs in the future.

Before the sow farrows she must be supplied with feeds sufficiently rich in protein, not only for the upkeep of her own body, but also for the development of the pigs she is caressential for the production of milk as well as for the upkeep of the body.

Such feeds as tankage, meat meal, wheat shorts and skimmilk are high in protein. The proportions by weight of 1 pound of tankage or meat meal to 8 pounds of corn or rice bran constitute a good ration for the brood sow. In addition she should be provided with green grazing of some sort such as oats, alfalfa or burr clover. If the grazing is alfalfa or burr clover tankage or meat meal will not be needed in the ration. She should receive a sufficient quantity of feed to keep her in good thriving gaining condition during the period of pregnancy.

A few days previous to farrowing the sow should be comfortably located in the place where she is to farrow, and her feed should be reduced to some extent. If she has previously been on such grazing as did not require some such feed as tankage, meat meal, wheat shorts or skimmilk, one of these feeds should be substituted for some of the corn or rice bran in order to continue a sufficient supply of protein.

After farrowing a sow should not receive any feed for about twenty-four hours, though she should have free access to water. The first feed should be light, as a slop of wheat bran. Several days should be taken in gradually getting her back to full feed, the object being to feed so as to produce no more milk than the pigs can well take. Green grazing should constitute a portion of the ration after farrowing as before, if the best results are to be obtained.—John C. Burns, Texas Experiment Station.

Too many farmers spend good money for Babcock testers and other implements of that kind, then store them away in the barn or on the shelf in the milk house and forget entirely how to use them. The tester, if it is going to be good, must be kept in use.

There should always be a little leisure on the farm. I know there are periods when the season is very much behind when one is rushed to the limit, but these should be brief as possible. It is far better to hire a little extra help for a few days than to be a slave to your work for weeks and months and to have things behind to such an extent that it is impossible to be your own boss.

The difference between success and failure on the farm, just as it is everywhere else, is a difference in method and application. It takes more than mere muscle and main strength to run the farm successfully.

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As we want to supply this demand through dealers, we are offering an attractive proposition to reliable parties in Ontarin, Quebec and the Maritime Provinces, who can handle quantities of 20 tons (minimum carloads) or more. This proposition is open to anyone, whether regular fertilizer dealers or not.

It offers a very profitable side line for Seedsmen, Implement Dealers, Flour and Feed Men, Millers, and progressive Farmers, in districts where we are not at present represented.

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have an extremely good performance record, having produced remarkable results for many farmers. They are prepared by using only the highest quality materials and are mixed under the supervision of experts. They are put up in 125 lb. bags (barrels if desired).

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We especially recommend our factory mixed high-grade fertilizers analyzing from 6 to 10% POTASH.
This is a splendid opportunity. Write us immediately about it before all the remaining territory is taken up.

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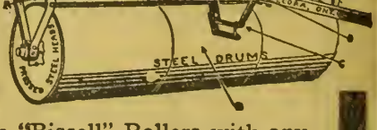

The "Bissell" Rollers are built by men who have made a life study of this work, and are SPECIALISTS IN THE BUSINESS. Search as you may, there are no such perfect Land Rollers on the Continent as the "Bissell." Make a note of these points and compare the "Bissell" Rollers with any other Land Roller in America. If the "Bissell" does not convince you that it is the best Roller, then don't buy, but you ought to know the facts, and it will do any person good to make the comparison. No need to send special travellers to sell "Bissell" Rollers. Practical farmers see the difference and prefer the "Bissell."

The 18 cold rolled anti-friction Bearings ½ inch thick with lathe cut ends, held in the one piece Malleable Iron Cage, is a single point placing the "Bissell" Roller away ahead.

Look for the name "Bissell" on every Roller. No other is genuine. Ask Dept. M for free catalogue. 61

T. E. BISSELL CO., ELORA, ONT.

FLORICULTURE.

Hampton, writes:—During the recent cold snap I unfortunately had my plants severely frosted. They consisted principally of Geraniums, one Calla Lily and an Oleander Heliotrope which looks entirely dead, and a few small foliages. What shall I do to save the roots if they can be saved.

First cut off all blackened and discolored wood and foliage. Then place in light but no sun for some little time. Water sparingly and keep at a moderate temperature. As soon as the foliage starts to grow again give sunlight and treat as before. The Calla will probably come all right. The Heliotrope would likely die also the Coleno which are what I presume are meant by foliages. Many times, if plants are not badly frozen, a complete submersion in cold water before they have started to thaw will save hardy varieties. This is worth remembering.

Freezia, writes:—I purchased bulbs last fall and planted them as directed but am sorry to say that they have wilted down almost flat on the soil yet they look healthy and the buds are appearing all right. Can I do anything to save them?

This is the natural habit of growth of this bulb and I hardly think there is anything the matter with them. You will find they will bloom all right as they are.

H. P., of Hampton, writes:—I have an Easter Lily plant about one and a half feet high. It has four small buds just appearing about the size of beans. The leaves are beginning to curl and have streaks of yellow through them. Will it be too early for Easter? How should I treat it to make it bloom then? I am very anxious to have it bloom for Easter Sunday.

You certainly have your plant quite well advanced for Easter bloom It must be in a warm tunny place. I would imagine it should be kept as cool as possible, that is in a temperature of say 60 degrees, in order to hold it back. However, you can tell better a month from now how to treat it. Let me hear from you then. The curling, yellow-streaked leaves are not a good sign. It sounds very much like the Bermuda Lily disease that is almost impossible to do anything with. However, it does not always kill the plant only makes the foliage look badly. We have very seldom seen it in plants for a few years back. The growers seem to have got the better of it. When the bud is affected with it, it seldom produces a perfect flower.

Noble of Oaklands.

Readers of the periodicals which give any prominence to agricultural matters noted that in May 1911, Noble of Oaklands, perhaps the most celebrated Jersey bull in the world up to that time, was sold in his six year old form for fifteen thousand dollars. His dam, a cow of thirteen years, on the same day sold for seven thousand dollars. Both these animals had won the highest possible distinction on the Island of Jersey, and in England, and have since made remarkable records in the United States. Needless to say, every Jersey breeder was anxious to get some of the blood of Noble of Oaklands. B. H. Bull & Sons, of Brampton, Ont., have had several daughters of this bull, and two or three sons, which have won many prizes in the show-rings, but the Record of Performance yearly test quoted below speaks more for the bull than all his show ring achievements, Brampton Oakland's Lady No 1158 C. J. C. C., who commenced her yearly test when just three years old, and produced 7973 pounds of milk and 417 pounds of butter fat, which is equivalent to almost 490 pounds of butter. During part of the time she was under test, she was travelling the show circuit, winning prizes at Toronto, Ottawa, etc.

This is the right time of the month and the right month in the year to start doing a little better on the farm. There is always a chance to improve.

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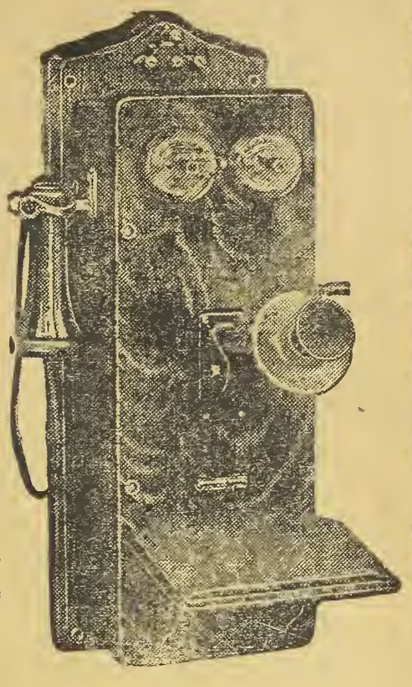

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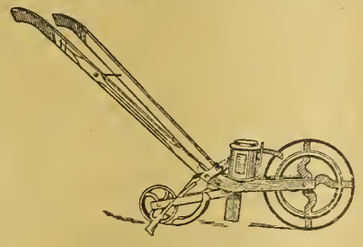

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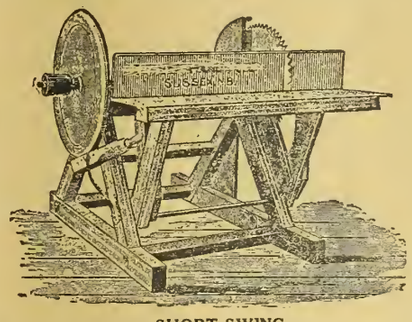

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The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1 5/8" diam.

Both bearings supplied with compression grease cups and for convenience in handling we are putting skids under our machines this season.

Send for our Wood Cutter catalogue.

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Following is a copy of his Register:

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This is to certify that Muster Hill, Jr., 58718 has been duly registered as standard under Rule I in Volume XX of The American Trotting Register, and the pedigree can be there traced in the following form—

58718

Muster Hill Jr., (1) b h foaled 1912 by Muster Hill, 47148; dam Edith Fuller, by Harkaway 2875; grandam Blanch K, by Lyle Wilkes, 4658 etc. (See Edith Fuller. Vol. XIX.) Bred by Warren C. Bull, Grafton, N. B., Can.

INITIAL TABULATION

Muster Hill Jr., 58718, from Muster Hill 47148 { Autograph 6146 / Rosa and Edith Fuller { Harkaway, 2875. / Blanche K.

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$5.00 takes the pair.

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Two pure bred Jersey bulls 1 1-2 and 3 years old respectively.

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Concentrates or Meals in the Dairy Cow's Ration

By J. H. Grisdale, B. Agr., Director Dominion Experimental Farm.

Knowledge of the composition of food is of very little use excepting there be added to that knowledge, information as to palatability, as to suitability for certain purposes, as to influence on the digestive organs or as to its effect upon the article being produced for sale, whether flesh, milk, cream, cheese or butter.

The notes which follow make no claim to being exhaustive but are, for the most part, as comprehensive as will ever be found necessary to enable the average dairy farmer to feed his cattle to the best advantage both as to cost of feed and quality and quantity of product.

BARLEY.

Barley when well ground and mixed with other and lighter meals has proven to be a valuable feed for milk production. It is held to have a good effect upon the flavour of dairy products, although the writer has never been able to satisfy himself that such was the case. It is usually a profitable food for cows but must always be fed cautiously and should never constitute more than half the meal ration. The other meals most suitable to feed along with it are bran, oats, oil cake and corn.

BREWERS' GRAINS.

The malt grains freed from the dextrin and sugar are known as brewers' grains. They are often sold to the local trade in the wet form, and are then valuable only for immediate use, as they do not keep. They are not iojurious to cows, as claimed by some, but make a very good food when mixed with corn, oats or barley.

BREWERS' GRAINS (DRIED)

A very valuable and easily stored cattle feed can be got by removing some of the excessive moisture from wet brewers' grains, when a feed containing a fair quantity of protein, carbohydrates, and fat is obtained. Four or five pounds per cow per day along with corn, oats, or barley and small quantities of oil cake meal or gluten meal will give good results in milk production.

BUCKWHEAT.

Buckwheat for dairy cows is rarely used in Canada outside the Maritime Provinces. It has a fair feeding value. When ground and mixed with other concentrates is usually cheapens the ration and frequently seems to increase the flow of milk. It is sometimes supposed to injuriously affect the flavour of milk.

BUCKWHEAT BRAN.

This is the same usually given to the mixture composed of the buckwheat hulls and that portion of the grain immediately within the hulls. The latter is a very good feed, rich in protein, but the hulls have practically no feeding value.

CORN.

Corn is an excellent feed for dairy cattle. It is a concentrated source of nutriment, extremely palatable, easily masticated and rapidly assimilated, but should never make up more than one-half to three-fifths of the concentrate part of the ration. Poor in protein but rich in digestible carbohydrates, it should always be ground and fed along with some other grain rich in protein and light in character, such as bran, shorts or crushed oats. Corn and cob meal is better for dairy feeding than corn meal alone or as the chief part of the meal ration. Pure corn meal is rather heavy but if mixed with cut feed can be fed in considerable quantities. Its great value lies in its easy and almost complete digestibility.

CORN OIL CAKE.

Corn oil cake consists of the pressed germs freed from most of the oil they carry. It is rich in ether extract, or fat, and protein. It should never be fed in large quantities and always mixed with feeds such as bran or oats, or a mixture of other light meals.

CORN BRAN.

Corn bran has about the same feeding value as good straw. It contains about one half less protein than wheat bran but more carbohydrates and fat. It feeds well with glutea meal. Only when low priced can it be fed with profit.

COTTON SEED MEAL.

Cotton Seed meal, as sold on the Canadian market, is of very variable composition. It frequently contains considerable hull and much fluffy, fibrous material. Such meal is of low feeding value and need not be expected ta give good results.

Cotton Seed meal of good quality, that is, free from hulls and fibre, is, however, an excellent feed for dairy caws, wnen fed in conjunction with other and lighter meals such as oats and bran. It is, as a rule, not very acceptable to cattle at first, but is soon eaten with apparent liking. It is usually as well to feed from two to three or at most four pounds only of this meal a day, along with other coocentrates. Larger quantities may injuriously affect the health of the animals.

Cotton Seed meal is one of the few feeds likely to in any way affect the character of the fat in the milk produced. As observed elsewhere, oil cake meal fed freely will usually induce the production of softer fats or softer butter. Cotton Seed meal, however, has the opposite effect, as it will, if fed freely, cause the cow to produce harder fats or firmer butter.

DISTILLERS' GRAINS.

From experiments it would appear that dried distillers' grains are better milk producers than oats. They are worth about 50 per cent. more than bran, depending, of course, upon their quality. According to German experiments, they will produce about 12 per cent. more milk and 9 per cent. more fat than oats. Our experiments here indicate an even higher relative feeding value than the German experiments point to.

EMMER.

Emmer and speltz, as to their nutritive properties, are more nearly allied to barley than to oats, but in practice they have about the same feeding value pound for pound as oats. They are always ground together with the hulls, and may enter in large quantities—one-half or more—in mixture with other grains.

Where the rain fall is so low as to make it difficult to grow oats and barley, emmer and speltz frequently do very well.

FEED FLOUR.

When feed flour can be had at reasonable prices, it is a good feed for milk production as it contains a high percentage of carbohydrates and fat. Objection is sometimes made to its stickiness. To overcome this, it should never be fed alone and always in small quantities and thoroughly mixed with bran or with some other feeds rich in protein and light or loose in character.

FLAXSEED.

On account of the high commercial value of the oil, flaxseed is not extensively used as cow feed. It cantains a considerable quantity of protein with an excess of oil, but very little starch. Steeped till it forms a gelatinous mass, it is of great value as a feed for calves on skim milk. It may be used as above either whole or ground. Mixed in small proportions along with coarse grains and ground, it adds greatly to the palatability and wholesomeness of the meal ration. It should very seldom constitute more than about one fifth of the grain mixture and one-tenth is usually an effective proportion.

GLUTEN FEED.

Gluten feed, as contrasted with gluten meal, contains more coarse residues from the manufacture of starch from corn. The affect of the addition of more or less hull or skin of the kernel is to render the by-product more open io character, lignt er in weight and less rich in protein, hence of lower feeding value. Gluten feed is worth about the same as wheat bran from the milk production standpoint, but it is not nearly such a safe feed to use. Gluten feed, like gluten meal, varies greatly in composition and should be bought subject to analysis.

GLUTEN FEED.

A by-product of the manufacture of corn in starch and glucose factories, gluten meal is rich in protein and has a feeding value about equal to oil cake. It should be fed mixed with either bran or oats. It is susceptible of adulteration and should be bought only on guaranteed analysis. Some gluten meal will show over 30 per cent. protein and may go as high as 35 per cent. When showing over 30 per cent. protein it is worth from 30 to 40 per cent more than wheat bran.

HORSE BEANS.

Horse beans are not much grown in Canada. They are rich in protein and enter very well into mixtures with bran, oats or corn, but no more than two or three pounds per cow per day shauld be fed.

MALT SPROUTS.

In the process of malting, the seeds are allowed to germinate; the germination is arrested at a certain stage and the seeds dried. The sprouts are broken off and separated from the grain and dried, in which form they are sold for feeding purposes. Malt sprouts are relatively rich in protein, 50 per cent more so than bran, but law in carbohydrates and fat. This feed is not much relished by cattle. and can only be fed in limited amount. It should be soaked for several hours before feeding and mixed with ground corn, barley or bran and never more than 2 to 5 pounds per day be fed. It is well to secure a sample for trial before buying.

OATS.

Oats of various varieties are :ed very extensively by dairy farmers. They have proven themselves to be fairly satisfactory as a milk-producing feed. It is, however, as a flavoring or palatability increasing constituent of the meal ration that they are most worthy of consideration. When finely ground, as should always be the case, a small proportion in the meal mixture adds very materianlly to its effectiveness. No other single grain or meal ration will give as good results as oats. They are,

(Continued on page 369)

N. B. Farmers and Dairymen in Annual Session

The thirty-eighth annual meeting of the New Brunswick Farmers' and Dairyman's Association was held in the city of Fredericton on March 2nd to 6th inclusive. The evening meetings were held in the Council Chamber; the morning and afternoon meetings in the exhibition buildings.

THE OPENING SESSION

was held on Monday evening. President W. H. Moore, occupied the chair The attendance was fairly representative of the various parts of the province. We remember previous years, when a recess was declared to give delegates a chance to register, present their credentials and pay their membership, the delegates came forward very slowly and often canvassers would have to be appointed to interview the delegates at their seats this year the delegates came forward with a will, as if striving who should be the first to be registered. This shows the increased interest that is being taken in agricultural organization.

THE PRESIDENT'S ADDRESS

"As chairman of this convention it becomes my duty to give an address relating to circumstances in connection with our farm work.

"I do not purpose explaining everything, or solving all problems, but aim at giving some problems that will lead you to do some thinking, and to start discussions along various lines. So I ask you to keep pencils busy jot down some ideas, and let us have record breaking results from these meetings.

"I assure you, that in one way, your chairman is like the good Apostle Paul, for you may recall that he told the Corinthians that: "I come not bciore you with eloquence of speech." In another place he says: "I press toward the mark." No doubt we all press toward the mark, of better farming—and some are more capable of reaching this mark than others.

"I feel that we as farmers owe the Hon. Dr. Landry, our past Commissioner of Agriculture, a debt of gratitude for the able manner in which he has supervised the business of his department for the well-being of New Brunswick farmers, and personally I wish to thank his office staff for all assistance they have given me in many ways.

"Is has been my privilege during the past year to visit a number of different sections in New Brunswick, and meet many of the farmers at home and at agricultural fairs and at the Fredericton exhibition. Their methods of working have been observed, their conditions for work and especially their work in connection with the growing of crops, and I think that owing to the variations of soil that all the farmers of this province cannot be expected to grow surplus crops of one kind in all different sections.

"As an example, we would not expect the farmers living along the dyke lands to grow a breat surplus of potatoes, as is done in Carleton and Victoria Counties, and to some extent, in part of York County. Nor could we expect the farmers in these more northern counties to compete with those of the dyke lands in the cheap production of hay and cattle.

"Not long ago, a farmer remarked to me, that he thought there was far too much fuss being made about the potato market. That man has not visited the sections where the farmers specialize in potato growing and was therefore rather narrow minded in connection therewith. Again the complaint comes that the farmers of Carleton and Victoria Counties are ruining their farms by growing potatoes on commercial fertilizers alone. To who ever it may concern, this advice is given, visit the special potato sections and observe before arriving at any such conclusions.

"During the past year there has been extremes in all kinds of weather but as amalgamation seems to be the order of the day, why should we not expect amalgamations of warm days, of cold days, of wet days, or even of stormy days. We might recall the thirteenth and fourteenth of January for amalgamations of wind and snow.

"Crops have been satisfactory throughout the province the past year. Considerable damage was done to crops by untimely changes in the weather. Perhaps the crops were a bit untimely as well. Considerable quantities of potatoes were damaged by the heavy frosts the last few days of October and first of November. Potatoes should have been all housed at that time of year. Yet it is quite evident that many potatoes were damaged by early digging, by housing them before they were sufficiently matured.

"The number o. farmers who try to grow the best quality of crops possible for their localities is small compared to the number who should do so. The average yield of grain is much lower in our province than it is in the sections where people give more attention to seed selection. There is grand apportunity of pressing towarh the mark of more and better crops. During the past year market prices have been good for all farm products. Of course, we farmers would like still higher prices, but when we consider our fellow beings, who buy the goods, together with the freight and middlemen's profits added we must agree that they are having as much of a struggle as we. One thing in connection with our produce and prices. Is it not costing us too much to market our surplus? The time, wear and tear of outfit added to cost of production, really does not leave a very great margin upon which ta become wealthy. ...

"The road problem is one of great importance. Had we good roads at all seasons, the cost of marketing would be cut down, for there is quite a difference in being able to haul half a ton, and two tons. But so long as we have rains and frosts, we must expect bad roads. Those having a short haul do not realize the importance of good roads, as do those who must drive from twenty to thirty miles to market.

"The new railways that are opening up should help the farmers in the sections through which the railways are built.

"The opportunities open now for obtaining education along agricultural lines is certainly the best now that has ever been in New Brunswick.

"With the arrangements made by the governments for the transportation to the various Agricultural Colleges, and free tuition at Truro, the various Short Courses and Agricultural Schools under the supervision of experts, the Dairy Schools and the seed fairs and special farm trains all are excellent aids in pressing toward the mark. The experimental farm being established here will work out problems for us that should do us all good. It will do us good to visit there and see the stock, crops, and methods of handling them after the farm is in proper working order. We have come to the time when we need demnostrations to go along with talk

"Another form of education is opened by the field crops competitions, and when the farmers get a bit more education in this line and exert a bit more energy there is going to be some very close competitions and he will need be a very pleased farmer, who can carry off first money. These competitions were carried on in seven counties of our province in 1913. I would have liked very much if other counties had taken up the work also, through our county vice-presidents. I would have had reason to think that my season as president of this association had left some good work begun In examining fields entered in these competitions, only two fields out of over 30 that I examined should have been discarded. One was a plot of turnips affected with club root, another was a field of some acres, of potatoes affected with scab. There were many fields of most excellent quality and yield of grain. Good enough, so that if more fields had of been sown with pure seed, there could have been a goodly quantity of pure seed grain for sale. But many farmers are learning. Would it not be a good idea to boom the sale of New Brunswick grain and potatoes, for seed? In connection with this work I would like to say that by all odds the best managed, most neatly worked farm that I visited was that of Mr. Charles McCormick, of Somerville, Carleton Co. What think you? Do not our farmers owe the mechanics a debt of gratitude for having produced farm machinery of such efficiency as is at present manufactured. I do not brag upon materials used by some manufacturers. When we realize the work that can be accomplished with machinery that formerly was done by hand, we are led to believe that we are living in a good age.

"One man can now with proper machinery produce as much crop as three men could produce by hand 25 years ago, and had we now to turn out work by hand, as was done a quarter century ago, times would be just as hard as at that time.

"I think the past year has seen as many people moving from the country to the towns and cities as has been in the past. Why not let them go to the towns? It makes that many more non-food producing bodies to be fed, and just between us now, were the people who have moved to the towns, of any particular benefit to the country? Was a country district any the better of these people living in it? Yes! Some have moved to the towns who were very well to do. Did they benefit their districts in any way except to pay their taxes? Did they improve the stock of the district? Did they do anything towards providing or growing better seeds or better bred animals, maintaining better schools? If so the country district met with a loss.

"A well-known American writer has said apropos of the rapid increase in urban population, as compared with rural dwellers, that "life in the city destroys the nerve of a man to take his chances with just nature. He would rather risk pauperism to get a 'job' than to endure with fortitude the chances of the seasons in the country. He has lost his plowhandle muscles, and his capacity to hope for a harvest just from the earth. He wants wages 'by the day' or month. He lacks the courage to believe in the soil, to endure the hardships of cold in the winter, and of heat in summer." For these and other reasons he does not care to return to the farm.

"Again we hear of the scarcity of labor. Is the country any the poorer because there are none of the semi-idle class hanging about, who could be secured to do occasional work?

"No! Nearly every man in the country now is a grower of farm products, and I believe the country and the people are as well off as if there were a great number of idle persons hanging around.

"It seems to me that if country clergymen would get interested in the work of the farmers they could do a good work. If the clergy sympathize with the farmers the farmers will have much more sympathy with the work of the clergy.

"We sure regret the removal of the Rev. Mr. Hunter-Boyd from our meetings, and how much more must the farmers of his old parish regret his removal from them. What a great source of energy was the Rev. Father Burke, of P. E. Island, whose influence was felt throughout the whole of the Matitime Provinces. The farmers of Antigonish, Nova Scotia, are at present blessed with a clerical gentleman, who is much in sympathy with the farmers and their labors and as one farmer cannot lead another, but are easily led by one of another calling, who is in sympathy with them and their work, it is inestimable the benefits derived from this source.

"In connection with this preamble iet us have some predictions. ...

"I think the time will come when we will see the stonepiles in our fields crushed up and put upon the roads, while the roads are muddy and loosened up by frost in the springtime. Then we would have a roadway that would stand wear. The fields would also present a better appearance.

"2. Sections will specialize in growing and marketing facm produce. A certain section will be noted for the quality of its goods that it has for market.

3. That potatoes will eventually be graded after the manner of grading fruitj That now the poor stock sells rather than the good selling on its own merits.

4. That it is possible that smaller areas may be worked and worked so that in sections skilled agriculturalists may manage several farms and more scientifically or intensively. Althus have a higher quality of work performed than is done at present.

Such neat workmen as Mr. McCormick, before mentioned, are capable of a great good in a community if people would only appreciate these good qualities and copy this method.

"In conclusion.—The programme of our doings for the next few days has been made up to cover a goodly number of topics, interesting to New Brunswick farmers, and it is our desire to have the delegates freely discuss the various subjects and discuss them from a purely agricultural point of view."

ADDRESS OF WELCOME AND REPLY.

Following the President's address, His Worship, Mayor Hooper, Fredericton, who takes a deep interest in the agriculturists of this province, extended the welcome of his city to the delegates, to which address H. H. Smith, treasurer of the Association, replied in a few well chosen words. Mr. Smith is one of the progressive farmers of Sunbury County and in the course of his remarks instanced the value of several of the garden vegetables, and small fruits that may be produced from a well worked acre of good soil. Following are some of his figures:—Cabbage, $250.00 per ac.; Potatoes, $100.00 per acre; Strawberries, $400.00 to 500.00 per acre; Raspberries, a trifle more than Strawber-

ries; Onions, at 5 cents per pound, $1000.00; Cucumbers and Cauliflowers, $1000.00 per acre. To get these results a farmer must know his business and apply his knowledge in a systematic manner. The province of New Brunswick was now on the eve of great development along the lines of agricultural education, this coupled with the fact that the province is the peer of any one of the Dominion Provinces in agricultural resources was something that our young men should ponder well before casting their lot in any other country.

HON. J. A. MURRAY,

the newly appointed Minister of Agriculture for the province, made his virgin speech as minister before the association. Mr. Murray said he had been greatly impressed with the spirit of optimism that had been evidenced in the preceeding speakers' remarks. He thought it presaged a great future as confidence in one's work was ane of the greatest assets a farmer could have.

Mr. Murray endorsed the tribute that had been paid to Hon. Dr. Landry, his predecessor in office, and solicited the co-operation of the farmers of the Province in all that stood for the improvement of conditions under which the agriculturists has to labor.

While 1913 had been a year of financial depression in Canada its effect had been little felt in New Brunswick The province was on a sound basis agriculturally, commercially and financially, so that even the people of the much boomed West are turning envious eyes towards us. It therefore was an opportune time for Easterners to do all they could in the way of booming our resources. The future of the Province will be whatever its people make it. The farmers of the province, in too many cases were not alive to the possibilities of their province, and this was vouched for by the large quantities of farm products that had to be imported to supply the demand.

He spoke of the educational advantages in New Brunswick and urged farmers to attend the Woodstock Agricultural School, a school built by the estate of the late L. P. Fisher, and equipped and conducted by the New Brunswick Department of Agriculture. On the success of the Woodstock school would depend the establishment of agricultural schools in other parts of the province. If the Woodstock School is well patronized, other schools will be established as fast as the requirements warrant. A Summer School of Science will be established next summer in Woodstock and teachers from all parts of the province will be there instructed in elementary agriculture and these in time will instruct the children along these lines in various parts of the province.

The farmers' special train last year on the C. P. R., had proved successful, and during the coming summer, a similar train will be run over the I. C. R.

The Dairy School in Sussex had been remodelled and ample provision made for the instruction of men and woman in Dairying and Household Science.

Horticulturally, the province was making gains in leaps and bounds. From 12,000 to 15,000 apple trees had been planted in the province last year and when these and trees subsequently planted will come into bearing, it will mean a great deal for the province.

Mr. Murray said his object in calling a meeting of the live stock men for Wednesday afternoon, was to get advice and support from the men interested in the industry so that he could work hand in hand with them. The year 1913 had been the banner year of the dairy industry in New Brunswick. Some parts of the province was very little known for dairying and in this line much work remained to be done.

Speaking of the potato embargo, Mr. Murray said the powdery scab was as prevalent in the State of Maine as in New Brunewick. Aroostock County potatoes were now barred from other parts of the United States. He was now trying to arrange with the federal government to exclude these potatoes from New Brunswick. Every effort would be made to eradicate the scab and brown tail moth from the province and to do this vigilance and constant effort would be required.

Along poultry lines the department was doing good work in demonstrating proper fattening, killing and marketing methods.

The work of the women's institutes was another good educational feature These had secured a firm hold in this province and their work had enlarged. Through these women were taught better methods of housekeeping and other work that falls to the lot of women.

While Agricultural Societies had increased in numbers in the province, the grants had not been diminished.

The Ditching Machine purchased by the Department for demonstration drainage purposes had done good work last season and the campaign will be continued in 1914.

In closing, Mr. Murray said that the government could only go so far and where they stopped the farmers of the Province must continue the work. The farmers of the province would always find the latch string of the Department of Agriculture on the outside and he invited them to make use of the Department and its various officers wherever they felt they needed advice and practical assistance with their various problems.

APPOINTMENT OF COMMITTEES.

Following Mr. Murray's address, Messrs. J. Frank Roach and C. Fred Fawcett were appointed as a Finance Committee, and Messrs. S. L. Peters, A. J. Bernier, M. McLaughlin and A. R. Wetmore as a Resolution Committee.

MR. J. B. DAGGETT

Secretary for Agriculture, gave an outline of what had been done re the powdery scab embargo. It is evident that the Aroostock County farmers had been the instigators in causing the embargo to be placed on New Brunswick potatoes. They too, have been weighed in the balance and been found wanting and now they too are barred from shipping to other parts of the United States and every effort will be made to prevent them from using Canada as a dumping ground for their infected potatoes.

On Tuesday afternoon, Andrew Elliott gave an interesting address on beef cattle and their characteristics. He dealt at length with the decrease of beef production in Canada and expressed the belief that in New Brunswick there was a profitable outlook for beef raising. The market for beef was at hand and the production in this province was far below the demand. Mr. Elliott suggested that a good way to keep the boys on the farm was to encourgae them to raise beef cattle and give them the proceeds of the sales made.

W. Searle, Fredericton, gave tbe gathering some useful pointers in regard to the kind of meats that had ready market. He spoke from the standpoint of a buyer and stated that most of the meat consumed in the provinces was imported. Local beef was of an inferior quality on the whole.

Mr. Elliott followed in a practical test of judging by score card, and was assisted by a number of those present.

At the evening session reports were read from various agricultural societies. Kent, Queens, Madawaska, Charlotte and Sunbury vice-presidents had statements showing progress in their respective counties.

An interesting discussion on alfalfa, led by Andrew Elliott, was brought on during the evening. The principal speaker gave his auditors many useful pointers in regard to alfalfa. Mr. Elliott stated that the finest piece of alfalfa he had ever seen was growo in the parish of Havelock, Kings Co. Later special attention was called to the peculiar adaptability of this parish for rais-ng the plant. Mr. Daggat announced that his department was prepared to conduct experiments with alfalfa for a number of years in order to test out its possibilities in New Brunswick. He offered to supply seed free for a number of small plots.

T. O. Clarke, who succeeds J. A. Telfer as sheep superintendent in the province, addressed the meeting, and invited the members of the F. & D. A., to use him in establishing sheep flocks. He gave statistics to show that there was no more profitable animal grown on the farm and none that needed less attention.

On Wednesday afternoon, Hon. J. A. Murray was in attendance to discuss with the members the subject of stock improvement in the province. A stenographer was present and took full notes of the suggestions made. These will be later used as a guide in fixing a policy for New Brunswick. A number of very excellent suggestions were made by delegates. Omong those who offered opinions were C. Fred Fawcett, George Jardine, John Campbell, Samuel Coates, Jas. Mavor, Mr. Reid, Stewart Fiske, Morris Scovil, J. Frank Roach, John Woods, Mr. Harding, M. A. McLeod, J. B. Daggett, S. L. Peters, O. D. Wetmore, R. G. Murray, T. J. Fraser and F. Donavan.

Hon. Mr. Murray promised to take up the question seriously and place in the field as many men as are needed. He recognized the need of encouraging breeding cattle and promised to devote more attention to it. He asked for the assistance of all, and informed the meeting that experts would be brought from other provinces to give the breeders the benefit of their experience.

H. B. Durost dealt with bee culture, W. W. Baird read an instructive paper on soil cultivation, followed by a practical talk on cultivation of the soil by Andrew Elliott.

The evening session was devoted to the discussion of an excellent paper on fertilizers by A. R. Wetmore. C. Fred Fawcett offered some practical suggestions along the same line.

The following resolutions were passed:

"This association, believing that the work done by the better farming special and its staff of instructors, has been a great advantage to the sections of the province visited, would recommend a continuation of the service and trust that the Department of Agriculture may see its way clear to do so."

"Whereas the Department of Agriculture having established agricultural schools throughout tbe province for the purpose of educating the youth of the country in the best methods of agriculture; and

Whereas, they have made tbose educational institutions accessible without any charge of tuition; therefore

Resolved, that this association does most heartily congratulate the Department of Agriculture on its effort in this line of action."

"Wheras an embargo has been placed on potatoes grown in this province by the authorities at Washington prohibiting their entry and sale in the markets of the United States because of a disease known as Powdery Scab; and

bers of this association."

"Whereas, New Brunswick farmers enjoy the satisfaction of knowing that N. B. grown potatoes are easily superior in quality to those grown by our western neighbors; and

"Whereas, our department has promptly taken the necessary steps to ascertain the possible existence, if any, of the Powdery Scab in N. B.; therefore

"Resolved, that this association do give expression of its hearty approval and appreciation of the activities and co-operation of the Department of Agriculture in so far as possible preventing any loss to our farmers in making sale of their potatoes."

"Whereas, by the recent reconstruction of the Provincial Government, led by Premier Fleming, Hon. Dr. Landry, our late Minister of Agriculture, has accepted the position of Provincial Secretary-Treasurer, and therefore has severed his connection with the active work of administering the Agricultural Department;

"Therefore resolved, that this association, in recognition of his services as Minister of Agriculture from 1908 to 1914, during which time many reforms were affected and an active and progressive policy was undertaken and successfully carried out, desire to place on record their thanks and appreciation of his services in the interests of our provincial agriculture.

"And further, that a copy of this resolution be conveyed to Hon. Dr. Landry by a committee of three mem-

Thursday's program opened with a trip to the Experimental Farm, where the visitors were received by W. W. Hubbard and shown over the premises.

In the afternoon addresses were delivered at the exhibition buildings by N. W. Eveleigh and Donald Innis on field crops, competitions and methods of judging. Counties which have not engaged in competitive work were urged ta do so. Mr. Innis gave some well founded advice as to seed selection and urged that only pure seed be sown. W. H. Moore was also heard in regard to field competitions.

W. W. Hubbard read a paper on silo construction and ensilage. He also drew attentian to the demand from Ontario for New Brunswick seed potatoes.

An important question, the building and maintenance of roads, was dealt with John Woods, Welsford.

At the evening session several resolutions were passed. Amendments to the game law permitting farmers to protect their crops from deer and moose were suggested.

The government will be asked to take steps to supply fertilizers to farmers as near cost as possible. The department will be requested to provide sheep to certain farmers for demonstration purposes.

F. C. Nunnick, of Ottawa, gave an illustrated lecture on conversation ideas and showed by pictures what should and should not be done on farms. He made a strong plea for boys on farms.

It was announced that the agricultural school at Woodstock would open on Monday and a short course extending over three weeks would be given fcee of charge.

The officers of the coming year were selected as follows: President, Thomas Strong; vice-president, J. Frank Roach; recording secretary, A. R. Wetmore; corresponding secretary, Morris Scovil; treasurer, H. H. Smith; county vice-presidents· Carleton, Bert Holyoke; Charlotte, Stanley Wilson; Kent, Ameda Maillet; Kings, O. W. Wetmore; Albert, R. A. Smith; Gloucester, John McIntosh; Madgwaska, J. A. Bernier; Queens, Murray Starkey; Restigouche, Henry McIntyre; Northumberland, John McColm; St. John, R. S. Murray; Sun-

(Continued on page 394)

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Maak

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

MARCH 10, 1914.

DATES OF ISSUE.

March 10-24
April 7-21

COMMUNITY SERVICE.

Under the above caption the following article appeared in a recent number of the Maine Farmer. We pass it on for the benefit of our readers. It is pithy and to the point.

"What I wanted most I do not find."

Many years ago there was a storekeeper in the city of Lowell, Mass., who was raised back on a farm. He had been prosperous in his business, and had a family of six children, in whom he was very much interested. He desired to have a home back in the country.

One day a farmer called at his store with a load of produce for sale, which he bought. The trader inquired where he was from. "Do you know of a good farm for sale in you section?"

"I do not know of many, but there is one in our vicinity where an old couple live, their children have gone away and want them to come and live with them. It has been a nice farm but is now somewhat run out. I think this place can be bought."

"I think I will drive out there some day."

The farmer returned home and told of his talk with the trader. It set the whole place to watching for a city team. One nice day a fine looking team drove into the door-yard of the old farm, stopped a while, made a tour through the neighborhood and then returned. In the evening there was a general turnout to the old farm to learn the result of the visit. The main question was, "Did you sell the farm? If not, why not?"

The old man answered in a sad tone of voice: "They liked the place very much, but there was one thing lacking. He said, 'What I wanted most I do not find. We have six children which we wish to bring up outside of city influences. As we rode through your neighborhood, we passed your schoolhouse, a very shabby building. It shows that you do not take any interest in the schooling of the children. And your old church building shows by the grass growing around the steps and the clapboards hanging by one nail that you have no interest in morals or religion. I see all of your other buildings are in good repair and are painted; even the blacksmith shop is painted white; therefore I cannot buy your place now.'"

Then up spoke the wealthiest man in the place, the owner of a large farm with fine, large buildings, and cottages for his help to live in (he thought it cheaper than hiring single folks). He said this must be stopped! "We are wholly to blame for all of this. That old church stands as a monument to our parents. It must be repaired. I will lead off by giving $50. We should have a new schoolhouse. Let us make a petition to the selectmen to call a school meeting to raise money to build a new schoolhouse." All this done before they went home.

In six months' time the city family was living at the old farm. There were meetings at the old church, and a revival in religion was started, and each one who became interested dated back to the words, "What I wanted most I do not find."

FATHER AND SON ON THE FARM.

One of our bright young men living in the city dropped into our office recently for a chat on farming matters. The young man was filled with enthusiasm in general, and had a genuine case of the "back to the land" fever. He was looking for a farm location. We quote from his conversation a few thoughts which are probably in the minds of many city young men placed in a similar position.

"My father was a good man and a good farmer, and particularly good and kind to his children," the young man stated. "When we were children we worked on the farm, but our lives were made easy by the hard labor of father and mother. We were sent to school whenever possible. The one thing for which my parents were to blame in raising their children was that they forced us into grooves of life for which we were not prepared. Henry was raised with the one idea of being a lawyer, and a poor lawyer he proved to be. My own life was shaped for the ministry, and in spite of my disinclination, my desire not to offend my mother's lifelong wishes led me to accept the charge. Time proved that neither my brother nor I were fitted for the life-work for which we were prepared by our parents. The regret of my life is that my father did not take me into comradeship in the conduct of the farm, that he did not teach me the things he was a lifetime learning, that he did not impress on my mind the advantages of farming, the only life for me worth living, for now I am bound to be a farmer just as my brother has become."

As this young man told us of this personal history, we could not help but think of the many parents the country over who are making this same mistake with their children. And we wish these parents would read the lesson in the true history above quoted. There are many boys who leave the farm simply because their parents do not teach them the advantages of a good farm, and that a good farmer is as much to be respected and honored by his fellow men as a good lawyer or a good preacher.

We recently visited the farm of a prominent breeder of pure-bred cattle. He had sent his only son, who had previously wanted to leave home, to the agricultural college. When the boy came home he was full of enthusiasm and interested in the farm and herd. He told his father what he had learned in college about farming and about stock, and made some suggestions, later carried out, which the father told us really made him money and benefited the farm. "My boy has decided not to leave the farm, but he's going to stay by me and take my place when I die," and there was a suspicious dampness in the old man's eyes as he talked, that made us agree with him that the boy was turning out well, and that the future need not be worried about.

The boys and girls are the most important crop on the farm after all, and the farm is the best place to keep them. They will not all stay there, but they ought to know that the farm is not such a bad place after all, before they get ready to leave it. The more we think about it the more we believe that the future prosperity, morality and physical welfare of the people of this country depends on the farm boys and farm girls. From the farm comes the fresh blood and the strong blood, the clear eye and the well-balanced intellect, the clean mind and the moral strength. The city needs many of them, but the farms need to keep still more.

SHORT COURSES AT WOODSTOCK

As we go to press the first short courses, other than the dairy courses at Sussex, in the history of New Brunswick's Department of Agriculture, will be opened in the Fisher Vocational School, Woodstock. The school is in charge of Mr. Robert Newton, B. S. A., who has recently assumed charge of the school. We have had the pleasure of a perusal of the programme laid down for the three weeks' course.

It is so designed that the farmer or farmer's son who cannot see his way clear to attend the full number of sessions may arrange to attend for a week or so.

Associated with Mr. Newton, on the tution staff during the short course period are some of the ablest agricultural exponents in eastern Canada. Plan to attend the courses. It will do you good to rub shoulders with your fellow farmers.

What about your supply of garden seeds? Peruse our columns. See what our various seed house advertisers have to offer. Send for their catalogues. Many of these catalogues are veritable text books on gardening. Make your selections and order early.

The Prince Edward Island Provincial Seed Fair was held last week at Summerside. This week the P. E. I. Central Seed Fair is being held in Charlottetown. The seed fairs have done much for the improvement of the seed grain that is being used on and shipped from Prince Edward Island.

A day or two ago we had the pleasure of meeting our venerable friend, Capt. Jas. Reed, the most extensive seed grain shipper of the Island province. His clients from coast to coast report excellent results from the use of Island seed oats. Some remarkably high yields are reported in the various testimonials sent in by the farmers who have tried and proved them.

Concentrates or Meal in the Dairy Cow's Ration.

(Continued fram page 365)

however, usually so high in price as to prevent their being so used. In any case, they do better when mixed with some other grain or meal. The other meals most suitable to feed along with them are bran, oil cake, cotton seed, barley, peas and corn.

OAT HULLS.

Oat hulls are low in nutritive value but not unpalatable to the cow. When they contain any portions of the grain, broken kernels, or oat dust, as they practically always do, they have a considerable value as a flavouring feed and are worth probably half as much as crushed oats or even more. They give best results when dampened before feeding.

OIL CAKE MEAL.

Oil cake should always be on hand. It is a very palatable feed and has a beneficial effect on the digestive tract. It serves as an appetizer and laxative as well as a concentrated source of protein. Its general effect is to place the animal in fine condition, with a pliable skin, sleek coat and good quality of flesh. It should be fed in amount not over two to three pounds per 1,000 lb. cow per day along with some other meals such as bran, corn or oats or a mixture of the three. Milch cows fed freely on this meal are likely to produce soft fats in their milk, or that, if churned, will yield a soft butter.

PEAS.

Peas being very heavy and very rich in protein, are suitable for mixing with lighter meals. They are palatable and easily digestible. The high price at which they are usually extensive use. They are suitable for sold does much to prevent their more feeding along with oats, bran or corn. Fed in moderation and along with oats, calves do well in them.

PEA HULLS.

Pea hulls are practically worthless as feed for milch cows. They are dry in nature and almost destitute of the best nutritive material. When very low in price, they might be fed to cheapen the ration, as they are light and fairly palatable.

RYE.

Rye is not much used for cattle feed in Canada. It has been fed in Denmark and is reported to have a deleterious effect on the quality of butter. When used at all, it should always be fed in small quantities, ground and mixed with bran, oats or corn.

SHORTS OR MIDDLINGS.

This is a by-product of the manufacture of wheat flour and is a valuable feed if obtained without the addition of mill dust and other adulterations. About equal to bran in dry matter and protein content and rather higher in carbohydrates, it is somewhat 'heavy' as a feed, and should be mixed with corn or oats.

SOY BEANS.

Soy beans are grown in very small quantities in Canada and then usually as a forage crop. As a meal feed for dairy cows they are practically unknown here but, when available, are very valuable if mixed with other concentrates. They are rich in protein and oil. Cows must be accustomed to them to eat them readily. They should be fed along with bran, oats or corn, but in moderation, since they have a laxative effect and tend also to soften the butter.

WEED SEEDS.

Weed seeds, being the residue from mill screenings, contain a great deal of dust with all kinds of chaff as well as many evil-smelling and worse tasting seeds which are not always a safe feed for dairy cattle. Feeding at intervals, in small quantities, ground, and mixed with other feed, turns to profit an otherwise waste material. Some weed seeds are very rich in oil, in protein and in carbohydrates. It is, however, safer to feed them to sheep, swine or poultry, and always in the ground state.

WHEAT.

Wheat as a feed for dairy cows is almost unknown in Canada. Where tried it has proveo satisfactory. To give the best results, it must be rather finely ground, and fed along with other meals. The other meals most suitable to feed with it are wheat bran, oats, oil cake and corn. Frozen wheat, when available, is a first-class feed for dairy cows. It should be finely ground and should not make up more than half the meal mixture. Oats and wheat bran are suitable for mixing with frozen wheat.

WHEAT BRAN.

As a concentrate feed for dairy cattle, all things considered, wheat bran has no equal in Canada to-day. It is good combined with other meals such as oats, corn, barley, pea, gluten, oil cake or bean meal. It comes nearest to making a successful meal ration of any concentrate fed alone. Furnishing, as it does, protein and ash, which are essentials in milk production, and also some amount of starchy matter, it should enter into every meal mixture intended for dairy cows. Being exceedingly wholesome, easily digestible and very palatable, it may constitute any part or even the whole of a profitable dairy meal ration.

Wheat bran is about of equal feeding value with a mixture of barley and oats, and is very little inferior to oats alone, which are usually very much dearer pound for pound. It is mildly laxative.

Bran, as offered on the Canadian market, is frequently adulterated with crushed weed seeds or the hulls thereof, which greatly detract from its value.

The Sussex School Garden

This is one of the ways in which the boys and the girls are being interested in farming operations.

Turnip Thinners.

The designing of labour-saving machines for use on the farm has always received much attention on the part of the engineer. Machinery is now a matter of considerable importance to the agriculturist, and few farmers dare neglect to use every opportunity for keeping themselves abreast of modern developments.

None can deny that not only is the use of machinery extending, but that the newer designs which are continually being introduced are each so much more efficient than those which they supersede as to render it a matter of wonder that any further improvement could be made. And yet the succession of new patterns continues with bewildering rapidity. One has only to sit down and recall the types and designs of the machines which were in use in the early eighties and compare them with those of the present day to realize the advances that have been made. There is a difference, for example, between the constructioo of one of the early side delivery corn-dressing machines of the hand-operated type, in which an additianal sweeping surface was obtained by applying an extra long bottom tray or sieve underneath the riddles through which the small grains and refuse passed into a spout below, and were delivered to one side of the appliance, whilst the grain passed over the tray into another spout, and was delivered on the opposite side of the machine, and that of its modern prototype. It is interesting to compare, for example, one of the clod crushers or rollers then in vogue with the patterns obtainable to-day. In the early types it was claimed as a remarkable achievement that a solid wrought iron frame with steerage wheel and guide had been substituted for the older wooden framework, and that the design was such that a man was enabled to drive three horses abreast and steer the implement with great nicety without other assistance. It was a matter for self-congratulation on the part of the makers that in the new pattern each horse did its fair share of the work, and that no undue strain was thrown on the shaft horse.

The development of almost every class of agricuftural machinery has been surprising. Clover-dressing machioes, seed separators, corn drills, turnip and manure drills, harrows, horse hoes, bean and maize mills; all alike have been improved from the earlier types almost beyond recognition; but it is curious to note that no turnip thinning machine has yet been devised which has proved entirely satisfactory in action.

Practically every firm of agricultural implement makers has devoted a large amount of time and money to designing a machine which should deal satisfactorily with the difficulties of turnip thinning. Many appliances have been devised, some of which have been placed on the market. The majority, however, have proved unsatisfactory in action, too complicated or expensive, or else have never emerged from the experimental state. The problem of designing a perfect machine is rendered the more difficult in that the result aimed at is opposite to that which the agricultural engineer usually endeavours to achieve. Instead of aiming directly to increase production, the object is to reduce it; to decrease in the first place the number of growing plants with the object of obtaining ultimately better crops, rather than to make certaia that every seed sown is given an opportunity of coming to maturity.

Every farmer is aware that the turnip family require careful handling, and no method of planting has yet been devised which will appreciably lessen the labour of thinning, and yet secure good crops. Single seed sowing has been tried repeatedly, but the results invariably have been poor, transplanting cannot be carried out. The mament a plant is removed from the soil the roots seem to lose an amount of vitality which they never regain, even if the transplanting is carried out immediately under what seem perfect conditions. In the absence of satisfactary mechanical hoeing machines it would appear that there is nothing for the farmer to do but to continue the tedious and expensive process of hoeing by manual labour.

Amongst the machines which have been devised for turnip thinning, there are some which are worthy of special attention. In one the machine consists of an horizontal frame with a main traverse shaft or axle, with a pair of travelling wheels by which the shaft is rotated, and which is provided with a spur wheel, gearing with a spur pinion located on a second motion shaft provided with a loose bevel wheel, which is thrown in and out of gear with its shaft by the medium of a clutch. The bevel wheel gears with a bevel pinion located on a longitudinal shaft placed at right angles to the second motion shaft. The opposite end of this long tudinal shaft carries a disc provided with a crank pin, on which is mounted a double-ended arm or rod to the lower end of which is attached adjustably a hoe or thinner blade, whilst the opposite end of the rod is connected through the mehium of a radius link to a standard fixed on the main frame. To the front portion of the latter is attached an adjustable arm provided with a front swivel wheel to the socket of which is attached avertical bar provided with an adjustable link to which the swingletree is attached and by whicn the machine is drawn. In other patterns the front swivel wheel is omitted and shafts used instead, whilst to the rear portion of the main frame a pair of handles for guiding are attached.—Basil Barham, A. N. I. E. E., in Farm and Home, England.

The cow testing association is no longer an experiment. It should have a place in every live dairy community for it is the most efficient and complete system of detecting the unprofitable cow that has yet been devisen.

Making money on the farm is a possible thing if one simply applies himself and knows how to turn the trick, but there are thousands of men on the farm today who will never be seen making money any more than thousands of men who are in the shops.

Spraying Mixtures and Spraying

Address by Prof. L. Caesar, Before N. S. F. G. A., at Kentville

It would be foolish or of little profit on an occasion like this to attempt to discuss many mixtures so that I shall confine my remarks to those that to-day are proving or have proven themselves of most value.

FUNGICIDES.

Until about two years ago lime-sulphur and Bordeaux Mixture were the only fungicides in use worth mentioning. Since then Soluble Sulphur has been much boomed by the Niagara Sprgy Co., and a gpod many fruit growers in Eastern North America are testing it. You will naturally therefore wish to hear what we in Ontario have to say of this spray material.

Soluble Sulphur is a chemical compound of Sodium carbonate and Sulphur. They are heated together at 400 degrees F., then apparently cooled down and ground. The subseance is a greenish yellow coarse powder. It is very convenient to ship and store. When placed in water and agitated it soon dissolves. In cost it is about the same as commercial Lime-sulphur. This last season I tested the mixture for San Jose Scale and also for Apple Scab, and found it fairly satisfactory. Several others also reported favorably, but in some cases light, and in some cases severe, burning of foliage followed. From the Entomologist of the Experiment Station at Geneva, N. Y., I have received word that in a number of cases very severe burning resulted from its use in that State. burning took place when Arsenate of Lead was used with it. I shall, therefore, advise the growers of Nova Scotia as I do now not to rely too much on this new mixture until it is tested further under a wider range of climatic conditions. I thinu probably it may be valuable spray for some purposes but I doubt whether it will displace Bordeaux or Lime sulphur as a spray for orcharh trees after the foliage has appeared.

Bordeaux Mixture. So far as I can judge by what I have observed and read Bordeaux Mixture is the best preventative of fungus diseases known. It has, of course, two or three great drawbacks: First, if used after the blossoms have fallen it will in many seasons seriously russet and deform the fruit. Second, it sometimes causes so-called yellow Leaf. Third, it is a good deal more inconvenient to use than commercial or home-made lime-sulphur after the latter has once been made. On the other hand the fact that we may, if we wish, safely use Paris green or Arsenate of lime with it lostead of Arsenate of lead, it is of considerable advantage on some occasions. For potatoes—and every farmer grows potatoes—I should use no other fungicide than Bordeaux. It is much superior to lime-sulphur for these. But we are concerned chiefly with apples and you doubtless are waiting to hear what my opinion is as to the use of Bordeaux on them. I candidly confess that while I intend, myself, to continue to use lime-sulphur in place of Bordeaux on apples and pears that will not urge others in Ontario to change back, yet I shall openly state to all that in any district where apple scab is regularly or frequen(ly difficult to control they would, in my opinion probably be acting wisely in using Bordeaux instead of lime-sulphur for the application just before the blossoms fall because of the great danger of russeting the fruit severely. The application just before tne blossoms open is always a very important application in wet cold springs and on such occasions the best possible fungicide should be used. Lime-sulphur, however, in our province of Ontario, if applied thoroughly at the times recommended in our spray calendar has in all but a very few cases proven itself a satisfactory fungicide, and its greater convenience will be almost certain to cause the mass of our growers to continue to use it in preference to Bordeaux. It is very seldom that seasons so hard to control Scab in as this last one, will occur and in any ordinary year lime-sulphur in Ontario at least is just as satisfactory as Bordeaux. Since coming among you I find that Prof. Blair's experiments seem to show that for Nova Scotia this year lime-sulphur has given better results than Bordeaux. So that it is impossible for me to boldly recommend the one mixture as superior to the other.

Lime Sulphur. The great advantage of lime-sulphur and the chief thing that has made it so popular in Ontario is its power to destroy both San Jose and Oyster Shell Scale, and also the blister mite in addition to its power as a fungicide. It has also other attractions in that itprevents the growth of lichens and moss on trees, wards off to a considerable extent cankers and once made is remarkably convenient to use, all that is necessary being to dip out the required amount, pour it into the tank and add the necessary water for dilution, adding of course, Arsenate of lead when needed. This by the way, I suppose you know, is at present about the only safe poison to use with lime-sulphur. Paris green or Arsenate of lime will sometimes, if used with it, burn the foliage very severely.

You will perhaps be interested to hear that Mr. Bradt, a recent college graduate, proved this year that strong lime-sulphur applied soon after Tent-caterpillars hatch will destroy them even without Arsenate of lead.

The difference in cost between lime-sulphur and Bordeaux Misture for use after the leaves appear is very small.

Almost every fruit grower in Ontario puts in an early spray application just before the leaf buds burst and for this, we believe that, unless soluble-sulphur may take its place there is no mixture half so satisfactory as strong lime-sulphur, say one gallon diluted with water to from 8 to 10 gallons. Having therefore to get lime-sulphur for this application we naturally think it desirable if possible to use it for the other two or three applications also. In Nova Scotia I understand that most growers admit this early application.

INSECTICIDES.

As insecticides for biting orchard insects we are using almost exclusively Arsenate of lead. You would naturally infer this from the fact that that this is the only safe arsenical at hand to use with lime-sulphur. For potatoes most of us are using Paris green with the Bordeaux. Many think I make a mistake in not recammending Arsenate of lead in preference to Paris green for these, but I find the average man gets better results from the Paris green.

Far sucking insects apart from those that are killed by lime-sulphur we seldom use any spray mixture, though a good deal of Black Leaf 40 has been applied of late years with or without lime-sulphur for aphis. Black Leaf 40 is very costly. We usually find it amounts to 80 cents per 40 gallon barrel. It has occurred to me that it is just possible that a fairly good mixture against aphids might be made by combining about 5 lbs. of any common laundry soap with each barrel of diluted soluble-sulphur and applying it either just after the aphis have hatched or just after the buds have opened and the little leaves unfolded so that the aphids may not be hidden among them when opening. Soap cannot be combined with lime-sulphur. I believe Prof. Brittain will test for you this new suggested mixture and let you know whether it is safe and efficient.

Kerosene emulsion and whale oil soap are occasionally used against sucking insects like aphids and are effective, but too costly.

WHY WE SPRAY.

Before discussing how often to spray and the best methods of doing the work let us first consider for a little why we spray as this will help to explain some of the things to be said later.

The following will be found to be the main reasons for spraying:

1. To keep the fruit clean, free from insect injuries and fungus diseases, so that it may be more attract ve, keep better and bring a higher price.

2. To prevent the fruit from falling prematurely and thus to obtain a heavier crop in years of otherwise often light yields.

3. To keep the trees themselves healthy, and vigorous thatthey may live longer and produce more fruit.

The first of these reasons is the one that most of us think of, and we forget the second and third, but if we consider them we shall find that they are also very important. One of the main causes of the early falling fruit and of the poor yields in years like this is that apple scab attacks the stems of the fruit while this is still very small and causes it to fall. The

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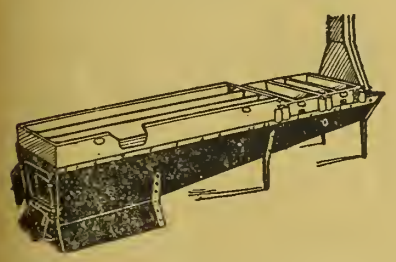

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attack on the stem may begin as soon as the blossoms have opened and mgy be well advanced by the time they are off. Moreover, any who have observed the work of the Plum Curculio and Codling moth wil, know that these insects do a great deal to cause fruits to ripen prematurely and drop. Now, thorough spraying can largely prevent the scab and destroy these insects and therefore save the fruit from falling.

That spraying will also do much to keep a tree healthy and vigorous and so able to bear larger crops can be readily understood if we remember that it will destroy to a large extent the scale insects that suck the juices out of the trunk, and branches, juices which would otherwise go to feeding the tree itself. It will also destroy most of the biting and some of the sucking insects that damage the leaves, and it will keep the scab or leaf spot from causing dead areas in them. We shall therefore from good spraying have healthy, clean, intact foliage. This is one of the greatest importance to the vigor of the tree because all the food of the tree is manufactured in the green parts and so chiefly in the leaves and tnerefore spraying by keep ng these healthy is a means of insuring the health of our trees.

SHOULD YOUNG TREES BE SPRAYED?

The last reason given above for spraying shows clearly that it is necessary to spray young trees even the first year they are set out if we want them to thrive. The fact that they do not have blossoms makes it easier to spray them just a little in advance of or a little after the bearing orchards. It takes very little time to spray 1000 such trees. They should receive practically the same number of applications as the older trees.

HOW OFTEN AND WHEN TO SPRAY.

It is difficult for one who has not lived in Nova Scotia to advise you on this point, and not run the risk of making some mistakes. You will in the meantime think over my suggestions and try to see how far they should be adopted. We shall, I believe, all agree on at least two of the applications; namely, the one just before the blossoms burst, beginning with the earliest varieties, and then going right on with the later, and the other just after the blossoms have nearly all fallen, say, 80 to 90 per cent. of them off. Without these two in a wet, cold May or June no one need hope to control apple scab. One of these is almost as importaot as the other. As to the other sprayings necessary there will be a difference of opinion. I believe you should also always make one earlier application. When this application should be put on is a debatable question. If you have Oyster Shell, Scale, Blister Mite or much canker to combat it should be before the buds burst or just as they are ready to burst. If these th ngs are not troublesome I should feel like suggesting that the spraying be done not before but as the buds are bursting, or have just burst. So that the unfolding leaves may be covered with the spray mixture and protested against Scab until th? application just before the blossoms open can be given.

As for any later sprays one must be guided by the weather. I think it probable that it will pay to spray again about ten days after the Codling Moth spray, which is, of course, the one just after the blossoms fall. It seems to me that better results will not be got by not waiting for the full two weeks as ordinarily recommended because each week after the blossoms fall the danger of Ap-

(Continued on page 386)

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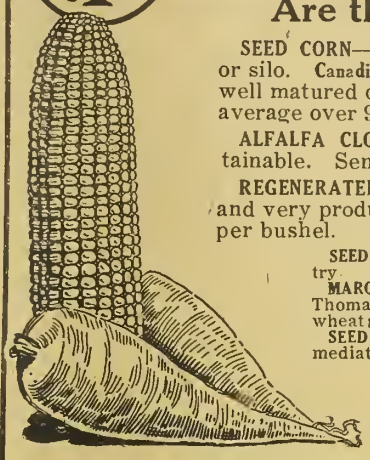

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LIVE STOCK.

Warts.

Last summer a wart started growth below the eye of a two-year-old grade Ayrshire heifer. It grew until it became the size of a hazelnut when it was taken off by coming into contact with a wire fence. Since then warts have started all over her body. She is now carrying twenty-four of these warts, varying from the size of a pea to the size of a man's hat. There is one on her abdomen extending from the teats to the front of the naval, that is nine ioches wide and five inches deep. It seems to increase in size and an offensive odor is emitted. Is there anything that will take off the wart or is it worth while spending time and money on her? Are warts contagious with other cattle? I have a heifer in another farm that is carrying a few small warts. I put caustic potash on them this week which made them turn red. The heifers have lost flesh since the warts started to grow.—R. J. S., York Co., N. B.

Ans. Warts are what might be commonly termed skin tumors. Cattle are affected with two varieties. One, the verruca vulgaris, is composed of a cluster of enlarged papillae covered with a thickened epidermis, the number of papillae determining the breadth and their length its height. Occasionally large numbers grow from the tender skin of the ears, the lips, the eyes and the vulva.

Another variety, the verruca acuminata are irregularly shaped elevations tufted or club-shaped existing as thick, short, fleshy excresences af a red or purplish color. Often by friction they become raw and bleeding, emitting an offensive odor. They usually grow in clusters and develop rapidly.

Warts are caused by an abnormal nutrition of the skin determined by increased energy of growth operating on a healthy skin. At other times the growths may operate on a weak or impoverished skin.

Treatment:—When warts are small they may be snipped off with shears and the stumps touched with nitrate of silver, butter of antimony or with a mixture of equal parts of boric acid, tannin and calcined alum. When they are broad and flattened they can be dissected out and the wound cauterized if necessary. If they are large they may be segregated and by tying a strong string around the base tight enough to prevent circulation they will snrivel, die and drop off. If there is a tendency to grow again, dress them with butter of antimany once every three days until cured. Small warts will often d sappear if kept soft with lard, sweet or olive oil.

It is rather suggestive that in young animals one wart as a general rule leads to many others, aod it has been shown that warts are contagious in many cases, not only between animal and animal, but sometimes between animal and man.

In cases where they are numerous, the patients become reduced in condition. Sometimes the warts become infected and suppurate, and may give rise to complications such as septic poisoning. As a rule, however, warts are not dangerous to life, but they diminish the value of the animals, particularly that of milch cows.

Internal medication is not of any great value, although there is no doubt that one ounce of Fowler's Solution of Arsenic given twice daily morning and evening in chop, has a beneficial result. This treatment can be continued for one or two weeks, after which it should be discontinued for the same period, and then repeated if found necessary.

Some writers favor painting over the warts daily with the same preparation. There is no doubt, however, that the most effective treatmeot is the radical one of excision. This, af course, is somewhat troublesome and requires a man of experience. I have personally, however, removed many pounds of warts from one animal at one time without any injurious effects.

It is well to apply a mixture of equal parts of Boric Acid, Tannin and Calcined Alum to the raw surface after the removal of the warts.

Reply by Geo. Hilton, Acting Veterinary Director General and Dr. J. Standish, V. S., Truro. N. S.

The Berkshire Pig.

Berkshires are common to the South-west of England, although they are found in every county, and are bred more generally than with us; but I have never seen them on a continental farm. The history of the breed is an interestiog one, but I prapose to refer to its utilitarian value in these remarks. Some of the earlier specimens of the breed reached 6 ft. in length, but this was before the advent of the modern type, which, compared with the large breeds, is too small. Whatever views are held by Berkshire breeders, this fact remains that German, Danish, and Continental buyers generally prefer the Large White. Had the Berkshire been large enough there is reason to believe that the Large Black breed wauld have failed to find a place.

There are three questions relating to the modern Berkshire which are

MARKINGS ON BERKSHIRES.

needing solution if the breed is to maintain its high position. I refer to its marking, its colour, and its size. Some years ago the Berksnire Society recommended that all pigs which were exhibited for prizes should be disqualified unless they were properly marked—i.e., unless the white on the feet, the face and the tip of the tail was distinct. Obviously in breeding for sale marking becomes imperative in the stock, with the result that it is far more difficult to find boars and sows which are approximately perfect. However large, lusty and well formed, however good the quality of the pig, it is disqualified if the marking is faulty, and this applies almost as freely to the breeding stock of the farm. If, on the other hand, we were told, by the Berkshire Society, that exhibits would be disqualified unless they reached a standard size, without regard to markings, or that size would be regarded as important a point as in the recognized Large varieties, very little time would elapse before we should see an improvement both in size and quality. Establish a large breed and no difficulty is experienced in maintaining it, but once insist that the pigs must be marked in a definite way and you commence to lose it at once. I have every reason to believe from a study of the history of the breed that the earlier Berkshires were much larger than those of to-day; but it is not surprising that they have lost this very valuable qualification in the effort of breeders to comply with the standard of marking.

COLOUR IN BERKSHIRES.

The next question relates to color. There are Berkshires which are black—I mean a dense solid black—with plenty of rather coarse hair, and tnere are Berkshires which are a dark plum, tinted black with finer hair. The former always appear to provide more lean in proportion to fat, an important point in a bacon pig, while the latter equally appear to fatten more rapidly and to produce more fat in proportion to lean

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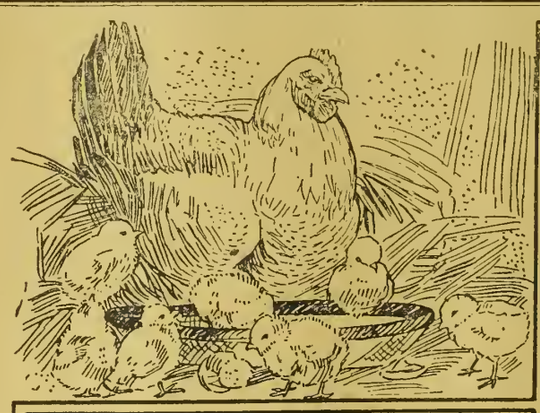

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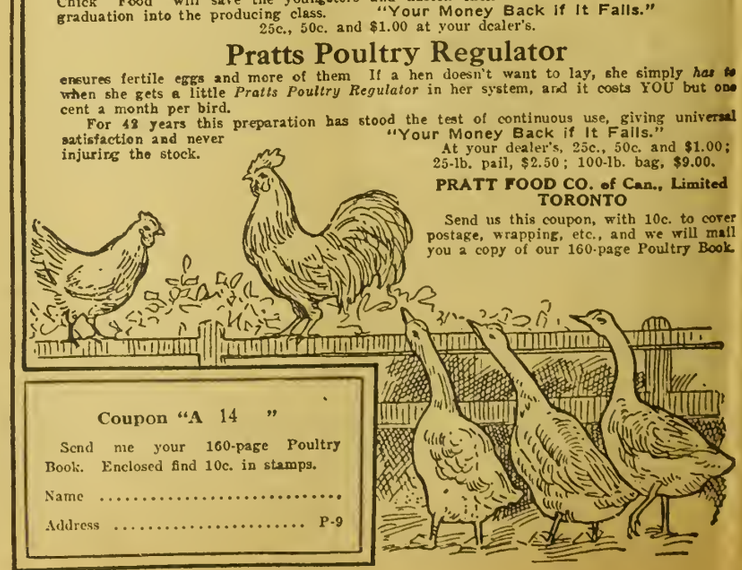

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In both cases the pigs are too small, and although of excellent form where they are well bred, they are also apt to produce too much fat. The leading exhibits at Smithfield and other winter fat stock shows will emphasize this remark. Such pigs are not economical, and generally realize very low prices. How unwise therefore to produce them and still more to provide them with prizes. I know of nothing in the economy of the showyard which is a greater mistake than to admit the excessively fat pig, which nobody wants, and, indeed, to encourage it by the offer of prizes. What should the colour be? To me the plum-colored black is the most typical, and carefully-bred pigs of this tint are the most perfect in form and might be made perfect in quality.

AS A BACON PIG.

Although the Berkshire is a good bacon pig—taking good specimens as a standard—it grows too slowly to be fit for the curer in such time as fits the large breeds for the knife. There is no doubt about the fact that the modern Berkshire if the result of crossing during the past forty years. Berkshire men have themselves admitted it to me. The most important crosses were made, as I believe, with the Black Suffolk, which was short, thick, small in head, and excessively fat. While imparting its bad properties it imparted no good ones, unless we can recognize the changed exhibition type. Sixty years ago the Beekshire walked to market, it produced nine to twelve pigs at a litter, was more dished in the face, hardy, and a producer of excellent bacon. Quite apart from the Berkshire standard, judges are wanted who are strong enough to ignore over-fatness as a claim to a prize, and to insist on larger size. It remains, however, for breeders themselves to decide the points of color and marking.—James Long.

First Aid in Live Stock Complaints.

As with the mother in the household so with the farmer and his livestock, the ability to render immediate aid in illness or accident is an asset of priceless value, and might, I think, be cultivated a great deal more than it is. Indeed, a certain amount of veterinary surgery should form an important part of the instructian given under the new system of agricultural education. Even in these days, in thickly populated England, many farms are miles away from the nearest veterinary and before he can arrive cases which, if treated at once might have been saved, have gone too far for his skill to be effective. Moreover, with the aid of a stock of simple medicines, which can be promptly administered, the doctor's services might often be dispensed with and his bill greatly diminished in length. There are many common ailments easily amenable to home treatment, and other more serious ones which might be nipped in the bud. Take colic in horses and cattle, husk in calves, foot-rot, and even scab in sheep. All these will yield ta amateur doctoring, intelligently and promptly applied. There are several firms whose wares are supplied in convenient form, and quite effective too, which no live stock owner should be without, and which the most ignorant person may use with safety and success. I am not "speaking without the book" in this matter, or with lack of practical experience. For many years I kept my own medicine chest, and by its means I am sure I saved many lives and also many a bill from the veterinary, but I do not say that in cases he should not be immediately called in.

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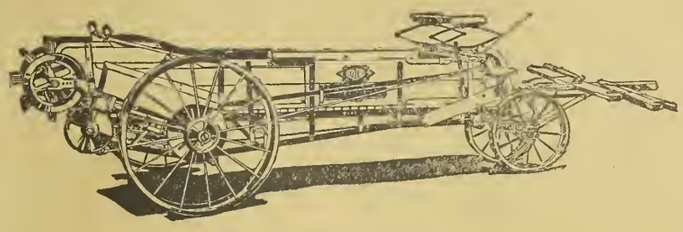

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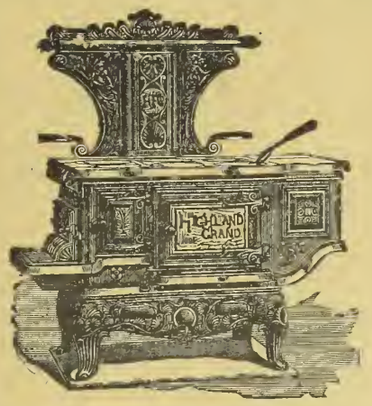

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DAIRYING.

Regular Exercise is very Essential for the Daiy Cow.

The general opinion held in this country by dairymen that cows should lead a quiet and inactive life would seem to be a question worthy of careful consideration. Experiments carried an in parts of Germany where milch cows are used as beasts of burden plainly indicate the moderate exercise or light labor does not cause a deterioration of milk. This being the case, in many cases not only can the owner of dairy cattle receive an income from the milk produced, but at the same time, by using the cattle to perform tasks which are not overburdensome, can cut down his expenses in other directions, writes Maud De Witt Pearl in the Breeders' Gazette.

The various investigations in Germany are based upon an analysis of the content of the milk during working periods and periods of rest. It was generally found that during the working periods the amount of milk produced was lessened but that there was an iocrease in the dry substances; namely, albumen, casein, milk-sugar, mineral salts and fat. The following table gives the results in the case of two cows of the Harz race, under investigation at the Agricultural Institute of the University of Leipzig. The quantity and quality of their milk was recorded da ly for the rest period of one week, when they worked from nine to ten hours each day.

Cow No. 1.

	During work.	During rest.	During work more X or less—
Pounds of milk	19,153	20,912	—1,759 lbs., 8.41 p. c.
Per cent of dry substance	13,330	13,003	X0.327 p. c.
Per cent of fat	4.38	4.01	X0.37 p. c.
Total pounds dry substance	4,718	2,550	X168 lbs.
Total pounds of fat	839	837	X2 lbs.

Cow No. 2.

Pounds of milk	10,469	11,505	—1,036 lbs.
Per cent of dry substance	13.316	13.232	X0.84 p. c.
Per cent of fat	4.28	4.17	X0.11 p. c.
Total pounds dry substance	1,347	1,333	X104 lbs.
Total pounds of fat	427	449	—22 lbs., —5 p. c.

According to the table the amount of milk is slightly reduced in each case during the working period, fram 8 to 10 per cent less being produced than during periods of rest. But in spite of this reduction in quantity the quality shows an improvement. There is a decided increase in the dry substance of the milk, except in the case of cow Number 2, where there is a slight decrease, about 5 per cent, in the fat cantent.

Other investigations show the same to be true. In a contest in Wurtemburg the so-called working cows, 85 in number, stood at the head of those entered in the competition. These cows worked for a period of 36 days during the year. While the yearly milk production showed a decrease as compared with those cows remaining in the stall yet in the dry content of the milk there was a decided increase. A fat content of 4 per cent. and over was showed in 37 out of the 85, 3.5 to 4 per cent. in 39, and 3.2 to 3.5 per cent in 9. The effect then of the cows' activity is to reduce the water content of the milk but to increase the substances which make for richness. In connection with these results, observations made upon herds of cattle doing violent exercise, such as climbing up the Alps for 6½ hours to the feeding ground, show that exercise may be overdone. Upon arival at the pasture the cows are milked, the quantity and quality of the milk showing almost no deterioration. The second milking made some 12 hours later showed a very great deterioration in the quantity as well as some reduction in the dry substances, particulgrly in the fat content.

Cows which are taking a moderate amount of exercise must be fed just as carefully as those remaining in the stalls. The food must be abundant and nourishing and they must be given ample time in which to eat it. Apparently the cows can be kept active for some hours daily provided the tasks be light. But in no case should the cows be required to do heavy labor, even for a short time. In the experiments in Germany the cows mainly did light hauling. The farmer who sells whole milk will find it more profitable to keep his cows quiet but those who are not concerned with the quantity of the milk produced so much as with the quality might do well to make a trial of the German results. Particularly in the great cheese and butter areas would it seem of value to the dairyman to provide some form of regular exercise for his cattle.

In this country where farming conditions are so different from what they are in Europe it would be less feasible to have the cows do labor on the farm but it is easily arranged of exercise daily. A little considera- so that the cows get a fair amount tion enables one to see tnat light labor or exercise should not be injurious to the milk-producing cow. Any creature, man included, is in a better condition physically for some exercise. It has long been known to physicians that the mother who is nursing her child, in order that she give the most nourishing food, not only have a wholesome and strengthening diet, but that she take a moderate amount of exercise in the open. If this rule applies unfailingly to the human race, why should it not apply equally well to those animals which aee bred for the particular purpose of producing one o, the most necessary articles of our diet?

Maritime Ayrshires in the Record of Performance.

In the list of Ayrshire cows that have been registered in the Record of Performance since their last report was issued up to February 19th 1914, we find the following:—

Mature Class—Milkmaid 7th-28769-lbs. milk, 16,696; per cent fat, 4.36; lbs. fat, 729; duration 365 days. Owned by A. McRae & Sons, Charlottetown.

Spicy Lucy-35903-lbs. milk, 12,645; per cent. fat, 3.77; lbs. fat, 477; duration, 365 days. Owned by A. McRae & Sons.

Lady Kirsty of Klenord-19571-lbs. milk, 9031; per cent. fat, 4.34; lbs. fat .392; duration, 365 days. Owned by Easton Bros., Charlottetown, P. E. I.

Four-Year-Old Class—Belvideu Princess-28375; lbs. milk, 7787; per cent. fat, 4.86; lbs. fat, 379, duration, 316 days. Owned by A. McRae & Sons.

Three-Year-Old Class—Miss Wylie-28176; lbs. milk, 8,757; per cent. fat' fat, 4.87; lbs. fat, 427; duraotion, 365 days. Owned by Samuel C. Crocket, Middle Musquodoboit, N. S.

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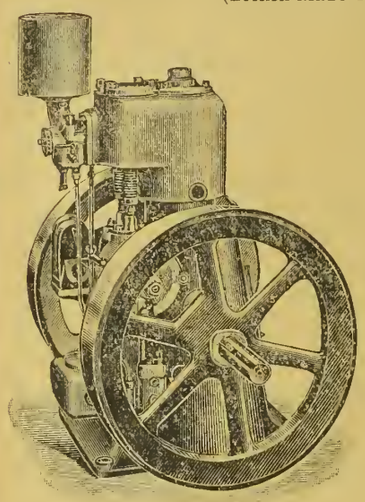

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Test 3.0 or 4.8 Which ?

Editor Maritime Farmer:—

One of the chief reasons for testing cows not simply once in a while, but at regular intervals, is found in the fact that they are known to vary so greatly and often so inexplicablyf Apart altogether from what are term ed normal variations from milking to milking, bes des the variations between morning and evening, and the variations between the fore milk and the stripuings, careful observers have noticed in two days a variation in the test of almost two per cent. of fat in the milk of individual cows, for which no reason can be assigned.

Obviously then it would be quite unfa r to judge any cow on any one isolated test when it might be 3.0 one day and 4.8 another day. Which

DON'T LET YOUR WIFE BEND OVER A WASHTUB

all day, rubbing and scrubbing in a hot, steamy wash-house. Think of the drudgery—the backache—the serious illnesses too often caused by chills. Avoid this! Get her a

Maxwell

"HIGH-SPEED CHAMPION" WASHER

and ease this burden and save money. Clothes washed cleaner and whiter in half the time. A dry, clean floor, too.

Go with the wife to the nearest Maxwell dealer and see the Maxwell "High-Speed Champion." Notice how easily it works—almost runs by itself. See the lever at top, and crank handle at side. Both equally easy. There's not a better washer on the market than this. It means lighter work and better health. Also enquire about our Washers for Water, Electric or Gas Engine Power.

DAVID MAXWELL & SONS, ST. MARY'S, ONT.

7

The Secret of good butter making is the Salt used

Windsor Dairy Salt

115

could you take? A fair and just way is to take samples regularly and test a composite sample once a month. Then there will be credit given when it is really due, not necessarily to the one that is supposed to be a high tester, because she is of fancy name or fancy price, but frequently to some tacitly despised individual which is really the queen of the dairy. It will pay to select those cows that are known, not supposed, to yield milk rich in fat.—C. F. W.

N. S. Aryshire Breeders in British Columbia Organize.

Another Ayrshire Club has been organized which makes 5 such Clubs now in Canada. This time it s the Ayrshire breeders in British Columbia that have organized and from what we know of the Ayrshire breeders there they are a wide-awake, energetic lot of men and we expect to hear good reports from the sun-set province.

Where such Clubs have been organized for any length of time there has been a marked progress made and increased interest in the high-class cattle. We look for several such clubs to be organized in Eastern Canada and the Middle West during the coming year.

The Club just organized in British Columbia has a membership of about 35 with the following officers:—

Hon. President, A. C. Wells, Sardis, B. C.; President, S. H. Shannon, Cloverdale, B. C.; Vice-President, E. A. Wel,s, Sardis, B. C.; Sec'y-Treas., W. T. Macdonald, Victoria, B. C.; Directors, G. Nutter, Duncan, B. C., T. Cunningham, Nanaimo, B. C., Geo. Sangster, Victoria, B. C., S. P. Chaplin, Agazziz, B. C., H. W. Vanderhoof, Huntingdon, B. C., J. J. Campbell, Nelson, B. C., N. C. Calder, Revelstoke, B. C., J. A. Pringle, Cranbrook, B. C.—W. F. Stephen.

Official Records.

In the list of mature Holstein-Friesian cows that completed seven day records between February 1st and February 14th we find Artis Rosie, 9808, age, 6 years, 3 months and 23 days; lbs. milk, 624.4 cantaining 18.-94 lbs butter fat, the equivalent of 23.68 lbs. butter, 80 per cent. fat. Artis Rosie is owned by the Nova Scotia Agricultural College, Truro,

Essentials for Successful Feeding of Dairy Cows.

1. Keep the cow the year around under the conditions of early summer. To do this observe the following:

2. Feed an abundance of palatable food. If the cow does not respond sell her. The greatest mistake made in handling cows in Missouri is under feeding.

3. Feed a succulent ration. Build a silo and feed corn silage in winter which helps to make summer conditions the year around.

4. Feed a balanced ration To do this feed corn silage, clover, alfalfa, cowpea hay. Timothy hay, corn fodder and corn is a poor ration for milk. It is improved by one-half pound of cottonseed meal pet day.

5. Feed the cow one pound of grain for each three pounds of milk she gives.

6. Imitate summer conditions by keeping the cows in comfortable quarters and at a moderate temperature.

Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

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often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "100 Per Cent Potato Planting" and copy of Iron Age Farm and Garden News.

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There is more than increased egg production for you in International Poultry Food. This wonderful tonic—made from roots, herbs and seeds—is purely medicinal. It keeps the roosters and hens vigorous and healthy, cures and prevents disease and sickness, promotes good health, supplies material for bone, muscle and fibre. It is very beneficial during the hatching season.

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is good not only for the chickens you have now, but also for those to come. International Poultry Food, Roup Cure, Louse Killer and other Poultry Remedies are sold by dealers everywhere. If not by yours, write us. Every preparation sold on a spot cash guarantee basis to give satisfactory results.

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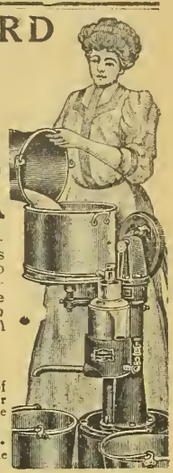

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Cheese Making,
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POULTRY.

The Westmorland Poultry Show.

The sixth annual mid-January exhibition of the Westmorland Poultry and Pet Stock Association was held in the city of Moncton. The attendance was good and the quality of the birds on exhibition was the best since the inception of the show. Judge Geo. Robertson, Ottawa, placed the awards.

C. cock; h. hen; r. cockerel; p. pullet.

White Wyandottes—Samuel Steeves, 1c, 3h, 1 and 2r, 1 and 2p, 1 pen; Maritime Poultry Supply Co., 2c; Wm. Wilson, 3c, 3h; Jas. F. Crockett 2h, 3r, 3p.

Silver Laced Wyandottes—All prizes to S. E. McKie.

Columbian Wyandottes—Maritime Poultry Supply Co.

Partridge Wyandottes—Parkside Poultry Yards.

Golden Wyandottes—Hartland Poultry Yards, 1c, 1h, 2r, 1p; Maritime Poultry Supply Co., 1r, 2p; Duncan Brace, 2c, 2 and 3 h, 3r, 3p.

Buff Wyandottes—Hartland Poultry Yards, 1c, 2h; Alex Donald, 2c, 1 and 3h, 1 and 2r.

A. O. V. Wyandottes—Maritime Poultry Supply Co.

Barred Plymouth Rocks—Parkside Poultry Yards, 1c, 3h, 2r, 2p; Watson Lutz, 1c, 1 and 2h, 1 and 3r, 1 and 3p; 1 and 2 pullet mating pen; 1 and 3 cockerel mating pen; Wm. A. Balser, 2 cockerel mating pen.

White Plymouth Rocks—All prizes to Watson Lutz.

Buff Plymouth Rocks—John Stewart.

S. C. White Leghorns—Odbur James, 1c, 2 and 3h, 1 and 2r, 1 and 2p; Maritime Poultry Supply Co., 2c, 1h, 3r, 3p; Jos. J. Landry, 3c.

R. C. White Leghorns—N. J. Govang, 1 and 2c, 1 and 2h, 3r, 1 and 3p; Hartland P. Yards, 2c, 3h, 1r, 2p; Maritime Poultry Supply Co., 2r.

S. C. Buff Leghorns—Alex Donald, 1c, 3h, 1r, 2p; Maritime P. S. Co., 1 and 2h, 2 and 3r, 1p.

R. C. Buff Leghorns—Maritime P. S. Co.

S. C. Brown Leghorns—Hartland P. Yds., 1h, 1p; Maritime P. S. Co., 3h, 2r; W. J. Major, 1r, 2p.

R. C. Brown Leghorns—Hartland P. Yds., all prizes with the exception of 2nd on cockerel, which went to Maritime P. S. Co.

S. C. Rhode Island Reds—Maritime P. S. Co.

R. C. Rhode Island Reds—Hartland P. Yds., 1c, 2h, 2r, 3p; William Wilson, 2c, 1h; Mrs. Jordan Steeves, 1r, 1 and 2p; Parkside P. Yds., 3r.

Buff Orpingtons—Watson Lutz, 1c, 1h; Hugh Jardine Jr., 2c, 1 and 2r, 1 and 3p; John Stewart, 3h, 3r.

Black Orpingtons—Geo. McEachern, 1c, 1 and 2h; Parkside P. Yards, 1p.

White Orpingtons—Watson Lutes, 1h, 1r, 1p; Maritime P. S. Co., 2h, 2r.

Partridge Cochins—Partick Scott, 1c, 3p; Edward Day, 2c, 1 and 3h, 1 2p; Hartland P. Yards, 3c, 2h.

Buff Cochins—Hartland P. Yds., 1c; W. A. Balser, 2c, 1, 2 and 3h, 1 and 2r, 1, 2 and 3p; D. D. Leger, 3c.

A. O. V. Cochins—W. A. Balser.

Dorkings—All prizes to Harry Day.

S. C. Black Minorcas—R. B. Stewart, 1 and 3c, 2 and 3h, 2r, 1, 3 and 4p; Alex Donald, 2c, 3r; Arthur E. Stone, 1 and 4h, 1r, 2p.

R. C. Black Minorcas—Hartland P. Yards, 1c, 1h, 1r, 1p; Arthur Morrell, 2h, 2r.

A. V. White Minorcas—Clifford Moller, 1c, 1h; Hartland P. Yards, 2h.

Black Spanish—Hartland P. Yards.

Blue Andalusians—F. B. Chapman, 1c, 1 and 2r, 1, 2 and 3p; Geo. McEachern, 1h, 3r.

Red Caps—Hartland P. Yds.

Pencilled Hamburgs—Hartland P. Yds.

Black Hamburgs—Hartland P. Yds.

Spangled Hamburgs—Geo. McEachern, 1c, 1 and 2h, 1p; N. J. Govang, 2c, 1r, 2p; Hartland P. Yards, 3c, 3 h, 3r, 3p; J. H. Ward, 2r.

Black Langshans—Chas. H. Smith, 1c, 1 and 3h, 1 and 2r, 2 and 3p; Clifford Moller, 2 and 3c, 2h; Hartland P. Yds., 3r, 1p.

Houdans—All prizes with the exception of 1st on cockerel, which went to Maritime P. S. Co., went to Edward Day.

Polands—Harry Day, 1c, 1 and 2h; William Wilson, 2c; J. G. Jones, 3h; O. J. Taylor, 3c; Hartland P. Yards, 1p.

Light Brahmas—Chas. H. Smith, 1c, 1 and 3h, 2r, 3p; C. Moller, 2c; Hartland P. Yards, 3c, 2h; Harry Day, 1r, 1p.

Dark Brahmas—Harry Day, 1 and 3c, 1 and 3h; Hartland P. Yds., 2c, 2h, 1r, 1p.

Games, B. B. Red—Hartland P. Yds., 1c, 1h; O. J. Taylor, 2c, 2 and 3h, 1 and 2r, 1p.

Game, Indian Cornish—Wm. Wilson, 1c; J. H. Ward, 2c, 2h; Hartland P. Yds., 3c, 1 and 3h, 1r, 1p.

Game, Indian White—Cifford Moller.

Game, Bantam, B. B. Red and O. V.—J. E. McEachern.

Game, Bantam, Red Pyle—Alex Donald.

Bantams, Cochin Black—Wm. Wilson, 1c; Maritime P. S. Co., 2c; Chas. H. Smith, 3c.

Bantams, Cochin Buff—Maritime P. S. Co., 1c, 2h, 1p; Alex Donald, 2c, 1h, 2r, 3p; Chas. H. Smyth, 1r, 2p.

Bantams, Cochin, White—Maritime P. S. Co., 1c, 1h; Chas. H. Smyth, 2c, 2h, 1r, 1p.

Bantams, R. C. White—Maritime P. S. Co.

Bantams, R. C. Black—Maritime P. S. Co., 1c, 1h; J. H. Ward, 1r, 1p.

Bantams, Seabright—J. H. Ward, 1c, 5r, 1p; Maritime P. S. Co., 2r, 2p.

Bantams, Japanese—Maritime P. S. Co.

Silkies—Maritime P. S. Co.

UTILITY POULTRY.

White Wyandottes—F. P. McFarlane, 1c, 1h, 1r, 2p; Allison Lutz, 1p.

Rhode Island Reds—Mrs. Jordan Steeves.

Barred Plymouth Rocks—Allison Lutz, 1c, 1h, 3r, 1 and 2p; Aubrey Lutz, 3h, 1 and 2r, 3p.

Orpingtons—Allison Lutz.

UTILITY BREEDING PENS.

Wyandottes—1, Jos. J. Stockford; 2, F. B. McFarlane.

Plymouth Rocks—1, Allison Lutz; 2, Aubrey E. Lutz.

TURKEYS, GEESE, DUCKS.

Bronze Turkey—M. H. Parlee, 1c, 1h, 1r, 1p.

Turkeys, A. O. V.—Maritime P. S. Co.

Geese, Tolouse—Hartland P. Yds., 1 aged gander, 1 aged goose, 1 youkg gander, 2 young geese; J. Titus Barnes 2 young gander, 1 young pullet; D. D. Leger, 3 young gander, 3 young geese.

Geese, Embden—Hartland P. Yds., 2, aged gander, 3, aged goose, 1, young gander and goose; J. Titus Barnes, 1, aged gander, 1 and 2, aged goose.

Geese, A. O. V.—Hartland P. Yds., 2, aged gander and goose, 1, young gander and goose; Maritime P. Supply Co., 1, aged gander and goose; J. Titus Barnes, 2 young gander and goose.

Ducks, Pekin—Maritime P. S. Co., 1 and 2, aged drake and duck; 1 and 2 young drake and 1, 2 and 3 young duck; J. Titus Barnes, 3, young drake, 3, aged drake; M. H. Parlee, 2, aged gander, 3, aged goose, 1, young gander and goose; J. Titus Barnes, 1, aged gander, 1 and 2, aged goose.

Ducks, Indian Runner—J. T. Barnes, 1, young drake and duck, 3, aged drake and duck; Maritime P. S. Co., 2, aged drake and duck, 3, young drake and duck; Hartland P. Yds., 1, aged drake and duck, 2, young duck.

Ducks, Rouen—Hartland P. Yds., 1, aged drake, young drake and young duck. J. Titus Barnes, 2, young drake and duck.

Ducks, A. O. V.—Hartland P. Yds. Silver Cup, donated by Mr. J. W.

Progressive Jones says:

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Scores, yes hundreds, of my farmer friends have got bumper crops from soils they thought were worn out. They now swear by

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One of them, A. Robinson of Rosemount, tells me that he used Harab Fertilizers on potatoes and turnips without any manure on the land which was very old and poor. He got a bumper crop and is more than satisfied. Another man, D. J. Ferguson, got a grand crop from very light land that had been hard run by tenants.

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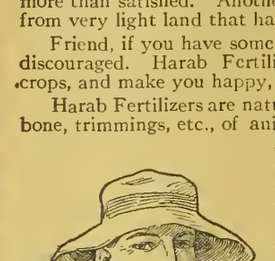

The cost of using Harab Fertilizers is small. The results are big. Write to The Harris Abattoir Co. for their booklet. It gives the information you want to know.

Yours for bumper crops
Progressive Jones

The Harris Abattoir Co., Limited, Toronto

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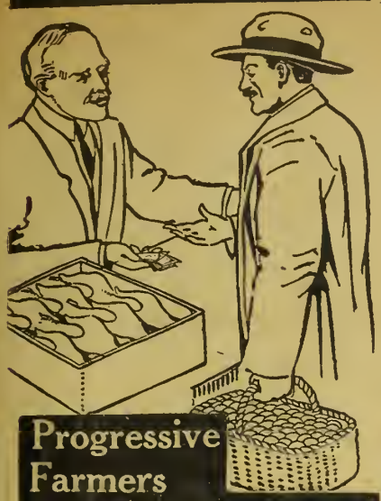

Progressive Farmers Make Handsome Profits from Poultry

THE stoutest advocates of Poultry-Raising on the farm are the progressive farmers who have investigated the Peerless Way. These men are alive to the fact that Canada does not produce one third of the poultry and eggs consumed in this country, and that handsome profits go across the border to the American farmer who is called upon to supply the shortage.

You, Mr. Farmer, can have this profit, plus the amount spent in Customs duties and long freight hauls importing eggs and poultry from the States, and you will always have an eager market waiting to buy up all the poultry and eggs you can raise.

Read what this British Columbia farmer says:

Greenwood, B.C., Dec. 1, 1913.

"I am pleased to report a good season for the past summer with the poultry . . pullets are just commencing to lay. Eggs hatched well and I raised practically all in the Brooder and only lost (1) chick out of 500 hatched. I sold 20 dozen baby chicks and am keeping over 150 pullets, as it is the egg trade that I am working up.

"Since last September, eggs have been selling here at 70c. per doz., and at present they are bringing 80c. and are very scarce too."

(Sgd.) A. R. Royce.

The Peerless Way Makes Poultry Pay

The whole idea of the Peerless Way of Poultry Raising is to raise the greatest number of the strongest chickens at the least outlay of money and with the least expenditure of time. We know that a farmer's regular duties do not leave him much time to look after chickens, so we have bent all our energies to perfecting a system whereby a farmer can take care of 400 or 500 chickens the Peerless Way in less time than he can look after 30 or 40 the old way.

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PEMBROKE ONTARIO CANADA

Y. Smith for best Cock, Hen, Cockerel, Pullet, White Wyandottes—Won by Samuel Steeves.

Silver Cup, donated by Mr. J. F. Edgett, for best Cock, Hen, Cockerel, and Pullet, Barred Rocks—Won by Watson Lutz.

Silver Cup, donated by Master Lloyd Edgett, for best Cock, Hen, Cockerel and Pullet. Black Minorcas, won by R. R. Stewart.

Silver Cup, donated by Mr. J. B. Toombs, for best Cock, Hen, Cockerel and Pullet, S. L. Wyandottes—won by S. E. McKie.

Silver Cup, donated by Mr. H. P. Brewster, for best Cock, Hen, Cockerel and Pullet, S. C. White Leghorns—won by Odbur James.

Silver Cup, donated by Mr. A. A. Tuttle, for best Cock, Hen, Cockerel and Pullet, any variety—Won by Samuel Steeves.

Silver Cup, donated by Mr. E. A. Reilly, for best Cock, Hen, Cockerel and Pullet, any variety Leghorns except S. C. White—Won by Hartland Poultry Yards.

Silver Cup, donated by Mr. F. W. Summer, for best display of water Fowl—Won by Hartland Poultry Yds.

Silver cup, donated by Mr. J. H. Brown, jeweler, for best Cock, Hen, Cockerel and Pullet. Asiatic Breeds—Won by Wm. A. Balser.

Silver Cup, donated by Dominion Poultry Guide, Ottawa, Ont., for best Cock, Hen, Cockerel, and Pullet, utility classes—Won by Allison Lutz.

Silver Cup, donated by the Dominion Poultry Guide, Ottawa, for best Cock, Hen, Cockerel and Pullet, Rhode Island Reds—Won by Hartland Poultry Yards.

Silver Cup, donated by Maritime Poultry Supply Co., for best pair Cochins Bantams—Won by William Wilson.

Box Spearmint Gum and Doll, donated by Mr. R. A. Knight, fot best Bantam—Won by Maritime Poultry Supply Co.

Ten Rod Roll Fencing, donated by the Pittsburg Perfect Fence Co., of Hamilton, Ont., for best utility breeding pen—Won by Allison Lutz.

White Wyandotte Male Bird, for best Utility Pullet, White Wyandotte donated by Marshall & Marshall—Won by Allison Lutz.

White Wyandotte Male Bird, for best Utility Breeding Pen, White Wyandottes, donated by Marshall & Marshall—Won by Jos. J. Stockford.

Picture, donated by Mr. B. E. Smith, for best Cockerel and Pullet, Cochins A. V.—Won by William A. Balser.

Ton of Coal, donated by Mr. W. McK. Weldon, for best Cock and Hen, Black Langshans—Won by Chas. H. Smyth.

Box Cigars, donated by Mr. O. B. Read, for best Cockerel and Pullet, White or Buff Rocks—Won by Watson Lutz.

Clock, donated by Mr. E. H. Prine, jeweler, for best Cockerel and Pullet, S. C. Black Minorcas—Won by R. B. Stewart.

Pair Pants, donated by Mr. J. D. LeBlanc, for best Cockerel and Pullet, Barred Plymouth Rocks—Won by Watson Lutz.

Silver Spoon, donated by Messrs. Gross & Dawson, for 4 best birds, Hamburgs, A. V.—Won by Geo. McEachern.

Box Cigars, donated by Mr. W. S. Smith, for best breeding pen, Leghorns, any variety—Won by Odbur James.

Box Cigars, donated by Mr. Joseph White, for best Cockerel and Pullet, Wyandottes, except Silver and White—Won by Parkside Poultry Yards.

Pair Gloves, donated by Mr. Aphie Robichaud, for best Breeding Pen, Class 98—Won by Watson Lutz.

Box Fancy Biscuit, donated by J. A. Marven, Ltd., for best Breeding

(Continued on page 392)

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DAVID MAXWELL & SONS, St. Mary's, Ontario

Adjustable handle—moveable to centre, right or left, as desired.

Strong light steel frame.
All roller bearings. (not ball)
Dark oak finish with gold bronze hoops.
Sold in eight sizes.

2

THE HORSE.

The Development of Horses.

Horses continue to grow in height up to the age af five, but they do not, broadly speaking, reach full maturity until about six and a half years old, although something depends upon the class of horse, as horses of Shire or other heavy cart breed mature more quickly and become set at an earlier age than those belonging to the light-legged division. It is often reckoned that a horse has arrived at maturity when it becomes "full-mouthed," as it is termed, but that is quite wrong, for at that stage it is still some way off being properly matured. Horses get their ;'full mouth" when the last pair of milk teeth has been shed and all the permanent incisor teeth are up, this occutting when they are between four and a half and nearly five years old, the exact time when the corner permanent incisors displace the corresponding milk teeth varying somewhat with different animals. Those which are well developed and were born early in the season, and have been generously fed during colthood, generally change their teeth some months earlier than horses that were more backward in their growthi etc., as foals and yearlings. In extreme cases horses may be as much as six months later than others in shedding their milk teeth. Those that change their milk teeth comparatively early are commonly said to have a forward mouth. In the gelding the tushes also have begun to protrude when the permanent corner incisors make their appearance. The last are, however, only just through the gums when a young horse establishes its claim to be described as full mouthed and its mouth, as regards the teeth, is not nearly "full" or perfect until the animal is five or five off, as its takes some time for the upper and lower corner teeth to meet after their eruption, and to come into wear. On becoming full-mouthed, gelding and entires cease to be colts, and are henceforth known as horses, while fillies are at this stage designated mares.

THE INFLUENCE OF FEEDING ON GROWTH.

According to investigations that have at various times been made, it appears that roughly from three-fifths to three-quarters of a horse's total growth is made by the foal in the first year of its existence. Of the remaining fifth or quarter share of the growth about half is completed during the second year, while the rest is distributed over the tnird, fourth, and fifth years. These facts indicate how important it is that foals and yearlings should be liberally fed and well looked after, in order to promote size and development. Two and three-year-olds do not require so much care, as most of the growing is done by this time, and they can do with a relatively less nutritious diet, especially if they have been well done during foalhood and the yearling stage. Certainly it is only during the first two years, and particularly in the foal, that the rate of growth can be perceptibly influenced by the breeder by dint of generous feeding and comfortable housing in winter. After that but very little influence can be exerted in this direction, and, under average conditions, probably none at all after a colt is over two and a half years old, excepting in respect of bringing about more thickening and promoting muscular development. The legs of a colt grow very little in length after the end of t first year, as one can readily understand, in view of the fact that the foal is born with such disproportionately long legs. The actual growth made by the limbs after the foal is twelve months old, as regards their length, is only about half an inch or less, as demonstrated in some investigations relating to the rate of growth in the horse which several years ago were carried out by Professor Cossar Ewart. But they increase considerably in thickness.

APPROACHING MATURITY

As young horses approach maturity they thicken or furnish increasingly, becoming broader or more set in shape, and filling out in all directions, while they also "let down" very considerably, their body coming closer to the ground. This furnishing and letting down process alters them a great deal, ano greatly improves their appearance. In sizing up the make and shape of three and four-year-old horses one should always make plenty allowance for the improvement which they will still undergo as the result of filling out and lett ng down, a fact which is frequently overlooked. The improvement made in this direction is, to speak broadly, most marked between four and five years old, but it will very commonly continue until the animal is six off. Horses, more especially, are found to muscle up a good deal after they have completed their fifth year, which serves to give them a stouter appearance. Young horses under five that are leggy, or light in the middle-piece, or narrow in their quarters, may, in particular, be expected to improve in their shape when they have furnished more and let down. Sometimes they will improve out of all recognition in such cases. A thin neck, too, is a fault which one may reasonably expect a young, immature horse to outgrow as it reaches its prime. To condemn a four or even a five-year-old animal as being an inherently bad doer, and short of constitution, when it is herring-gutted, and will not put on much flesh in response to good feeding, as is frequently done in cases of this kind, is often most premature, for their is, under these circumstances, every chance of the horse gaining normal condition, proving itself a good thriver, and filling out nicely about the flanks and belly when it is a year or two older, as the trouble, as likely as not, is merely a temporary one, due to immaturity. Hand in hand with the outward improvement made by a young horse as it reaches maturity there goes an increasing access of strength and improvement in its working capacity. In fact, horses continue to get stronger and tougher for some while after they have ceased to fill out and improve outwardly, and they do not actually attain to their prime in point of strength and stamina until close on seven years old, this applying, at any rate, in the case of the light breeds.

WHEN IT REACHES ITS PRIME.

It is very generally considered that a horse has reached its prime and found its full strength by the time it becomes six years old, but that is hardly correct, for it is then only beginning to arrive at its prime, and not until they are seven, or nearly so, can horses be reckoned as fully "seasoned," although they may be quite equal to doing a full share of constant work already a year earlier

A GREAT SCANDAL

Big Efforts to Hush the Matter Up--- The Truth Out At Last . . .

Erom exhaustive enquiries made during the last few months we find there have been a number of patients kept under conditions which to say the least of it, is a great scandal.

We trust our readers will bear with us for a moment. The facts of the matter are these, there have been some thousands of cases where horses have been suffering from distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in some cases no attempt has been made to relieve their sufferings, their owners either being indifferent, or where they have thought at all about their animals have had recourse to cheap so-called remedies, of which there are unfortunately a few on the market, but which, while some may give a little relief temporarily, cannot from the nature of their ingredients give permanent relief or effect a cure.

It is high time in our opinion that something should be done to bring this state of things to an end, and with this in view we are about to take drastic action, to bring before every owner of horses that wonderful remedy known to all as "Dr. J. Woodbury's Horse Liniment,"

This remedy has been used for years throughout the Dominion during which time it has been used in hundreds of cases, comprising distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in no case to our knowledge, has "Dr. J. Woodbury's Liniment" failed to first relieve and then to cure the above mentioned complaints.

Every owner of horses should, if they have not already got a bottle of this Liniment in their stable immediately procure one. It is the only guaranteed remedy we know of, and it is a cheap form of insurance, and it will be found, that, if used immediately any symptoms of any of the above diseases appear, to give immediate relief, and probably save tremendous expense, probably the life of the horse as well.

Dr. J. Woodbury's Horse Liniment is sold by Stores and Chemists throughout Canada, but should your Storekeeper be out of stock he will procure it for you, and if you should find any trouble in getting a bottle, don't delay for an instant in mailing 25 cents and a bottle will be immediately forwarded you.

Sole Owners and Manufacturers:

FRASIER, THORNTON & CO., LTD.

Cookshire, Quebec, Canana.

Lump Jaw

The first remedy to cure Lump Jaw was

Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

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Most complete veterinary book ever printed to be given away. Durably bound, indexed and illustrated. Write us for a free copy.

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VIGORA

The remedy without equal for all horse troubles and especially coughing, broken wind ond skin diseases.

Mr. B. C. Pelletier of St. Roch, Quebec, proves it's value when he writes:

"For two years my horse was troubled with broken wind. I have used VIGORA, and wish to say that the horse is now completely cured. I have pleasure in recommending this remedy as the best psssible to be obtained.

Ask for circulars and full information. Prepared by

J. B. MORIN, Druggist and Chemist,
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Warranted to Give Satisfaction.

Gombault's

Caustic Balsam

Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

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Make Them Sound

A lame horse is a dead loss. Spavin, Curb, Splint, Ringbone, Swollen Joints and Bony Growths won't cure themselves. Yet you can cure these troubles and make your lame horse sound with

Kendall's Spavin Cure

just as thousands have done, and are doing today.

In the 40 years that this world's famous remedy has been on the market, Kendall's Spavin Cure has saved millions of dollars to horse owners.

Mounds, P.O., Olds, Alta.

"I have used Kendall's Spavin Cure for a number of years with great success, and I think it can't be beaten as an all-around stable liniment for Kicks, Strains, Swelling of all kinds, Ringbone and Spavin".

ARTHUR FLETCHER.

No telling when you will need it. Get a bottle now—$1—6 for $5.

Our book—"A Treatise On The Horse"—free at your druggists or write us 49

Dr. B. J. KENDALL CO., Enosburg Falls, Vt.

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TRADE MARK REG. U.S. PAT. OFF

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain: Stops Spavin Lameness. Allays pain. Does not Blister, remove the hair or lay up the horse. $2.00 a bottle, delivered. **Book 1 K free.**

ABSORBINE, JR., the antiseptic liniment for mankind. For Synovitis, Strains, Gouty or Rheumatic deposits, Swollen, Painful Varicose Veins. Will tell you more if you write. $1 and $2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P.D.F. 124 Lymans Bldg., Montreal, Can.

Their prime continues until they are nine, as regards their innate working powers and strength, assuming that they remain sound, and that they are not prematurely worn out by excessive severe work, as happens so commonly with horses used for town work, nor that they have been overtaxed in their youth. At nine years old a horse will, of course, have lost some of its erstwhile freshness of appearance, and its legs will, in all probability, show the effects of wear to a greater or lesser extent, so that it no longer looks at its best, despite being so, while its market value will also have depreciated, the last, broadly speaking, being highest when horses are from four to six years old. The four-year-old has the whole of its future before it, hence the high value of horses at this age in the market. After nine years old the working powers begin gradually to decline, though perhaps not very perceptibly so for a couple of years. Horses, however, vary widely in regard to the age up to which they will retain their usefulness for work fairly unimpaired, and some will last years longer than others, all according to their constitution and wearing capacity, while much in regard to this question also depends upon the nature of the work they are used for.

Fith Maritime Horse Show

The Maritime Horse Show, which will be held at Amherst, April 1st, 2nd and 3rd, promises to be one of the best shows ever held under the auspices of the management. The prize list is practically the same as that of last year. The prize lists are now ready for distribution and those desiring them should address F. L. Fuller, Truro, or any of the Directors of the Maritime Stock Breeders' Association.

Horses That Sell Well.

A breeder and grower of horses has these sensible suggestions in a letter to American Farming. He says:

Many farmers think that there is no money in raising horses. Yet there is constant demand in the markets at remunative prices for horses of a definite type. Last summer I had opportunity to talk with a farmer on this very point. He was near an excellent horse market, and on his farm he was producing an abundance of the finest horse feed. But the buyers did not want his horses. The trouble was that they were neither draft horses nor road horses; neither express horses nor coach horses. They were nondescripts, without the right form and weight for any particular purpose. This farmer had started with a number of fairly good mares, but had tried first one stallion and then another without any definite idea in mind as to breed. The natural results was that the colts showed a mixture of incongrous tendencies. All that could be said of them was that they were horses. The modern market will not buy nondescript horses. They must be horses of a different class—draft horses, roadsters, etc.—with the proper form, size and action to admit them to that class. By consulting horse buyers the farmer can easily learn what the market requirements are, and can breed horses that meet these requirements. Then it will be found that there is money in raising horses. But there is surely no use in producing a mongrel horse when no one wants it.

There are several ways in which horses may be improved by intelligent selection and breeding, such as the farmer adopts in securing a herd of cows noted for their milk yield or a flock of sheep to produce winter lambs. I once had occasion to observe a company of cavalry horses that had been selected for their rapid walking gait. These horses, without urging, would easily make five miles an hour on a walk. I had previously thought my saddle horse was a fast walker, but found that he had to be trotted at frequent intervals to keep up with the procession. This seemed to be an interesting point, and I accordingly timed several ordinary saddle horses. They made less than four mile per hour. Now these are lines of work in which a fast walking gait would add greatly to the value of a horse. The walking speed of a horse can be increased by breeding just as readily as the trotting or running speed. A fast walker is more in demand and is good for more purposes than a fast runner. Horses are just as susceptible to improvement by breeding as other animals are. It will therefore pay farmers who are fitted for this work to breed up a line of horses with a fast walk. Don't be content with present standards, but raise them.

PEERLESS - PERFECTION

The Fence That's Locked Together

The attacks and onslaughts of animals can't faze it. It's strong, yet springy. Manufactured from Open Hearth steel galvanized wire. When made by this process, impurities are burned out of the metal, removing one of the chief causes of rapid corrosion or rusting.

Read What Others Say

Gentlemen:—There is no fault to find with your fence. The fencing I put up 4 years ago is just as good as the day I put it up, showing no sign of rust, and giving good satisfaction. The Peerless stands the test better than any other make that I have seen. Yours truly, Spring Brook. JOHN MASON.

Gentlemen:—I have been in the fence business for ten years, and I find no fence like the Peerless, both for galvanizing and workmanship. I consider it equal, if not superior to any other make of fence on the market today. I have always found the Banwell-Hoxie Fence Co. people of their word. Yours respectfully, Glenburnie, Ont. MACK. LILLIS.

Send for our latest catalog. Ask about our poultry fencing and ornamental gates.

Agencies nearly everywhere. Agents wanted in open territory.

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Fith Annual

MARITIME HORSE SHOW

will be held at

AMHERST, NOVA SCOTIA

. . . on . . .

APRIL 1, 2, 3, 1914

Arrangements are being made to have a larger and better show than ever before.

F. L. FULLER, Sec'y - - Truro, N. S.

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Bickmore's Farm Account Book will be sent free to any farmer who will tell us who and where he is. This book is arranged to keep all accounts in simple form—more simple and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborers' time record; and section for personal accounts. **64 pages, for ink or pencil.** Not a cheap affair. Its quality is in keeping with **BICKMORE'S** Gall Cure, a soothing, healing salve, the old-time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. **Bickmore's** Gall Cure heals and cures **Harness and Saddle Galls; Rope Burn, Cuts, Scratches, Grease Heel, etc.** You don't have to lay the horse off. **Bickmore's cures while the horse works.** Great thing for sore teats in cows. The work-horse trade mark on every box. None genuine without it. Be sure to ask for **Bickmore's** Gall Cure when you go to buy and do not take a substitute. Farm Account Book is ready. Send today.

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. adies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

I felt the utmost sympathy for Mr. and Mrs. Micawber in this anxious extremity, and said as much to Mr. Micawber, who now returned: adding that I only wished I had money enough to lend them the amount they needed. Mr. Micawber's answer expressed the disturbance of his mind. He said, shaking hands with me, "Copperfield you are a true friend; but when the worst comes to the worst, no man is without a friend who is possessed of shaving materials." At this dreadful hint Mrs. Micawber threw her arms round Mr. Micawber's neck and entreated him to be calm. He wept; but so far recovered, almost immediately, as to ring the bell for the waiter, and bespeak a hot kidney pudding and a plate of shrimps for breakfast in the morning.

When I took my leave of them, they both pressed me so much to come and dine before they went away that I could not refuse. But, as I knew I could not come next day, when I should have a good deal to prepare in the evening, Mr. Micawber arranged that he would call at Doctor Strong's in the course of the morning (having a presentiment that the remittance would arrive by that post), and propose the day after, it would suit me better. Accordingly I was called out of school next forenoon, and found Mr. Micawber in the parlor; who had called to say that the dinner would take place as proposed. When I asked him if the remittance had come, he pressed my hand and departed.

As I was looking out of the window, that same evening, it surprised me, and made me rather uneasy, to see Mr. Micawber and Uriah Heep walk past, arm in arm: Uriah humbly sensible of the honor that was done him. and Mr. Micawber taking a bland delight in extending his patronage to Uriah. But I was still more surprised, when I went to the little hotel next day at the appointed dinner-hour, which was four o'clock, to find, from what Mr. Micawber said, that he had gone home with Uriah, and had drunk brandy-and-water at Mrs. Heep's.

"And I'll tell you what, my dear Copperfield," said Mr. Micawber, "your friend Heep is a young fellow who might be attorney-general. If I had known that young man, at the period when my difficulties came to a crisis, all I can say is, that I believe my creditors would have been a great deal better managed than they were."

I hardly understood how this could have been, seeing that Mr. Micawber paid them nothing at all as it was; but I did not like to ask. Neither did I like to say tnat I hoped he had not been too communitive to Uriah; nor to inquire if they had talked much about me. I was afraid of hurting Mr. Micawber's feelings, or, at all events, Mrs. Micawber's, she being very sensitive; but I was uncomfortable about it, too, and often thought about it afterwards.

We had a beautiful little dinner. Quite an elegant dish of fish; the kidney end of a loin of veal, roasted; fried sausage-meat; a partridge and a pudding. There was wine, and there was strong ale; and after dinner Mrs. Micawber made us a bowl of hot punch with her own hands.

Mr. Micawber was uncommonly convivial. I never saw him such good company. He made his face shine with the punch, so that it looked as if it had been varnished all over. He got cheerfully sentimental about the town, and proposed success to it: observing that Mrs. Micawber and himself had been made extremely snug and comfortable there, and that he never should forget the agreeable hours they had passed in Canterbury He proposed me afterwards; and he, and Mrs. Micawber, and I, took a review of our past acquaintance, in the course of which, we sold the property all over again. Then I proposed Mrs. Micawber; or, at least, said modestly. "If you'll allow me, Mrs. Micawber, I shall now have the pleasure of drinking your health, ma'am." On which Mr. Micawber delivered an eulogium on Mrs. Micawber's character, and said she had ever been his guide, philosopher, and friend, and that he would recommend me, when I came to a marrying time of life, to marry such another woman, if such another woman could be found.

As the punch disappeared, Mr. Micawber became still more friendly and convivial. Mrs. Micawber's spirits becoming elevated, too, we sang "Auld Lang Syne." When we came to "Here's a hand, my trusty frere," we all joined hands round the table; and when we declared we would take a right gude Willie Waught," and hadn't the least idea what it meant, we were really affected.

In a word, I never saw anybody so thoroughly jovial as Mr. Micawber was, down to the very last moment of the evening, when I took a hearty farewell of himself and his amiable wife. Consequently, I was not prepared, at seven o'clock next morning, to receive the following communication, dated half-past nine in the evening; a quarter of an hour after I had left him:—

"My dear young friend,

"The die is cast—all is over. Hiding the ravages of care with a sickly mask of mirth, I have not informed you, this evening, that there is no hope of the remittance! Under these circumstances, alike humiliating to endure, humiliating to contemplate, humiliating to relate, I have discharged the pecuniary liability contracted at this establishment, by giving a note of hand, made payable fourteen days after date, at my residence, Pentonville, London. When it becomes due, it will not be taken up. The result is destruction. The bolt is impending, and the tree must fall.

"Let the wretched man who now addresses you, my dear Copperfield, be a beacon to you through life. He writes with that intention, and in that hope. If he could think himself of so much use, one gleam of day might, by possibility, penetrate into the cheerless dungeons of his remaining existence—though his longevity is, at present, to say the least of it, extremely problematical.

"This is the last communication, my dear Copperfield, you will ever receive

"From the beggared outcast,

WILKINS MICAWBER."

I was so shocked by the contents of this heartrending letter, that I ran off directly towards the little hotel with the intention of taking it on my way to Dr. Strong's and trying to soothe Mr. Micawber with a word of comfort. But, half way there, I met the London coach with Mr. and Mrs. Micawber up behind; Mr. Micawber the very picture of tranquil enjoyment, smiling at Mrs. Micawber's conversatian, eating walnuts out of a paper bag, with a bottle sticking out of his breast pocket. As they did not see me, I thought it best, all things considered, not to see them. So, with a great weight taken off my mind, I turned into a by-street that was the nearest way to school, and felt, upon the whole, relieved that they were gone: though I still liked them very much, nevertheless.

CHAPTER XVIII.

A Retrospect.

My school-days! The silent gliding out of my existence—the unseen, unfelt progress of my life—from childhood up to youth! Let me think, as I look back upon that flowing water, now a dry channel overgrown with leaves, whether there are any marks along its course, by which I can remember how it ran.

A moment, and I occupy my place in the Cathedral, where we all went together, every Sunday morning, assembling first at school for that purpose. The earthy smell, the sunless air, the sensation of the world being shut out, the resounding of the organ through the black and white arched galleries and aisles, are wings that take me back, and hold me hovering above those days, in a half-sleeping and half-waking dream.

I am not the last boy in the schooll I have risen in a few months over several heads. But the first boy seems to me a mighty creature, dwelling afar off, whose body height is unattainable. Agnes says "No," but I say "Yes," and tell her that she little thinks what stores of knowledge have been mastered by the wonderful Being, at whose place she thinks I, even I, weak aspirant, may arrive in time. He is not my private friend and public patron, as Steerforth was; but I hold him in a reverential aspect. I chiefly wonder what he'll be, when he leaves Dr. Strong's and what mankind will do to maintain any place against him.

But who is this that breaks upon me! This is Miss Shepherd, whom I love.

Miss Shepherd is a boarder at the Misses Nettingall's establishment. I adore Miss Shepherd. She is a little girl, in a spencer, with a round face and curly flaxen hair. The Misses Nettingalls' young ladies come to the Cathedral too. I cannot look upon my book, for I must look upon Miss Shepherd. When the choiresters chaunt, I hear Miss Shepherd. In the service I mentally insert Miss Shepherd's name I put her in among the Royal family. At home, in my own room, I am sometimes moved to cry out, "Oh, Miss Shepherd!" in a transport of love.

For some time, I am doubtful of Miss Shepherd's feelings, but, at length, Fate being propitious, we meet at the dancing school. I have Miss Shepherd for my partner. I touch Miss Shepherd's glove, and feel a thrill go up the right arm of my jacket, and come out at my hair. I say nothing tender to Miss Shepherd but we understand each other. Miss Shepherd and myself live but to be united.

Why do I secretly give Miss Shepherd twelve Brazil nuts for a present I wonder? They are not expressive of affection, they are difficult to pack into a parcel of any regular shape, they are hard to crack, even in room doors, and they are oily when cracked; yet I feel they are appropriate to Miss Shepherd. Soft, seedy biscuits, also, I bestow upon Miss Shepherd; and oranges innumerable. Once, I kiss Miss Shepherd in the cloak room. Ecstasy! What are my agony and indignation next day, when I hear a flying rumor that the Misses Nettingall have stood Miss Shepherd in the stocks for turning in her toes.

Miss Shepherd being the one pervading theme and vision of my life, how do I ever come to break with her? I can't conceive. And yet a coolness grows between Miss Shepherd and myself. Whispers reach me of Miss Shepherd having said she wished I wouldn't stare so, and having vowed a preference for Master Jones—for Jones! a boy of no merit whatever! The gulf between me and Miss Shepherd widens. At last, one day, I met the Misses Nettingalls' establishment out walking. Miss Shepherd makes a face as she goes

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

WOMAN IN TERRIBLE STATE

Finds Help in Lydia E. Pinkham's Vegetable Compound.

Cape Wolfe, Canada.—"Last March I was a complete wreck. I had given up all hope of getting better or living any length of time, as I was such a sufferer from female troubles. But I took Lydia E. Pinkham's Vegetable Compound, and today I am in good health and have a pair of twin boys two months old and growing finely. I surprised doctors and neighbors for they all know what a wreck I was.

"Now I am healthy, happy and hearty, and owe it all to Lydia E. Pinkham's remedies. You may publish this letter if you like. I think if more women used your remedies they would have better health."—Mrs. J. T. Cook, Lot No. 7, Cape Wolfe, P.E.I., Canada.

Because your case is a difficult one, and doctors having done you no good, do not continue to suffer without giving Lydia E. Pinkham's Vegetable Compound a trial. It surely has remedied many cases of female ills, such as inflammation, ulceration, displacements, tumors, irregularities, periodic pains, backache, and it may be exactly what you need.

The Pinkham record is a proud and peerless one. It is a record of constant victory over the obstinate ills of women—ills that deal out despair. It is an established fact that Lydia E. Pinkham's Vegetable Compound has restored health to thousands of such suffering women. Why don't you try it if you need such a medicine?

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The CHALLENGE BRAND WATERPROOF COLLARS

No shiny celluloid or hard rubber about "Challenge" Waterproof Collars.

Look like linen—feel like linen—give you the smart, neat appearance of a brand new linen collar.

But are much better for you than linen.

Cleaned in a minute with soap and water —outwear a dozen linen collars.

Sold at all Men's Furnishing and Dry Goods Stores—or send 25c. for sample collar.

Absolutely the best Waterproof Collar made. 7

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We ship on approval to any address in Canada, without any deposit, and allow **10 DAYS' TRIAL.** It will not cost you a cent if you are not satisfied after using bicycle 10 days.

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ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you **Free Postpaid** by return mail. **Do not wait.** Write it **now.**

HYSLOP BROTHERS, Limited
Dept. R TORONTO, Canada

MRS. ALVIN ZINK,
Rose Bay, N. S.

States that she has been cured of

INDIGESTION

and Stomach trouble by the use of

Gates' Invigorating Syrup & Life of Man Bitters

after having been under the care of physicians without receiving benefit.

And although three years have passed has no returning symptoms.

She highly recommends these medicines to her friends and the public.

Sold everywhere at 50c. per bottle, $5.50 per dozen.

by, and laughs to her companion. All is over. The devotion of a life—it seems a life, it is all the same—is at an end; Miss Shepherd comes out of the morning service, and the Royal family know her no more.

I am higher in the school, and no one breaks my peace. I am not at all polite, now, to the Misses Nettingalls' young ladies, and shouldn't dote on any of them, if they were twice as many and twenty times as beautiful. I think the dancing-school a tiresome affair, and wonder why the girls can't dance by themselves and leave us alone. I am growing great in Latin verses, and neglect the laces of my boots. Doctor Strong refers to me in public as a promising young scholar. Mr. Dick is wild with joy, and my aunt remits me a guinea by the next post.

The shade of a young butcher arises like the apparit on of an armed head in Macbeth. Who is this young butcher? He is the terror of the youth of Canterbury. There is a vague belief abroad, that the beef suet with which he anoints his hair gives him unnatural strength, and that he is a match for a man. He is a broad-faced bull-necked young butcher, with rough red cheeks, and ill-conditioned mind, and an injurious tongue. His main use of this tongue, is, to disparage Dr. Strong's young gentlemen. He says, publicly, that if they want anything he'll give it 'em. He names individuals among them (myself included), whom he could undertake to settle with one hand, and the other tied behind him. He waylays the smaller boys to punch their unprotected heads, and calls challenges after me in the open street. For these sufficient reasons I resolve to fight the butcher.

It is a summer evening, down in a green hollow, at the corner of a wall. I meet the butcher by appointment. I am attended by a select body of our boys; the butcher, by two other butchers, a young publican, and a sweep. The preliminaries are adjusted, and the butcher and myself stand face to face. In a moment the butcher lights ten thousand candles out of my left eyebrow. In another moment, I don't know where the wall is, or where I am, or where anybody is. I hardly know which is myself and which is the butcher, we are always in such a tangle and tustle, knocking about upon the trodden grass. Sometimes I see the butcher, bloody but confident; sometimes I see nothing, and sit gasping at my second's knee; sometimes I go in at the butcher madly, and cut my knuckles open against his face, without appearing to discompose him at all. At last I awake, very queer about the head, as from a giddy sleep, anh see the butcher walking off, congratulated by the two other butchers and the sweep and the publican, and putting on his coat as he goes; from which I augur, justly, that the victory is his.

I am taken home in a sad plight, and I have beef-steaks put to my eyes, and am rubbed with vinegar and brandy, and find a great white puffy place bursting out on my upper lip, which swells immoderately. For three or four days I remain at home, a very ill looking object, with a green shade over my eyes; and I should be very dull, but that Agnes is a sister to me, and condoles with me, and reads to me, and makes the time light and happy. Agnes has my confidence completely, always; I tell her all about the butcher, and the wrongs he has heaped upon me; she thinks I couldn't have done otherwise than fight the butcher, while she shrinks and trembles at my having fought him.

Time has stolen on unobserved, for Adams is not the head boy in the days that are come now, nor has he been this many and many a day. Adams has left the school so long, that when he comes back, on a visit to Doctor Strong, there are not many there, besides myself, who know him. Adams is going to be called to the bar almost directly, and is to be an advocate, and to wear a wig. I am surprised to find him a meeker man than I had thought, and less imposing in appearance. He has not staggered the world yet, either: for it goes on (as well as I can make out) pretty much the same as if he had never joined it.

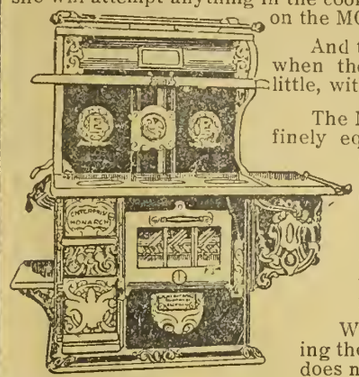
A blank, through which the warriors of poetry and history march on in stately hosts that seem to have no end—and what comes next! I am the head boy, now! I look down on the line of boys below me, with a condescending interest in such of them as bring to my mind the boy I was myself, when I first came there. That little fellow seems to be no part of me; I remember him as something left behind on the road of life —as something I have passed, rather than have actually been—and almost think of him as of some one else.

And tne little girl I saw on the

"THE ENTERPRISE MONARCH"

CANADA'S FINEST STEEL RANGE

inspires the housekeeper with a feeling of confidence and security. With it she will attempt anything in the cooking line, for she knows she can depend on the MONARCH to respond to her needs.



And this in warm weather or extreme cold, when there is much baking to be done or very little, with consequent fuel economy.

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Mail it and get a free set of Catesby's suit or overcoat patterns and be convinced that it is possible to buy a better suit in London, England, for $12.50 than could be bought in Canada for $25.00.

You've heard that clothing is much cheaper and better in England—you know that English fabrics are the finest in the world.

Think, then, of the advantage of securing a suit made of the best English woolens, cut in the latest Canadian, New York or London style (whichever you prefer), and tailored to your individual measure, delivered to your door all duty and carriage charges prepaid, for about half what you would have to pay if you bought it in Canada?

Isn't it worth while then to get our patterns and see what there is in this offer? You can't lose anything by it but you may save a whole lot.

All you need to do is to fill in the coupon and mail it to our Toronto office. By return we'll send our latest Style Book, 72 pattern pieces of fine English suitings, a letter explaining our system of doing business, and a self-measurement chart that is so simple you can't go wrong in taking your own measure.

We will also send you testsmonials from Canadians who at first were as sceptical as you are, but who are now satisfied and regular patrons.

Write now. If you don't want to cut this paper, send a post-card or letter. We'll mail the book and patterns anyway. But to get them **you must mention** Sussex Maritime Farmer.

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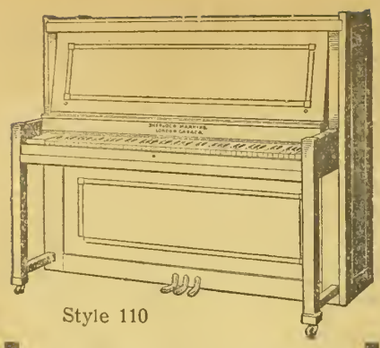
The "BURLINGTON." This shows the most popular style of suit worn by well dressed men in Canada. The materials used are especially selected for this shape of suit. $12.50. Duty free and carriage paid.



Style 110

Few Great Pianos

Most piano makers will tell you that their instruments are the **best** made. Some of them **think** so: Others **merely say** so. But, as a cold, business proposition there are only **a few really great** pianos manufactured **—their hidden parts are identical**—and the

Sherlock - Manning 20th Century Piano

is recognized as one of them. Here is another remarkable fact: A competitor **originated** our slogan. After **studying** our instrument he declared: The Sherlock-Manning is

"Canada's Biggest Piano Value"

You cannot buy a **better** piano than the **Sherlock-Manning** pay what price you will, and when you **do** buy a **Sherlock-Manning** you can **rest assured** that your instrument is

—one of the **few great pianos** made

—that it is **unrivalled in brilliancy of tone.**

—that it is **built to endure**, and YOU save $100, by our **different** and **better** way of doing business.

Don't you think that it would **pay** you well to **consider** our proofs of these claims? Write today for our handsome **Art Catalogue.** And the proofs!

SHERLOCK-MANNING PIANO CO.

(No street address necessary)

London, - - Canada

Minard's Liniment Co., Limited.

Gentlemen,—My daughter, 13 years old, was thrown from a sleigh and injured her elbow so badly it remaineh stiff and very painful for three years. Four bottles of MINARD'S LINIMENT completely cured her and she has not been troubled for two years.

Yours truly,

J. B. LIVESQUE

St. Joseph, P. O., 18th Aug., 1900.

first day at Mr. Wickfield's, where is she? Gooe also. In her stead, the perfect likeness of the picture, a child likeness no more, moves about the house; and Agnes, my sweet sister, as I call her in my thoughts, my counsellor and friend, the better angel of the lives of all who come within her calm, good, self-denying influence, is quite a woman.

What other changes have come upon me, besides the changes in my growth and looks, and in the knowledge I have garnered all this while? I wear a good watch and chain, a ring upon my little finger, and a long-tailed coat; and I use a great deal of bear's grease—which, taken in conjunction with the ring, looks bad. Am I in love again? I am. I worship the eldest Miss Larkins.

The eldest Miss Larkins is not a little girl. She is a tall, dark, black eyed, fine figure of a woman. The eldest Miss Larkins is not a chicken; for the youngest Miss Larkins is not that, and the eldest must be three or four years older. Perhaps the eldest Miss Larkins may be about thirty. My passion for her is beyond all bounds.

The eldest Miss Larkins knows officers. It is an awful thing to bear. I see them speaking to her in the street. I see them cross the way to meet her, when her bonnet (she has a bright taste in bonnets) is seen coming down the pavement, accompanied by her sister's bonnet. She laughs and talks, and seems to like it. I spend a good deal of my own spare time in walking up and down to meet her. If I can bow to her once in the day (I know how to bow now, knowing Mr. Larkins), I am happier. I deserve a bow now and then. The raging agonies I suffer on the night of the Race Ball, where I know the eldest Miss Larkins will be dancing with the military, ought to have some compensation, if there be even-handed justice in the world.

(Continued in next issue)

Farm Home Food.

French Beef Steak—Have ready a tender steak weighing about 1 pound, trim it neatly, and cut off all the fat Wash and prepare one carrot and a small turnip, and cut them into slices, slice half of a medium-sized onion, and cut three or four sticks from a head of celery into small pieces cross-wise. Put 2 oz. of butter into a stewpan, and when hot add the vegetables and fry them brown; then put in the steak and brown it well both sides. Pour in half a pint of hot water, add a bunch of herbs, and let all simmer together for an hour and a half, stirring occasionally to prevent the contents of the pan sticking to the bottom and getting burnt. Meanwhile have more carrot, turnip, onion and celery boiled in salted water until tender, and bake the trimmings of fat cut from the steak in the oven until brown. When done put the steak on a hot dish, strain the gravy round, arrange the fat on the top, and little heaps of the boiled vegetables round the edge of the dish and serve very hot.

Orange Gingerbread—Ingredients: ½ lb. of flour, half-teaspoonful of good baking powder, 4 oz. of butter, 4 oz. of golden syrup, 2 oz. of brown sugar one teaspoonful of ground ginger, 1 egg, the grated rind and strained juice of one large orange, 1 oz. of candied orange peel cut into small dice. Mix well together the flour, baking powder, ginger, grated orange rind, and candied peel. Put the syrup butter and sugar into a saucepan and warm them over a mild heat until well mixed; add the beaten egg and the orange juice, and stir these to the dry ingredients. Pour into a buttered Yorkshire pudding tin that has been lined with buttered paper, and bake in a moderate oven for about forty minutes.

The Rea' Irish Stew—A "Subscriber" would like us to repeat the receipe for a "Real Irish Stew," which he did not see when it appeared in a previous issue. We have great pleasute in acceding to his request:— The method adopted around here is as follows: In the first place, all the ingredients must be added to the stewpan in their raw state, as the real meaning of stew is a combination of flavors, blended together to suit the palate. What distinguishes the Irish stew from Seville, Exter, or any other stew is the predominating flavor of the potato, the stape food of Ireland since the days of Sir Walter Raleigh. If all is not cooked together the flavor of one ingredient cannot be imparted to the others. As to onions used here, we grow what

Flour trial is essential but—it is not your work!

Flour varies from time to time in baking quality. This is because wheat continually varies according to soil conditions, etc.

Therefore, if baking results are to be constantly high, baking tests are essential. It is unreasonable to expect you to make these tests at your expense.

PURITY

So from each shipment of wheat delivered at our mills we take a ten pound sample. This is ground into flour. Bread is baked from the flour. If this bread is high in quality and large in quantity, we use the shipment. Otherwise we sell it.

By simply asking for **FLOUR** bearing this name you can always be sure of more bread and better bread.

"More Bread and Better Bread" and "Better Pastry Too" 523

SISTER: READ MY FREE OFFER.

I am a woman.
I know a woman's trials.
I know her need of sympathy and help.

If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understand women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back, or bowels, feeling of weight and dragging down sensations, falling or displacement of internal organs, bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete **ten days' treatment** entirely **free and postpaid**, to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escaping the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured**, my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatment is for all,—**young or old.** To **Mothers of Daughters**, I will explain a simple home treatment which speedily and effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, **write for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask** for the **free treatment to-day**, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box 309, WINDSOR, ONTARIO

are known as "potato" onions. These are what ought to be used if procurable at all, for this particular stew, as they are not nearly so strong in flavor as Spanish onions and the meat used must be rather lean, as greasy stew is abominable. Then slow cooking, so much so, that the potatoes retain their shape when cooked. Irish stew, when properly made, is really an appetising dish, not something between a "hash" and a "stew."

Color in the Home.

Every housekeeper's library may well include Principles of Home Decoration by Candace Wheeler, which is a concise and complete authority. From it the following notes are taken

The general appearance of the interior of a house is very largely the result of the color treatment and the careful selection of accessories. The color of the walls dictates that for all else in the room, and creates the atmosphere, whether cheerful or sad cozy or repellant.

The relation of color to the beauty of the house has just recently been recognized, and beauty within the house may in a degree atone for the loss of nature's beauty. The color used in a room depends on (1) quality and quantity of light and (2) personal taste. A north room or one much shaded requires a warm treatment with yellow, red, or golden brown. South rooms are best treated with cool blues, water greens, grays, or greenish yellows. A limited amount of the warmer colors may sometimes be used here also, and no room should be without a touch of red. Personal preference should receive greater consideration than it usually does. It is not always necessary to know why a color is disliked, if it has an unpleasant effect, it should be discarded.

A material chosen in a strong light appears many shades darker in large wall masses or dark colors. Walls should seldom be more than moderately dark in color. The subject should be studied in all its phases.

Useful Hints.

Pour a strong and hot solution of soda water down the gutter gullies, and small sink traps occasionally; it keeps them sweet and clean. This is absolutely necessary for the kitchen and wash-house sinks.

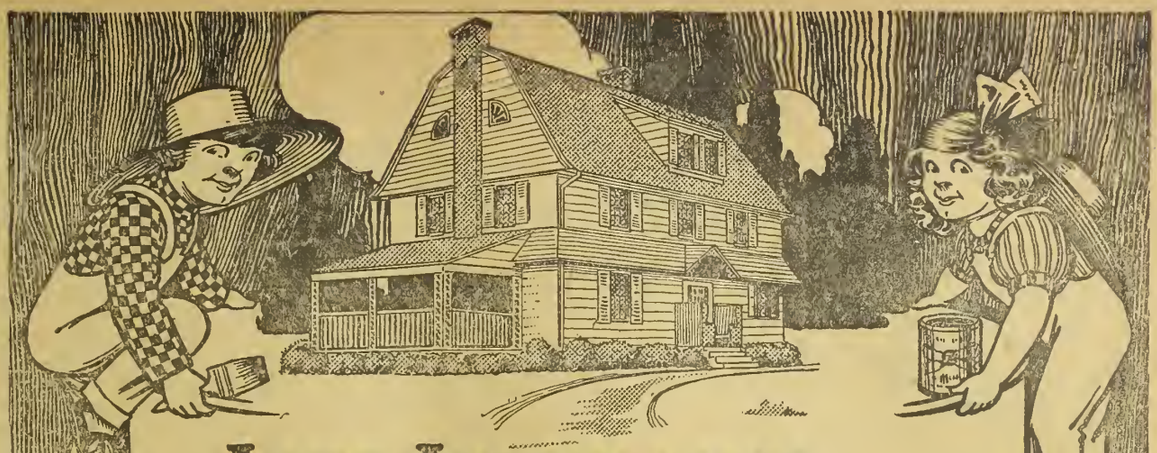
A cut lemon will often remove even obstinate stains, but strong spirits should on no account be used for removing them or grease spots.

Very badly stained and furred decanters can be quickly cleaned if half-filled with stale tea-leaves with the addition of a little vinegar. Shake vigorously, turn out the liquid and rinse. If the decanter is not quite clean repeat the operation. The final rinsing should be of cold water, turning the neck safely downward to drain and so dry.

To fill nail-head holes in wood mix a little sawdust of the same kind of wood with a little glue. Press this well into the hole or fracture, when well hardened it can be fined down with a piece of glass-paper, the repair being hardly noticeable and quite obliterated if the article is to be repolished or painted.

Even though a carpet may be underlaid with felt it is a good plan to place a few sheets of old newspaper between as the printing ink is a capital moth preventative.

Paper bags got at the fruiterer's or grocer's are usefuf for covering the hands when blackfeading a stove. They prevent hand soiling and can be put on the fire when done with, a much better plan than keeping gloves about the place.



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A TREE often lives several hundred years. Nature has protected the wood by covering it with bark to shield it from the elements.

When trees are sawed into lumber, Nature's protection is lost. Therefore, the wood used in your house must be paint protected to insure it against wear and weather.

"100% Pure" Paint is a good life insurance policy on your house. It protects against decay—pays for itself, over and over again, in the repairs it saves—adds value and beauty to the building as well as long life to the wood.

Martin-Senour "100% Pure" Paint

is most satisfactory for all outside and inside painting. ***"100% Pure"*** is genuine White Lead, Oxide of Zinc, purest Colors, and Linseed Oil—ground to extreme fineness by powerful machinery—the combination of which produces a paint that is greatest in hiding, covering and wearing qualities—and makes it the cheapest to use as well as the most satisfactory.

Write for our booklet, "Town and Country Homes". It gives you many helpful suggestions in Color Harmonies, and is free for the asking.

MARTIN-SENOUR 100% PURE PAINT & VARNISHES

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MONTREAL.

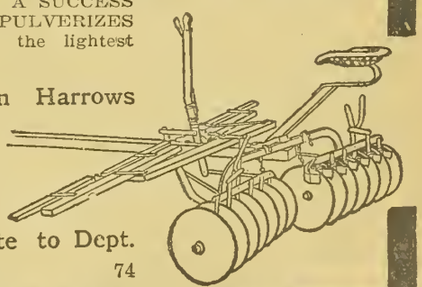
26

Prove the "BISSELL" by Its Work

Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you will HAVE PROOF that it is A SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.



Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept. M for free Catalogue. 74

T. E. Bissell Company, Limited, Elora, Ont.

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NO DUTY TO PAY. Good freight service. Practically no competition. We are the only Company who owns and operates its own factory in Canada. Hundreds of our salesmen are making big money here in the West. Now is the time to secure good Eastern territory.

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Mailed direct to your home anywhere in the Maritime Provinces at these wonderfully low prices :

1,000	1 lb.	Printed	$2.00
500	1 lb.	Printed	1.40
1,500	1 lb.	Plain	1.77
1,000	1 lb.	Plain	1.20
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500	2 lb.	Printed	1.95
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You can easily make up an order for Plain Parchment with your neighbor.

Buying 1,500 one pound sheets you have your wants filled at 59 cents per ream. These prices go into force on and after February 10th, 1914. All goods shipped parcel post.

The Maritime Farmer
SUSSEX, N. B.

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Our specialty is CANADIAN RAW FURS. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

HALLMAN FUR CO., Toronto Ontario

N. Hallman, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

Farmer Ads. will Bring Results.

Simple Cold Cures.

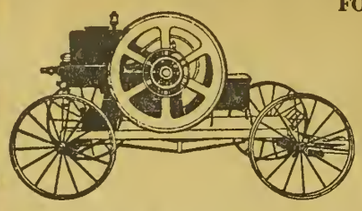
With the first indication of a cold all work should be suspended and treatment of the affection made the chief business. A hot bath of some kind should be taken, a simple foot bath often being effective. Place the feet in a small tub or bucket two-thirds full. The receptacle should be covered over with blankets or other material in order to retain as much of the heat as possible. The water should be as hot as can be borne, and as it cools may be reheated by the addition of fresh water at intervals. The patient should sip water or lemonade as hot as can be borne during the course of the treatment. The bath should continue until a good perspiration is secured. The feet should then be wiped dry and the patient undressed and put to bed with enough covering to insure warmth and to prevent chilling. In many cases where sneezing is the chief symptom, relief can be obtained by inhaling steam to which have been added 20 to 30 drops of camphor. For this purpose a bath towel and a small bowl filled with boiling water may be used. Arrange the towel so that it encloses the bowl and the head of the patient. Apply the treatment for ten minutes every two hours, after each treatment rubbing the face with a towel wrung out of cold or ice water. This simple remedy influences not only the inflamed mucous lining of nasal passages and throat, but also affects those parts of the skin area which have a direct nerve connection with the affected parts. An important feature of the treatment of colds consists in the hygiene of the alimentary canal. Particular care should be taken that the bowels are moved before any of the above sweating procedures are employed. The chief reliance should be placed upon a laxative diet. Water, which flushes the system and thus removes accumulated poisons, and which also exerts a laxative effect, should be drunk in large quantities. Aside from this, fruits and fruit juices may be used freely—in fact, they may be used exclusively for the first two or three days to advantage. Generally the appetite is in abeyance, so that fruit may be taken as freely as may be desired, especially such juicy frdits as apples, peaches, pears, oranges, and grapes. Cereal and vegetable foods may be added gradually until the cure is complete.

Infant Mortality.

It cannot be too strongly impressed upon mothers that by all means the safest food for babies is that which nature provides— the mother's milk. James Acton, of Toronto, discussing this question for the Women's Institutes of Ontario, has said·

"It is estimated that in the United States there are about 225,000 children die before the age of five years. In this country, I have not seen any figures, but I think it is a safe estimate that somewhere between 20,00 and 25,000 children die every year before they reach the age of five. It is claimed by eminent authorities that at least one-half of these deaths could be avoided. In other words, we have to face the fact that within the Dominion of Canada there passes away every year, of children under the age of five, somewhere in the neighborhood of 12,000 which could actually be saved. A doctor says that of 2,000 children who died, when he looked at the history of these cases, he found that four-fifths of them died from imperfect feeding, causing troubles of the intcstines and stomach. Another authority states that out of 943 cases, nearly 90 per cent of them died from imperfect nourishment, from bad feeding. In the city of Bir-

FOR YOUR FARM, YOUR HOME, YOUR FACTORY
FOR EVERY POWER PURPOSE, A



GILSON
"GOES-LIKE-SIXTY"
ENGINE
MORE VALUE, MORE POWER, MORE SERVICE, MORE SATISFACTION

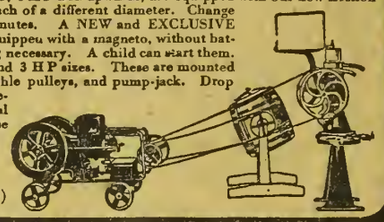
Does satisfaction mean anything to you? Does money saved in fuel, in time, in repairs and expense bills appeal to you? Get Gilson Facts, and find out how the Gilson 60-SPEED engine does the greatest variety of work—how it gives the maximum satisfaction—saves money in equipment, and yields 100% service at lowest cost. Every engine covered by a cast-iron guarantee.

NEW FEATURES AND LATEST IMPROVEMENTS

The new Gilson 100% SERVICE ENGINES, 4 HP and upwards, are equipped with our new friction clutch pulley with five interchangeable rims, each of a different diameter. Change to the proper speed for every job in a few minutes. A NEW and EXCLUSIVE GILSON FEATURE. These engines are also equippeu with a magneto, without batteries or coil, with spark retarder,—no cranking necessary. A child can start them.

We also make 60-SPEED engines in 1½ and 3 HP sizes. These are mounted on truck, with line shaft and five interchangeable pulleys, and pump-jack. Drop us a card to-day, and we will send you full descriptive literature. We are making special prices to the first purchaser of one of these engines in every locality. Write NOW.

Agents wanted.



GILSON MFG. CO., LTD.
1607 YORK ST., GUELPH, ONT. (975)

Make Your Stock and Poultry Pay Better with
Royal Purple
STOCK AND POULTRY SPECIFICS

At a cost of less than a cent a day per head of stock, it will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases. Tones up run-down animals so that they quickly gain weight and vigor. Increases the yield of milch cows three to five pounds a day, besides enriching the quality of the milk.

ROYAL PURPLE is not a food. It is a conditioner—the best ever so'd. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not pamper them with soft predigested mush so that after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do.

ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared foods."

Try It On a Poor-Conditioned Animal

If there is a run-down, poorly nourished beast on your farm, see what **ROYAL PURPLE SPECIFIC** will do for it. A 50-cent package lasts a cow or horse 70 days. The cost is so trifling that no farmer in Canada has any excuse for having out-of-health stock around his place. Try it on the poorest-conditioned animal you have and we know you'll be surprised at the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of $1.50. Steers treated in the same way cost no more than $1.00 each to put in prime state for market. **ROYAL PURPLE SPECIFIC** fattens and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 50c, and air-tight tins, $1.50.

Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens

Do you know that **ROYAL PURPLE POULTRY SPECIFIC** makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If **ROYAL PURPLE** does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give **ROYAL PURPLE POULTRY SPECIFIC** a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and $1.50 air-tight tins.

WE ALSO SELL

Royal Purple Cough Specific for cough and distemper. (Will cure any ordinary cough in four days). 50c, by mail 60c.

Royal Purple Sweat Liniment for lameness, rheumatism, sprained tendons, etc. 50c, by mail 60c.

Royal Purple Worm Specific for animals; removes the worms, also their larvae. 25c, by mail 30c.

Royal Purple Disinfectant, in 25c, 50c and $1.00 tins.

Royal Purple Lice Killer for poultry and animals. 25c and 50c, by mail 30c and 60c.

Royal Purple Gall Cure for scratches, harness scalds, open sores, etc. 25c and 50c, by mail 30c and 60c.

Royal Purple Roup Specific for roup, pip, diphtheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry. 25c, by mail 30c.

Free
TO STOCK AND POULTRY RAISERS

We will mail for the asking our new revised 80-page book on common ailments of stock and poultry. Tells how to feed light and heavy horses, colts, mares, cows, calves, steers, hogs; also how to feed and keep poultry so that they lay winter and summer. Cover lithographed in six colors, showing farm utility birds in their natural colors. This is a book that should be in every farmer's possession. IT'S FREE. Write for your copy today.

31

W. A. Jenkins Mfg. Co. London, Canada

Order Your Horse Posters From The Maritime Farmer.

It Stands the Test of Time

JOHNSON'S ANODYNE LINIMENT

IN USE 103 YEARS

for the relief of aches, pains, swellings, burns, cuts, rheumatism, bowel troubles. For internal and external use.

25c and 50c everywhere

I. S. JOHNSON & CO., Inc.
Boston, Mass.

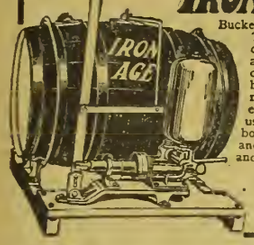
Parsons' Pills
give quick relief without distressing.

SPRAYERS Are a Necessity and a Benefit.

Outside Pumps. Bronze Ball Valves. Hemp Packing. Easy to get at.

They save your crop, increase the yield and improve the quality. Our Spray Calendar shows when to spray and what materials to use. Our "Spray" booklet shows 70 combinations of

IRON AGE



Bucket, Barrel, Power and Traction Sprayers for orchard and field crops and other uses. Built complete or in units—buy just what you need. Ask your dealer to show them and let us send you our spray booklet, spray calendar and "Iron Age Farm and Garden News" free.

The Bateman-Wilkinson Co., Limited
434 Symington Av.
Toronto, Can.

Heaves

AND HOW TO CURE

—A Standard treatment with years of success back of it to guarantee results is

Fleming's Tonic Heave Remedy

Use it on any case—No matter what else has been tried—and if three boxes fail to relieve, we will Refund full amount paid. Further details in

Flemings's Vest Pocket Veterinary Adviser

Write us for a Free Copy.

Best Ever Used.

Dear Sirs:—Enclosed find $1.00 for 1 package of Tonic HeaveRemedy. I used a package last year and completely cured a case of Heaves of some 3 years standing.
H. B. BURKHOLDER, Lillooet, B.C

Per Box $1.00, 3 for $2.50

FLEMING BROS., Chemists
41 Church St. - Toronto

TRAPPERS WE BUY FOR CASH

And pay highest prices for **Fine Fox, Mink, Martens, Rat, Lynx, Wolves** and all other **Furs, Hides** and **Ginseng.** Best facilities in America. Send for Free Price List and Shipping Tags. No commission charged.

ROGERS FUR COMPANY,
Dept. 332 St. Louis, Mo.

Children are much more likely to contract the contagious diseases when they have colds. Whooping cough, diptheria, scarlet fever and consumption are diseases that are often contracted when the child has a cold. That is why all medical authorities say beware of colds. For the quick cure of colds you will find nothing better than Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

mingham, the health office in 1905 made a report that out of 178 cases, 133 were of children who died from imperfect feeding. This subject of 10,000 preventable deaths of children ought to interest every woman. Now the first thing that we need to lay down in this propaganda of life saving for children, is that the safest food for children is the mother's breast. One of the stastics that I have here states that only three per cent of the number of deaths could be traced to mothers who had nursed their own children. It is a wonderful provision of Providence; it is found in cattle as well as human kind, that the milk that comes from the mother is practically pure. The mother may be diseased. Why, where mothers are affected with contagious diseases, the doctor seldom thinks of taking the child away from the mother. The mother will not transfer disease to the child while she is nursing it. It is a provision of nature tbat the milk reaches the child in a pure uncontaminated form. The first thing we need to emphasize is that the safety of the child depends on being fed as much as possible by the mother."

Killing Diphtheria Germs.

Diphtheria is caused by the presence in the throat of a germ called Klebs Loeffler bacillus. It is different from many other disease germs in that the germ does not enter the blood, but remains localized in the throat, and produces toxins which are taken by the blood to all parts of the body.

After any infectious disease, the sick room should be disinfected. The best material to use for this purpose is formalin, which on evaporation gives off formaldehyde gas which kills any germs that are adhering to the walls, furnishings, bedding, etc. Use 10 or 12 ounces of formalin for every 1,000 cubic feet of air space in the room. Stop up all cracks in the room, close all chimneys, stovepipe holes, windows, etc., all openings of any kind must be closed. Make the room as nearly air-tight as possible, so that the gas cannot escape before killing the germs. Fasten up a line across the room to which a sheet can be attached. Open the bureau drawers and leave everything in situ. Mix the formalin with three times its bulk of water, throw it on the sheet with a dipper, then leave the room closed for twenty-four hours. At the end of that time all disease germs will be killed. Then open the room and air it. It will not be fit for a sleeping room for three or four days.

An Evening of Fun.

A hard times party can be made to yield more fun to the minute than almost any other form of entertainment. It can be held in the barn, the basement or attic if they are warm enough, but the usual rooms will do especially if the nice furniture is removed and boxes substituted for the chairs, etc.

For invitations tear off (don't cut) a piece of manilla wrapping paper, and write the invitation upon it, or have them printed upon strawboard, mailed in manilla envelopes. All the guests should come in ragged clothes or if these are not obtainable, the girls should wear gingham aprons and the boys overalls. A patch here and there adds to the costume.

Refreshments should be served from wooden plates, tin spoons, paper cups etc.— no fine dishes are to be used. Spread the table cloth upon the floor, and O my, what fun! Sandwiches, cake, pickles, candy, coffee and chocolate are enough to serve, but have plenty, as at a party of this kind the people are less bashful about taking a second helping. Dolls made from clothespins and dressed as boys and girls make fine favors. The head of the pin can be mane into a face with a few strokes of the pen. If the place be large, dance square and circle dances and an accordion player is the best for the occasion.

"The Finest in the Land" SEEDS Send for Catalogue

Headquarters for Northern Grown Vegetable, Flower and Farm Seeds, Plants and Bulbs

WM. RENNIE CO., Limited 190 McGill Street MONTREAL

Also at TORONTO, WINNIPEG and VANCOUVER

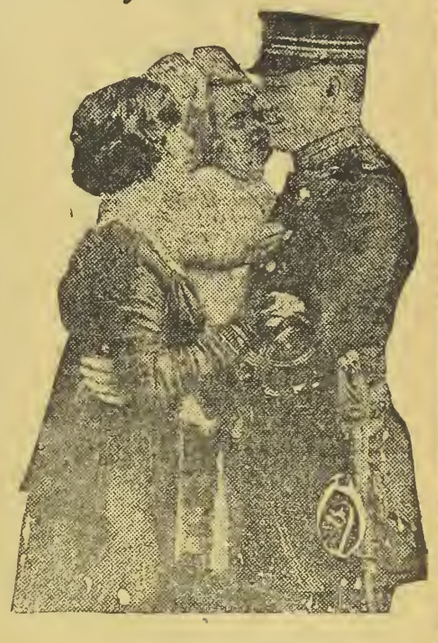
Special Advice For Men

Vitality Restored by New Method

The attached coupon entitles you to one illustrated copy of my pocket compendium and guide for the self-restoration of lost strength. (See description below) Upon hearing from you, this valuable little book of private information for men will be sent by return mail in plain sealed envelope. Please call or write today.

There is a new and marvelous method for restoring lost manly strength, for renewing the vigor of youth, which every man should know of, a self-restorer which operates without the use of drugs or medicines, a new way to treat yourself and by which it is my firm belief any man anywhere who is content to lead a decent life, free from excesses and dissipations may be almost certain to restore his full manly vigor snd strength, if he but makes the little effort that is called for in connection with the use of a little vitalizing appliance which I have patented and am now distributing all over the world.

Please remember that a man is not one day older than he actually feels, and therefore no matter what your age, if you are young or elderly, married or single, large or small, if I can show you reader, how you can yourself actually add to your system, nerves and blood the very nerve force or vital vigor which may have been drained away, and which is necessary to make you strong, vigorous, and capable again, then I have shown you the real secret of perpetual youth, and how you can again be filled with vitality and again be just as powerful in your influence and just as thoroughly manly in your capacity as the big gest fullest blooded, most successful fellow of your acquaintance.



HEALTH IS HAPPINESS

I call my vitalizer a HEALTH BELT because it is worn around your body in the position of an ordinary belt. It sends a great, soft, strength-giving supply of a force I call vitality into your body nights while you sleep. I would like you to call or to write and get my free book, that you may know the whole wonderful account of what my HEALTH BELT is doing for others who were looking for a safe and sure means to restore vigorous health and to rid the body of pains, aches and weaknesses.

Note—My HEALTH BELT, with special attachment, is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

86-PAGE BOOK SENT FREE

My 86- page illustrated booklet (pocket size) was compiled by me to answer fully and correctly those questions which are asked privately by any man needing new strength and who seeks personal advice pertaining to the ailments and weaknesses he wishes to overcome. The book, fully illustrated, with photo reproductions contains much that a single or married man should know. It also fully describes my HEALTH BELT and tells how you may secure one to use in your own case, should you decide you want to use one. Remember the book is sent absolutely free, in plain, sealed envelope. Why not write for a copy today?

DR. M. F. SANDEN,
140 Yonge St., Toronto, Ont.

Dear Sirs—Please forward me your book as advertised, free.

NAME.....

ADDRESS.....

Many sufferers from rheumatism have been surprised and delighted with the prompt relief afforded by applying Chamberlain's Liniment. Not one case of rheumatism in ten requires any internal treatment whatever. This liniment is for sale by all dealers.

To prevent accidents at the time of lighting the kitchen fire, fill the coal oil can with water. We have never known of a serious burning accident to follow such a course, but pouring coal oil on fires results in disaster right along.

Keep the "emergency shelf" well-filled so that unexpected company will not find you unprepared. It is not necessary to give such visitors an especially elaborate meal but ease and comfort are much increased if one feels "prepared."

A Severe Cold

Settled On Her Lungs.

Mrs. Geo. Murphy, Spence, Ont., writes:—"I have had occasion to use Dr. Wood's Norway Pine Syrup, and can say it most certainly is a wonderful medicine. Last winter my little girl, just a year old, took a severe cold which settled on her lungs. I tried everything, and was almost in despair, when by chance I read of Dr. Wood's Norway Pine Syrup, and decided to try it. I got two bottles, and as soon as I started to use it I could see it was taking effect. I gave her three bottles in all, and they completely cured her."

Dr. Wood's Norway Pine Syrup is a universal remedy for sufferers from all bronchial troubles. Coughs and Colds of all kinds, Bronchitis, Sore Throat, Hoarseness, Croup, Asthma, Whooping Cough, and Throat and Lung Troubles, disappear quickly after a few doses have been taken.

It will stop that distressing, tickling sensation in the throat which causes coughing and keeps you awake at night.

Price, 25c; large family size, 50c. Put up in a yellow wrapper; three pine trees the trade mark; manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Refuse substitutes.

Clover and Timothy

SEED

You can buy good, clean seed direct. Below find present prices **freight paid** to your nearest Railway Station on C. P. R. or I. C. R. for an order of 180 lbs. or more. Ask for samples. Also tested seed catalogue.

NO. 1 GOVERNMENT STANDARD

Mammoth Clover $13.50 per bushel of 60 lbs. Bags Free.
Red Clover $12.50 per bushel of 60 lbs. Bags Free.
Alsyke Clover $13.75 per bushel of 60 lbs. Bags Free.
Alfalfa Clover $10.75 per bushel of 60 lbs. Bags Free.
Timothy Seed $4.75 per bushel of 48 lbs. Bags Free.

If ordering less than 180 lbs., allow $1.00 for freight.

Order early.

GEO. KEITH & SONS

Seed Merchants Since 1866

TORONTO, - ONTARIO

FARM AND SHOP
BLACKSMITH'S
FORGE
6.85
A well built practical Forge with 8 inch fan, 18 inch hearth. Stands 33 inches high. Weighs 85 lbs.
WRITE FOR COMPLETE CATALOGUE OF BLACKSMITHS GOODS FOR FARM AND SHOP
The HALLIDAY COMPANY, Limited
HAMILTON, CANADA
FORMERLY STANLEY MILLS & CO, ESTABLISHED 1866

Advertise in the Maritime Farmer.

Spray Mixtures and Spraying.

(Continued from page 372)

ple Scab begins to grow rapidly less and the all important thing is to get the apple safely through June, because there is seldom danger in July

All are aware that two years ago the injury by Apple Scab was done chiefly in the latter part of August and in September. This injury could have been largely percented by an application of spray mixture the last week in August, supplemented perhaps by another about two weeks later. This would also help greatly to prevent the Fly Speck, Inky Spot or Sooty fungus, all of which are supposed to be but different names for one disease.

MIXTURES TO BE USED FOR EACH APPLICATION.

For the first application use lime sulphur, (experiment if you wish on part of the orchard with soluble-sulphur), of the strength of 1 gallon of the commercial diluted to 0 or 10 gallons with water, or to a specific gravity strength of 1,030, that is if the spraying is done before the buds have burst. If it is postponed until the buds are bursting or have just burst, dilute each gallon to about 15 gallons, or to about specific gravity 1.020 Bordeaux in this latter case should also be satisfactory. If Tent caterpillars, canker-worms or other troublesome biting insects are present add 2 to 3 lbs Arsenate of lead to each 40 gallons of the mixture.

For the second application, the one just before the blossoms open, use either Bordeaux mixture with about 2 or 3 lbs. Arsenate of lead or about 1-3 lb. Paris green to each 40 gallons or Lime-sulphur of the strength of 1.010 specific gravity or the commercial diluted 1 gallon to about 50 and with it 2 or 3 lbs. Arsenate of lead to 40 gallons.

For the third applicatian, the one just after the blossoms have nearly all fallen, use lime-sulphur, 1 gallon, of commescial diluted to about 25 or 40 gallons ar about specific gravity 1.009 or 1.008 with a lbs. Arsenate of lead to 40 gallons.

For the fourth application the same strength of lime sulphur as for the third should be used, it will probably be better to add 1 lb. or 2 lbs. of Arsenate of lead as it usually increases the fungicidal action and seems also to help the sticking power. Do not spray at this time in the heat of a hot, calm, sunny day for fear of sunscalding the fruit

For any later applications such as a wet cold August or September may require use either the same strength of lime-sulphur or Bordeaux Mixture, the latter in the later applications not being nearly so likely to cause russeting as when the fruit is just forming or is still quite small.

EQUIPMENT FOR SPRAYING.

It is impossible to do good spraying without a fairly good outfit kept in good repair. The utmost precautions should be taken to see that the pump, hose, nozzles, shut off and everything is in good working order before starting, and to keep them so throughout the season.

Machines. If a man can afford a good gasoline outfit of a kind known to be reliable he will be delighted with it and do better work on large orchards of old trees than with any kind of hand pump, he will also do the work in less than half the time andnot require so many men. Many however, make the mistake of trying to cover too many orchards with one machine. I think one should not expect to do more than 25 acres of old trees with one gasoline outfit, and 12 acres with a good, double-acting pump. A barrel pump will do 8 ac-

(Continued on page 390)

"Metallic" Ceilings and Walls for

Homes, Stores, Theatres, Hospitals, Schools, Churches and every description of building.

Beautiful Economic
Fireproof Durable

Can be applied by any mechanic. Write now for FREE BOOK and full information.

Save time and money, by sending us the dimensions of your rooms. 22

Ford
THE UNIVERSAL CAR

It's the Ford age—the age of dependable and economical transportation. More than four hundred twenty thousand Fords in world-wide service have changed distance from a matter of miles to a matter of minutes. Buy your Ford today.

Six hundred dollars is the price of the Ford runabout; the touring car is six fifty; the town car nine hundred—f. o. b. Ford, Ont., complete with equipment. Get catalog and particulars from Ford Motor Company of Canada, Limited, Ford, Ont.

100 p. c. Increase in Crops

The French Minister of Agriculture says that farms in Europe have doubled their productiveness in 100 years, and that 70 p. c. of this is due to the use of commercial fertilizers.

Such an increase could be obtained only by using good fertilizers. "Made at Windsor Fertilizer" is not only good fertilizer, but the best fertilizer.

It is manufactured at

WINDSOR, NOVA SCOTIA

in the largest—best equipped—and most up-to-date Fertilizer Factory in Canada.

When you buy your fertilizer ask "Is this Fertilizer made at Windsor, Nova Scotia?" If the man says "Yes", you are getting the best.—If he says "No", you are not.

Write us and we will give you the name of the nearest "Made at Windsor, Nova Scotia" Fertilizer Agent.

BOX 432 - - WINDSOR. N. S.

Try an ad in the Maritime Farmer—It will pay you

Don't Go On Getting Half or Quarter Crops!

Buy a Spramotor

There are too many men engaged in agriculture who think that when they have tilled and cultivated, they can wait for the fields and orchards to return them the full reward of their labor. A bigger mistake was never made. Only by protecting your trees and plants from pests and disease can you get all that they will produce.

Spraying is no longer on trial. It has been proven to be a necessary operation. The world's best authorities are unanimous in advocating proper spraying of orchard trees, row crops and grains. Find the men who make most money out of fruit growing, market gardening or grain growing and you'll find that they are the most consistent spray-users in their community.

The Spramotor Fills Every Need

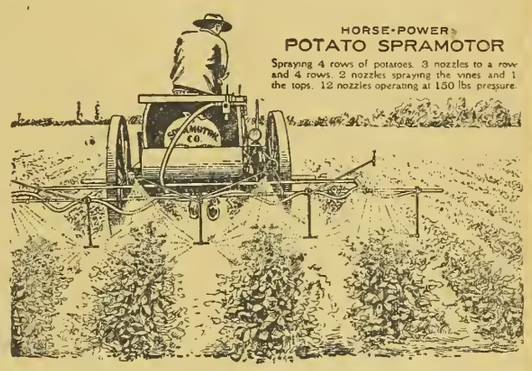
It is twenty years since the first **Spramotor** was sold. We continually receive letters from men who bought our machines away in the nineties, stating that their **Spramotors** are still in active use and doing good work. We have supplied the leading universities and agricultural experimental stations of this country and the United States, also the Governments of both countries. **Spramotors** have been shipped to India in 200 lots, for use in the tea gardens. We have also supplied them to the West Indies, Finland and Belgium.

We make a **Spramotor** for every need—for the small farm and for the largest. There are over 50 different styles and sizes in the **Spramotor** line, including hand machines horse-drawn and horse-operated outfits and gasoline power Sprayers.

Prices Range From $6.00 to $350.

No two men's requirements are exactly alike. We prefer to have you give us some idea of what you want a **Spramotor** to do and then to send you full details of the machine that will suit your case best. We go carefully over the information you supply and then determine which Spramotor will do your work to the greatest advantage at the least possible outlay on your part.

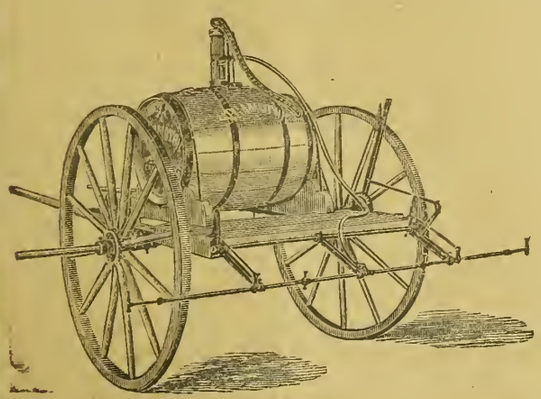
Bear in mind that we make only **Spramotors** We can't sell you you an engine or a pump or a windmill, but we **can** sell you what the greatest authorities in many countries have pronounced the best spraying outfit possible to make—the **Spramotor**!


HORSE-POWER
POTATO SPRAMOTOR
Spraying 4 rows of potatoes. 3 nozzles to a row and 4 rows. 2 nozzles spraying the vines and 1 the tops. 12 nozzles operating at 150 lbs pressure.

We Make Every Part That Goes Into a Spramotor

Our plant is completely equipped for turning out every fitting and part used in **Spramotors.** We can make a better nozzle ourselves than we can buy anywhere in the country, and the same applies to every joint, coupling, and fitting that we use. We guarantee every machine shipped, therefore it pays us to be careful to see that each part works to perfection.

Twenty years unremitting attention to the manufacture of **Spramotors** alone, has enabled us to overcome all obstacles and solve many difficult problems. To protect the fruits of our industry and research we have taken out over twenty patents covering improvements that can be found on no other machine. All this experience is embodied in the **Spramotor** of today, and is yours at the same price as you are asked for inferior outfits.



FREE

Write us telling what your spraying needs are and we will mail you a copy of our valuable treatise on Crop Diseases FREE, also particulars of a **Spramotor** that will best suit your purpose. This entails no obligation what ever upon you, so write us without delay.

Read the Opinion of Prof. Bunting of MacDonald College

MacDONALD COLLEGE

Ste. Anne de Bellevue, P. Q
Jan. 19. 1914

The Spramotor Co.,
London, Can.

Dear Sirs:

We used one of your model C power sprayers in our 30 acre orchard last year with entire satisfaction. With two lines of hose we had no difficulty in maintaining a steady pressure with the pump running only about two-thirds of the time, each line of hose throwing as much spray as a man could handle efficiently. We could easily have carried an extra line of hose had we needed it.

I might say that this power sprayer was one of the first power sprayers ever used in this Province and from the interest now being taken in spraying there should be a large number of power sprayers brought in during the next few years, and I feel confident that from our experience with it, your machine will give good satisfaction to any one using it.

Yours very truly,
(Signed) T. G. BUNTING,
Professor of Horticulture.

The London Spramotor, 1724 King St. E., London, Can.

THE APIARY

Who May Keep Bees and Why.

It has been said that "any person who is cautious, observing and prompt will succeed in bee-keeping." This is all true, but he must have a splendid amount of that stick-to-it-ivness which is so essential to success in any business. He must expect to work with full energy, and persist, though discouragement and misfortune both confront him. Capital is good, but not necessary. Men of true metal will bespeak success in advance.

To the specialist, bees in the Maritime Provinces offer a bright future. Bees here in no place, is overdone, and our beekeepers' who combine intelligence with their work are obtaining large rewards. What should the specialist do who puts his whole thought on the industry? Our climate, flora and product is unsurpassed.

Fruit growers need and must have bees to pollenate the fruit blossoms and insure a crop. This opinion is getting stronger with our fruit growers, and our experimentalists annually is proving that bees are not only necessary for the production of quantity, but as much for the quality of fruit. All classes of farmers are giving bees more attention, for the same reason as the fruit grower, and not infrequently find the bees are their most profitable stock. Many of our best bee-keepers live in the town, and add bee-culture to their work in the shop, office or study, and receive health, pleasure and money as a reward. It is an ideal occupation for ladies, they being more observing, painstaking and thorough in their work, seldom meet with the mishap that befall the men.

To those who wish some recreation, there is nothing that has the fascination as the study of the honey bee. Bees from their wonderful instincts, curious structure and habits, and the interesting relation which they bear to vegetable life, are most fascinating objects of study.

The pleasures and profits of bee-keeping is not all. The bee-keeper is a public benefactor, for it is he who makes the "two blades of grass grow where only one grew before." By the increased pollenization of the fruits, clovers, etc., he increases the quantity and quality of the agricultural crops. His is the crop that displaces no other, and in the getting of the same, others are benefited

Now all cannot keep bees. Many are not adapted to such work. Only those who love the study of nature should venture bees. Start in a small way. Get advise from those you know are making a success under as near the same conditions as your own. If you are handy with tools, make your own hives. Read the best literature on bee-keeping you can get. In this way you will not spend much money, gain a lot of valuable information in a short time, and if you should find you are not suited to the business, you will be a broader man for this study and experience.

A last inducement for bee-keeping and certainly a worthy one, is the offering it brings to our table. It is true our sugars and especially our commercial syrups are not wholesome The apiary gives us one of the most delicious and wholesome of sweets, which has received praise from the most ancient time to the present day.

We often hear bees referred to as being profitable, because "they work for nothing and board themselves." Some get the mistaken idea that there is nothing to learn from so small an insect, and success depends wholly upon luck. A bee-keeper must know his bees, and must make the conditions ideal before they can

GIRLS Here is the biggest and handsomest outfit of Dolls and Toys ever gathered together and you can get them all free without a cent of expense. Just look at the picture and then

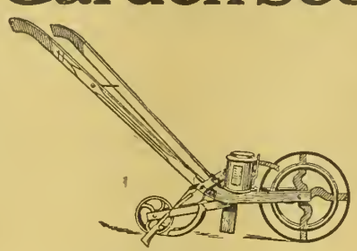
READ WHAT EACH OF THESE WONDERFUL OUTFITS CONTAINS

First, a big, roomy, red and green summer cottage with curtained windows, wide side verandah and the latest style bungalow roof. You will be delighted when you see how pretty the house looks at night when you place a light inside. Just like a fairy palace. Every girl wants a dandy big doll house. Next comes the dandy farmyard outfit consisting of a big barn, a horse, cow, sheep, pig, donkey, rooster and a motherly old hen with her little chicks. You can give dolly a real day in the country. Then we give you a dainty baby dolly who will enjoy being dressed up when company comes or put to sleep in her lovely little canopied bed inside the house. Of course, we give you the bed above complete with canopy, mattress, spread and all. It will delight you. NEXT COMES THE BEST GIFT OF ALL—this beautiful big Parisian sleeping doll fully dressed from hat to shoes in the latest fashion. She is fully 13 inches tall, is fully jointed so that she can sit down, move her arms, legs or head, and she shuts her eyes and goes to sleep just like a real baby. Last but not least we give you this doll's Fairy Kitchen set of 5 pieces—a good start toward furnishing dolly's kitchen. Girls, there are 17 pieces in this great outfit and no such delightful doll outfit as this has ever before been offered.

SEE HOW EASY THEY ARE TO GET. Simply send your name and address to-day and get by return mail 30 of Yvonne's Hearts of Flowers, the latest Parisian perfume, to sell among your friends at only 10 cents each. They are easy to sell because we send eight delightful odors, such as Beauty Rose, Lily of the Valley, Lilac, Wood Violet, etc., and everybody wants to try two or three kinds. Return our $3.00 when your sales are completed and we will promptly ship the whole outfit (17 pieces) exactly as illustrated above. Hurry girls and write to-day.

REGAL MANUFACTURING CO., DEPT. B. €21 TORONTO, ONT. 70

Garden Seeders and Wood Cutters

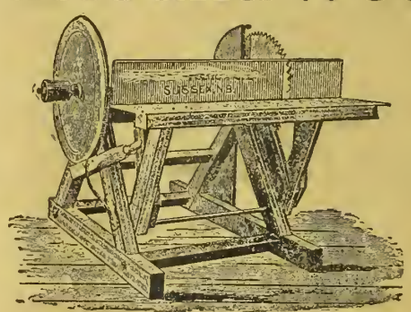


"THE BEST BY TEST"
GARDEN SEEDER

Does the work of two men in half the time. Makes the drill, sows, covers and rolls the seed while you walk.

No better seeder can be built for the fast and accurate sowing of turnips, cabbage, carrots, beets, corn and all other garden seeds.

Price $7.50 Delivered at Your Station.
ORDER NOW



SHORT SWING

"The best made" is the users verdict.

Made in four different sizes: Long Swing, Long Swing Improved (with extra long table and roller) the Flat Roller Table and Short Swing.

The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1 5/8" diam.

Both bearings supplied with compression grease cups and for convenience in handling we are putting skids under our machines this season.

Send for our Wood Cutter catalogue.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton • New Brunswick

GOODS SATISFACTORY TO YOU OR MONEY REFUNDED, INCLUDING SHIPPING CHARGES. NO EXCEPTIONS

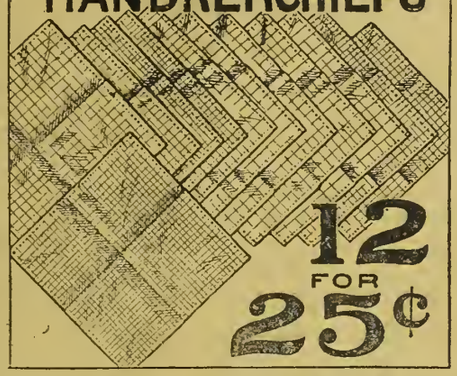
EATON'S

FREE DELIVERY
WE PREPAY SHIPPING CHARGES ON $10.00 ORDERS AND OVER

WEEKLY MAIL ORDER BARGAINS

Here's another grand list of special values which we have gathered together for our Mail Order customers. Every item means a big saving, and, as quantities are limited, quick choosing is imperative. Do not put off ordering, as we feel sure you will be more than pleased with your purchase, and save money besides. Just look over this list, and observe closely the very low prices.

WOMEN'S CROSS BAR HANDKERCHIEFS



JUST THINK! IRISH LAWN QUALITY

24-F12. Most women will see in this offering their chance to buy for present need and future use at this big bargain price. **Women's Irish Lawn Crossbar Handkerchiefs,** assorted bars, hemstitch hems, snowy white, good size. You save nearly half regular price on each purchase. Order at once, as there is only a limited quantity in stock. Our special price.... **12 for 25c**

LOOK HERE!

YOUR CHOICE — ONLY **79c**

MEN'S and WOMEN'S UMBRELLAS

Men's and Women's Suitcase Umbrellas, made with strong steel frame and fast black cotton taffeta cover.

20-F56. Men's Natural Wood Handle.
20-F58. Women's Ebony Directoire Handle.
At a great saving. While they last, to clear, each..... 79c
Order by number.

PER PAIR **15c** — **BOY'S AND GIRL'S HOSIERY**

20-F68. Boy's and Girl's 2-1 Ribbed Union Cashmere Hose, extra spliced sole, heel and toe, good weight for spring wear. **Black only. Sizes 6, 6½, 7, 7½, 8, 8½.** Buy in a stock now, and save money. You'll be wonderfully pleased at the saving.
While they last, to clear, per pair 15c
Be sure to state size and item number.

SEND FOR THIS

IT'S FREE — TO-DAY

FREE FOR THE ASKING

OVER THREE HUNDRED PAGES OF QUALITY MERCHANDISE

YOUR SPRING AND SUMMER CATALOGUE IS READY

We want everyone to receive a copy of our latest Catalogue. It is a bigger and better book than we have ever issued. Throughout its three hundred odd pages are to be found positive examples of quality merchandise at prices that bespeak greater economy for you. Many interesting articles of wear and household necessities are beautifully illustrated in their actual colors, which simplifies choosing in no small degree. If your copy has not reached you through delay, or for other reasons, be good enough to send us your name and address, and we will forward one by return mail.

DON'T BE WITHOUT AN EATON CATALOGUE

SPOT EMBROIDERY NET WAISTS

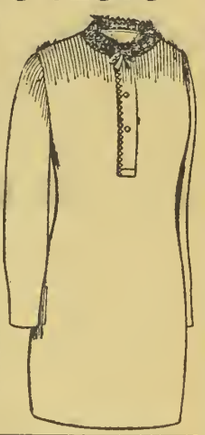
HALF PRICE **67c**

84-F56. To afford our Mail Order customers a very special opportunity we offer these **Waists** of Spot Embroidered Net, lined with mercerized mull, at such a remarkably low price as would clear them out in short order if placed on sale in our Toronto Store. They are trimmed with pipings and Dutch collar of paillette silk in contrasting shade, closing invisibly at the back. **Choice of either White or Ecru net, with trimmings in Sky Blue, Green, or Rose. Bust sizes 32, 34, 36, 38, 40, 42 or 44. As the quantity is limited, select at once to avoid disappointment. Clearing at half price. 67c**

HALF PRICE

WOMEN'S VESTS

ONLY A CHANCE OFFER **29c**



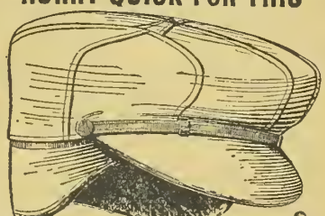
74-F14. Here's a great buying chance in **Women's Vests,** made of heavy fleece-lined cotton, high neck, and front opening trimmed with crochet edge; tape drawstring; long sleeves. **Sizes 32 to 38.** This is an unusually big value, and the price given is close to half regular value. Each **29c**

74-F10. Same style as above, but of fine Ribbed Merino, wool and cotton mixture, long sleeves. Almost half price. **Sizes 32 to 38.** Each..... **29c**

BUY WOOL AT THESE PRICES

1,500 lbs. of Excellent 4-ply Fingering Yarn, in Black only, best for general purposes, as sweater coats, men's sox or heavy mitts. Order early, as this line will not last long at the present price, which is much lower than you will be able to purchase next season owing to the strong advance in wools.
26-F38. Price, per lb., for clearing..... 59c
300 Gross Diamond ◈ Mending Wool, on cards, fast black, 27 yards on card with needle. While the supply lasts.
26-F23. 12 CARDS FOR..... 11c
3,500 Skeins of our Corona Aviation Wool, in colors of Pink, Green, Sky, Tan, Dark Cardinal, Brown. This is a nice soft wool, and suitable for caps, shawls, fascinators, and at the price now offered, which is below half, should appeal strongly to makers of these goods.
26-F32. 3 (ounce) SKEINS FOR. 10c

HURRY QUICK FOR THIS



42-F25. A bargain price in **Winter Caps.** To clear the balance of our Men's Winter Caps we are making this special offering of warm, high-grade Caps at greatly reduced price. Made in the popular golf shape, as shown in illustration, of fine quality Black Beaver and Dark Grey Melton Cloths, assorted Tweeds, also a few Black Beaver Driving Caps. All have fur-lined turn band, which can be worn up or turned down to cover the ears. All sizes **59c**

THE T. EATON Co LIMITED
TORONTO - CANADA

be made a success. Every bee-keeper has his own problems. Wintering, spring, dwindling, and the prevention of swarms are often a matter of location. The man who knows his conditions, can soon overcome those, but he who depends on luck, will never make a success. Mr. R. F. Holtermann, of Brantford, Ont., who harvested a crop of honey last season of over forty tons, says he neither looses or expects to lose any greater per cent of his colonies, than the successful stockman will loose of his live stock. This man is making bee-keeping a success, but it has only come with work and study. Put the same amount of intelligent work on your bees, as you would have to on any other branch of business, and success is assured.—E. L. Colpitts, Petitcodiac, N. B.

Make what you can out of this. It is taken from an English journal, which says: "At an agricultural meeting some remarks were made on the various remedies which had been recommended for the cattle plague, one of which was the following:—"That the therapeutic inferences drawn from the stgte of the peritoneum, the capillary engorgement of the omasum and the hyperdermic condition of the tissues, point to the organic hypsosulphites and the salicine with hypodermic and subcutaneous injection of morphia and ferruginous preparations as the best remedy."

Send your Raw
FURS to
John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE
HALLAM'S TRAPPERS GUIDE
French and English.

A book of 96 pages, fully illustrated. Game Laws revised to date—tells you how, when and where to trap, best steel traps to use, and many other valuable facts concerning the Raw Fur Industry, also over "Up-to-the-minute" fur quotations, sent ABSOLUTELY FREE for the asking. Write to-day—address JOHN HALLAM, Limited
Mail Dept. 5
111 Front St. East, TORONTO

BABY CHICKS

We can fill limited number of orders for B. P. Rock & W. Leghorn chicks this spring. Prices, April $20.-00 per 100. May, $15.00 per 100. Cash before shipment.

NEW LAID EGGS

We pay best cash market prices for new laid eggs delivered weekly.

LIVE POULTRY

Price per lb. on live market poultry quoted at any time also on dry picked, undrawn dead poultry.

BROODERS

Write us for prices on most modern Colony-house Brooder Stoves. Also a few second-hand Model indoor brooders for sale very reasonably.

KINNEAR POULTRY CO.
Sussex, N. B.

FARM FOR SALE

Containing 400 acres, 56 acres dyke land, 35 upland in high state of cultivation, 15 in bush land to be cleared and the remainder in timber, 2 good houses, 3 barns on farm in fair repair, plenty good water, 5 miles to station, 2 1-2 to steam boat landing, 2 to church ane store, 1-4 to school and Poss Office. Apply owner

W. B. KEIVER,
UPPER NEW HORTON. - ALBERT CO., N. B.

FERTILIZERS

We carry the famous
HARAB FERTILIZERS
Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,
Moncton, - - N. B.

A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $2.50 to $12. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

The Bateman-Wilkinson Co., Limited
2-4 Symington Av., Toronto, Can.

Spray Mixtures and Spraying.

(Continued from page 386)

res or so well but more in an ordinary season.

Agitator. A good agitator kept constantly working is very essential. The importance of good agitation is often overlooked. It keeps the mixture of uniform strength.

Nozzles. Another requisite is good nozzles. We are all using in Ontario the large disc nozzles of various makes. Most of these have two or three plates with them, one with a large opening, one with a small and another with a medium size. This enables a man to get a fine or coarse spray by merely changing the plates. For the Codling Moth spray the angle nozzle is a necessity. I like it also for the other sprays as a rule. It enables a man to send the spray in whatever direction he wishes, and also helps to prevent unnecessary waste

Hose. The best hose is usually the only one that should be purchased. For the man on the ground I like about 35 feet of hose, and about 12 to 14 feet for the man on the tower. This long hose for the former enables him to spray the tree behind while the man on the tower is doing the top of the next tree. Thus the men do not drench each other.

Pole. A ten-foot spray pole made of bamboo with an aluminum rod inside is to my mind most satisfactary for the man on the tower. It is light and if properly used will last for years. For the man on the ground 7 feet is a long enough rod usually. To prevent drip we cut a circular piece of leather about three inches in diameter, make a hole in the centre and place it just behind the nozzle or nozzles.

Strainer. If we are to push the work along with as few stops as possible a good atrainer with about 10 meshes to the inch is absolutely necessary so that the mixture may not clog the nozzles.

Tower. For tall trees a good strong tower about 5 or 6 ft. high is very necessary for thorough rapid work. The spray machine should always be well cleaned after each day's work by pumping clean water through it. I also loosen the nozzles to prevent setting.

TESTING THE MIXTURE.

If Lime-sulphur is used it should always be tested with an hydrometer before diluting it. A good specific gravity hydrometer can be secured for 80. postpaid. The testing is easily done. See my bulletin No. 198 pages 10 to 13, or the lower part of the spray calendar. Unless each barrel of the commercial or home-made concentrated is tested one never knows what strength he is putting on his trees.

METHODS OF APPLYING THE SPRAY.

In most cases the spraying should be done with the wind and in most cases the stronger this is the better for large trees as it carries the mixture right through them. As we can never be sure that the wind will change to the opposite direction in time to get the other side done before the calyces close, it is necessary to spray at least two-thirds of the tree as thoroughly as possible from the first side. Ta accomplish this, stop the waggon just before it comes to the tree and spray as far as you can on this side. Then drive directly opposite the tree and do this part. then go a little past it and finish as much of this side as can be conveniently reached. If this is done it is very seldom that the wind will not veer sufficiently to enable the rest of the tree to be done, even though not so thoroughly as if the wind were to change directly opposite. Where trees are wide it is often a good plan

Do not Spend your Money on Incomplete Fertilizers

That is do not buy a fertilizer, low in POTASH, because you will not get maximum yields from your farm.

Agricultural Authorities prove that all crops remove from the soil more POTASH than Phosphoric Acid; therefore, the folly of using a fertilizer containing less POTASH than Phosphoric Acid.

We will tell you the right kind of fertilizer to use—one that will make more money for you.

Having **POTASH, Acid Phosphate, and Nitrate of Soda** in stock, can quote you attractive prices on these three fertilizer materials, and will show you

How to Mix Your Goods at Home and Save Money

Make up your mind to have bigger crops this year by using the right kind of fertilizer.

With a high grade POTASH fertilizer you can get crops that will pay you many times over for the cost of fertilizers.

Drop in and let us tell you HOW TO MAKE MONEY FROM YOUR FARM.

A. R. WETMORE,
CLIFTON, - - - N. B.

Big Ben

Hitch Your Sleeping Schedule to Big Ben

Big Ben will wake you early enough for profitable before-breakfast action. His gentle get-up *call* starts the day with a *flying start* on thousands of farms.

For your accommodation he rings TWO WAYS. He'll get you up by degrees or in a hurry. Set him either way you wish—to give one long five-minute ring, or ten short rings at one-half-minute intervals, until you're wide awake.

He stands 7 inches tall; is triple-nickel plated over a tested implement steel coat, the handsomest and truest thoroughbred in the clock world. He has big, bold numerals and hands that show the time plainly at a glance, large keys that anyone can wind easily, and such a pleasant tone that you are glad to get up when he calls.

Big Ben makes early rising easy. He's the leader of the early morning brigade. His cheerful "good morning" ring calls millions of live wires to action. Thousands of successful farms are run on a Big Ben schedule. He starts you off right in the morning and keeps you right all day. From "Sun up" to "Lights out" he regulates your day. He'll work for 36 hours at a stretch and overtime, if necessary. The only pay he asks is one drop of oil a year.

He is sturdy and strong—built to last a lifetime. Yet under his dust-proof steel coat is the most delicate "works." That's why his on-the-dot accuracy has won him fame.

Big Ben's wonderful sales are due to his having "made good." His biggest hit has been with folks with the "make good" habit. He stands for success—that's why you'll like him for a friend.

When 3 million families find Big Ben a good clock to buy and 20,000 dealers *prove* he's a good clock to sell, it's evidence that he is worth $3.00 of *your* money. Suppose you trade $3.00 for him today.

A community of clockmakers stands back of him. Their imprint, *Made in La Salle, Illinois, by Westclox*, is the best alarm-clock insurance you can buy.

Her HEART and NERVES

Were So Bad She Could Not Sleep.

To those who sleep in a kind of a way, but whose rest is broken into by fearful dreams, nightmares, sinking and smothering sensations, who wake in the morning as tired as when they went to bed, we can recommend Milburn's Heart and Nerve Pills. By taking them you can have your old, peaceful, undisturbed, refreshing sleep back again.

Mrs. Chas. Teel, Horncastle, Ont., writes:—"Just a few lines to let you know what Milburn's Heart and Nerve Pills did for me. My heart and nerves were so bad I could not sleep, and the least noise or excitement would make me feel so that I used to think I was going to die, and I would tremble until I could hardly stand. I took doctor's medicine, but it did not do me much good. At last I tried Milburn's Heart and Nerve Pills, and I can certainly say they did me a great amount of good. I can recommend them to anyone who is suffering as I was."

Milburn's Heart and Nerve Pills are 50c. per box, 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

when finishing to hold the nozzles high and let the spray drift through the top; because in wide trees it is very hard without high pressure to get every part of the leaves, calyx and fruit covered on account of intervening leaves and branches.

Sometimes weather conditions and the stage of the blossoms or buds make it imperative that the whole orchard be sprayed without any delay such as is caused by waiting for the wind to change. In such cases one can spray as follows: Suppose the wind is blowing from the East, drive in a direction parallel withthe wind, the horses always facing it, that is, spray along the roads running East and West, starting always at the west end so that the horses may not get wet. As soon as the east end is reached turn around and go back to the west end and up the opposite side of the row thus finishing each row as you go. In this method one has, of course, to spray the west end of each tree against the wind, but this is only a small part of the tree and the east end of it gets tull benefit of the wind. In spraying the north and south sides respectively it is necessary to reach as far in towards the centre of the tree as possible, and it is wise to turn the nozzles against the wind because in this way one will cover both sides of the fruit, leaves or calyces, since the wind will drive the spray back again through the tree. Very good and fairly rapid work can be done in this way. The only trouble is that the man on the ground is likely to be drenched by the man on the tower. To prevent this he should wherever possible work in advance of tne latter as being lower he is not likely to wet the other.

If the Codling Moth is not very troublesome I should advise using a fine mist spray as this saves the mixture, makes it easier to pump, and gives just as good results. The plate with the small opening will, of course, give the fine mist. Most books on spraying will advise you to stop spraying just as soon as the leaves begin to drip. In Ontario I always attack this statement and have never had any reason to regret doing so. My advise to our men is always this. "Stay at the trees until you are satisfied with every leaf, calyx or apple has been thoroughly covered and don't worry if this causes the mixture to drop like rain from the trees." It is only from this thorough work that we can get really satisfactory results. Every man who does this at the right time is getting results and is delighted, others who do not are blaming everything except themselves for the failure to destroy Codling Moth, Scab, Ccale or other pests.

We find it necessary to use about 6 or 7 gallons of mixture for a tree 40 years of age for the application just before the blossoms open and 10 gallons just after these have fallen. Of course, we probably have to spray heavier than you at this time because the Codling Moth is a great pest in many of our orchards. If it were not bad 6 gallons or 7 would probably do us.

The first application before or as the buds are bursting takes about the same amount or a little less. In it we spray from the topmost twig to the base of the trunk at the ground because we want to keep our trunks healthy as well as our branches and twigs. In any orchard where Canker is troublesome I should advise you to spray the bark as well as the leaves and fruit at each application to prevent canker spores germinating and causing new cankers.

As to pressure any one who has used a gasoline outfit at 200 lbs. pressure soon sees how helpful for thorough quick work high pressure is. I should urge that one use as high pressure as he can conveniently get. To get good pressure often means repacking the pump, it means also keeping all fittings tight and in good working order.

I think that it must be difficult for the fruit growers of Nova Scotia to learn what real thorougn spraying means, because unlike us you have not had to choose between this and the loss from 40 to 80 per cent. of your fruit from the Codling Moth, or in a few of our districts the destruction of the trees by San Jose Scale. So I cannot emphasize too strongly the need of using the greatest intelligeoce in soraying and seeing to it tnat the work is done promptly, and thoroughly. Remember that there is no miracle about it. Good work gives good results, poor work is most discouraging. If you are not going to spray thoroughly you will be disappointed with the results but if you spray thoroughly and at the right times you will be delighted with the results and will prove for yourself that the claims made for it are justified. W

Dr. Morse's Indian Root Pills

exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

A Household Remedy

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

"NOW I have the best roof in this township. One that will last—one that's waterproof—one that will resist the hardest storms—and I didn't have a bit of trouble laying it."

That's about what every Amatite owner says. Its superiority over all other ready roofing is apparent to any one who uses it.

Amatite does away with all roofing troubles and unnecessary expenses because it is made with a real mineral surface that *needs no painting*. It is durable, fire retardant, practical, economical.

Don't buy any other roofing till you look up Amatite.

Write to nearest office for samples.

The Carritte-Paterson Mfg. Co., Limited
St. John, N. B. Halifax, N. S. Sydney, N. S.

12 Tumors Removed Without An Operation

Silver Lake, Ont., Sept. 20, 1909.

Dear Mrs. Currah,—I am enjoying better health than I have for eight years, and I think I am entirely cured. I have none of the old symptoms. I am very grateful for my present health, and think Orange Lily is the greatest treatment for women the world knows. Its use in my case caused 12 tumors or growths of some sort to be expelled. Some were as large as a hen's egg, and others smaller, down to the size of a walnut. You may use my case in your advertisement, for it is the solid truth, and pen cannot describe all the good it has done for me. Mrs. Louise E. Boiteridge.

This letter gives an indication of the positive benefits that always follow the use of Orange Lily. It is an applied treatment and comes in direct contact with the suffering organs. It produces results from the start in all cases of women's disorders, including painful periods, failing of womb, irregularities, leucorrhoea, etc.

I will send a sample box containing 10 days' treatment absolutely free to any suffering woman who has not yet tried it if she will send me her address. Enclose 3 stamps and address MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

To Be Able To Deduct One Grain Of Useful Suggestion Amongst A Heap Of Worthless Advice Is A Great Power, Truly

We pick out the Grain and hold it up for observation, when we tell you that

EDDY'S WARES

are the most reliable and the best, representing as they do over 60 year's experience.

It is for you to benefit by this advice and insist every time upon having **NONE BUT EDDY'S.**

THE E. B. EDDY COMPANY

Makers of Matches, Fibreware Articles, Paper and Paper Bags.

200,000 Have Learned to Play the Piano In One Hour.

Without Lessons or Knowledge of Music Anyone Can Play the Piano or Organ in One Hour.

Wonderful New System That Even a Child Can Use.

He—"You surprise me! You told me yesterday you couldn't play a note!"
She—"I couldn't; I learned to play in one hour by the wonderful 'Easy Method Music.'"

Impossible, you say? Let us prove it at our expense. We will teach you to play the piano or organ and will not ask one cent until you can play.

A musical genius from Chicago has invented a wonderful system whereby anyone can learn to play the Piano or Organ in one hour. With this new method you don't have to know one note from another, yet in an hour of practice you can be playing your favorite music with all the fingers of both hands and playing it well.

The invention is so simple that even a child can now master music without costly instruction. Anyone can have this new method on a free trial merely by asking. Simply write saying, "Send me the Easy Form Music Method as announced in The Maritime Farmer

FREE TRIAL

The complete system together with 100 pieces of music will then be sent to you Free, all charges prepaid and absolutely not one cent to pay. You keep it seven days to thoroughly prove it is all that is claimed for it, then if you are satisfied, send us $1.50 and one dollar a month until $6.50 in all is paid. If you are not delighted with it, send it back in seven days and you will have risked nothing and will be under no obligations to us.

Be sure to state number of white keys on your piano or organ, also post office. Address, Easy Method Music Co., Wilson Bldg., Toronto, Canada. 13

The "New Century" SMILE

Is worn by every housewife who uses one of these washers. The reason is quickly found for the New Century makes washing easy. It removes the hard rubbing and does the work more thoroughly than any other way.

The New Century Hand Washer works quickly and easily. It gushes the water through the fabric, leaving it sweet and clean in a few minutes. It cannot injure the finest garment you possess.

The product of twenty-five years experience in making washers, the New Century is without an equal. Patented features make it the leading hand washer.

Examine it at your dealer's or send to us for information.

CUMMER-DOWSWELL Limited
Hamilton, Ontario.

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You can say goodbye to constipation with a clear conscience if you use Chamberlain's Tablets. Many have been permanently cured by their use. For sale by all dealers.

The Westmorland Poultry Show

(Continued from page 377)

Pen, Class 97—Won by Samuel Steeves.

Barrel Cornmeal, donated by the Fawcett Mfg. Co., for best Breeding Pen, Plymouth Rocks, Barred—Won by Watson Lutz.

Clock, donated by Mr. A. H. Melanson, jeweler, for best Cockerel and Pullet, S. C. White Legharns—Won by Odbur James.

Box Cigars, donated by Messrs. Baird & Peters, for best Cockerel and Pullet, any variety Leghorns, except S. C. White—Won by Hartland Poultry Yards.

$2.00 Cash, donated by Mr. A. B. Bray, for Whitest Bird in Show—Won by Samuel Steeves.

$3.00Cash, donated by Mr. C. S. E. Robertson, for best Cockerel and Pullet, English breed—Won by Hugh Jardine, Jr.

$2.00Cash, donated by Mr. J. H. McInnes, for best Cockerel and Pullet, White Wyandottes—Won by Samuel Steeves.

Pair Boots, donated by Doyles, Ltd., for best Cockerel and Pullet, S. L. Wyandottes—Won by S. E. McKie.

$2.00Cash, donated by Mr. B. A. Lutz, for best pair Barred Rock Pullets, utility—Won by Allison Lutz.

Pair Boots, donated by J. J. Bourgeois & Co., for best Cockerel and Pullets, Light Brahmas—Won by Harry Day.

1 Ton Coal or $5.00 in Gold, donated by Moncton Fuel, Ice & Cartage Co., for best Cock and Hen, White Wyandottes—Won by Samuel Steeves.

$2.00Cash, donated by Mr. A. R. Whimby, for best Cockerel and Pullet, Rhode Island Reds—Won by Wm. J. Major.

1 Poultry Book, donated by the Reliable Poultry Journal, of Quincy, Illinois, for youngest exhibitor—J. E. McEachern.

For 4 Best Birds, Wyandottes, any variety, $2.50, donated by Mr. J. Edington—Won by Samuel Steeves.

For 4 Best Birds, Leghorns, any variety, $2.50, donated by Mr. J. Edington—Won by Odbur James.

The usual annual banquet of the Association was held in the course of which the various speakers were most optimistic in regard to the future of the poultry industry in general and the Westmorland Poultry and Pet Stock Association's Show in particular.

The Cape Breton Poultry Show.

The third annual show of the Cape Breton Poultry Association was held in St. Marv's Hall, Sydney Mines, on January 20th, 21st, and 22nd. The display of birds was above the average in quality. Many birds brought in from outside points at large figures were not successful in getting first money. The poultry men of Cape Breton are now breeding some very fancy show stock and expect to make a good showing at next winter's fair at Amherst. Prof. Landry judged the show in his usual prompt and pleasing style.

There was not one protest lodged with the management against his decisions. Which fact is certainly pleasing to everybody.

An entry list of 600 birds shows the awakening interest in the poultry business.

Single Comb Rhode Island Reds led in quantity of birds in any one class, there being 52 birds in the open class not including pens.

There was a splendid showing of White Leghorns, White Wyandottes, and Barred Plymouth Rocks.

The attendance at this first poultry show held at Sydney Mines was very poor. Not nearly up to the expectations of the management.

Barred Plymouth Rocks—Cock (5)—W. B. Ross, W. M. Voognt, T. C. Munn. Hen, (8)—T. C. Munn; 2 and 3, W. M. Vooght. Cockerel, (9)— 1 and 3, W. M. Vooght; 2, T. C. Munn Pullet (14)—1 and 3, W. M. Vooght; 2, W. B. Ross; 4, T. C. Munn.

White Plymouth Rocks—Cock, J. Barrington; Hen, 1, 2, 3, J. Barrington; Cockerel, C. W. Lovett, George Musgrove, J. Barrington. Pullet, C. W. Lovett, Geo. Musgrave, J. Barrington.

Buff Plymouth Rocks—All prizes went ta Rev. W. R. Turner.

Silver Wyandottes—All prizes went to S. H. Rudderham.

TO-DAY AND EVERYDAY

You'll Like the Flavor

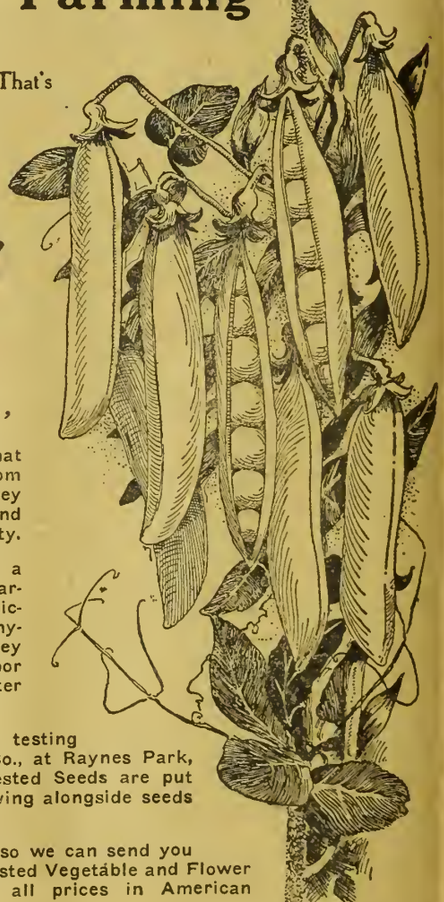
35¢-40¢-50¢ Per Pound

"Intensive" Seeds for Intensive Farming

Bigger crops per acre!

That's intensive farming. That's what every farmer wants.

But to get bigger crops, you must sow better seeds,—intensive seeds,



Carters Tested Seeds

"Seeds With a Lineage"

By "Tested" we mean first, that Carter's Seeds are free from dirt and weeds, second that they are tested for germination and production as well as for purity.

Carter's test, therefore, is a triple, threefold test, and Carter's Tested Seeds are practically a sure thing, as sure as anything on earth can be. They never waste your money, labor or time. They net you a greater profit.

At the famous trial and testing grounds of James Carter & Co., at Raynes Park, London, England, Carter's Tested Seeds are put to the real test of actual growing alongside seeds produced by rival growers.

Please write us your address so we can send you a free catalogue of Carter's Tested Vegetable and Flower Seeds—special edition, with all prices in American currency.

Carters Tested Seeds, Inc.

133 O King Street East, - - Toronto

Golden Wyandottes—All prizes went to T. C. Munn.

White Wyandottes—Cock— S. E. Jackson; 2 and 3, Fred Jackson. Hen —1, 2, 3, Fred Jackson. Cockerel— 1 and 3, Fred Jackson; 2, S. E. Jackson. Pullet—1 and 3, Fred Jackson; 2, Fertilizer Farm.

Partridge Wyandottes—2, cockerel, and 3 pullet, Geo. Musgrave. All other prizes to T. C. Munn.

Columbian Wyandottes—All prizes to T. C. Munn.

S. C. Rhode Island Reds—Cock (8), —T. C. Mdnn, W. M. Vooght, C. W. Lovett. Hen—(2), T. C. Munn, W. M. Vooght, H. W. Lovett. Cockerel (14)—C. W. Lovett, W. M. Vooght; 3 and 4 T. C. Munn. Pullet (18)—T. C. Munn, C. W. Lovett; 3 and 4, T. C. Munn.

Rose Comb R. I. Red—Cock—Chas. Johnston, W. H. Lovett, Geo. Musgrave. Hen—H. W. Lovett; 2 and 3, Chas. Johnston. Cockerel— George Musgrave; 2 and 3, Chas. Johnston. Pullet—1 and 2, Chas. Johnston; 3, Geo. Musgrave.

Brahmas—Cockerel—1 and 2, S. E. Jackson; 3, Geo. Musgrave. Pullet— 1 and 2, F. E. Jackson; 3, George Musgrave.

White Leghorn—Cock (6)— Fertilizer Farm; 2 and 3, Chas. Johnston. Hen, (4)—1 and 2, Chas. Johnston; 3, H. W. Lovett. Cockerel (13)—1, 2, 3, 4, Chas Johnston. Pullet (23) 1, 3, 4, Chas. Johnston; 2, H. W. Lovett.

S. C. Brown Leghorns—Cock (3)— Fred Jackson, H. J. Hunt, H. W. Lovett. Hen, (7) Fred Jackson; 2 and 3, H. W. Lovett. Cockerel (13)— 1 and 2, Fred Jackson, W. M. Vooght C. W. Lovett. Pullet, (9)—Melling & Gardner; 2, 3, 4, Fred Jackson.

Buff Leghorns—Cock—S. E. Jackson, W. M. Vooght. Hen—1 and 3, S. E. Jacvson; W. M. Vooght. Pullet—1 and 3, S. E. Jackson; 2, W. M. Vooght.

Black Minorcas—Cock—Wilson Gillis; Hen—1, 2, 3, Wilson Gillis; 4, Fertilizer Farm. Cockerel— Fertilizer Farm; Wm. Vooght, Harry Kelly. Pullet—1 and 2, Wilson Gillis; 3, Fertilizer Farm.

White Minorcas—1, cock, 1, hen, 2 Pullet, W. B. Ross. 1 Pullet— Wm. Scott.

Anconas—Cock—H. W. Lovett, Gordon Ross. Hen—1, 2, 3, H. W. Lovett. Cocketel—1 and 2, H. W. Lovett; 3, Gordon Ross. Pullet—1 and 2, Gordon Ross; 3, H. W. Lovett.

Orpingtons—1 and 2 Hen—W. M. Vooght. 1 cockerel and pullet, Harry Hassell.

Hamburgs—Cock—Geo. Morris. Hen —1 and 2, Thos. White. Pullet—1 and 3, Gordon Ross, Geo. Morris.

Houdans—Cock—Wm. Crawford, H. J. Huner. Hen—Wm. Crawford, H. J. Huner. Cockerel— Robert Hunter. Pullet—Robt. Hunter.

Campines—All prizes went to S. H. Rudderham.

Buff Cochin Bantams—1 Cock, 1 Hen, H. W. Lovett; 2, 3 hen, C. W. Lovett.

Black Cochin Bants—1 Cock, 1 Hen H. W. Lovett. 1 Cockerel, Pullet, 2 Cock, 2 Hen, C. W. Lovett.

White Cochin Bants—All prizes to C. W. Lovett.

Game Bantams—Cock— 1 and 2, Fertilizer Farm, G. Ross. Hen, 1 and 2, Fertilizer Farm; 3, H. W. Lovett. Cockerel, 1 and 3, G. Ross; 2, Fertilizer Farm. Pullet, 1 and 2, G. Ross; 2, Fertilizer Farm.

Breeding Pen Rocks—Adult Birds— W. S. Thompson.

Young birds—W. M. Vooght, T. C. Munn, W. S. Thampson.

Breeding Pen Wyandottes—Adult — W. B. Ross, Chas. Anderson.

Young Birds—F. E. Jackson, C. W. Lovett, Fred Jackson.

Breeding Pen S. C. R. I. Reds— Adult—C. W. Lovett.

Young Birds—H. W. Lovett, C. W. Lovett.

TALK No. 3
ON THE
"GEORGE" STEEL GALVANIZED SHINGLE

Now for a little talk on the QUALITY of
PEDLAR'S PERFECT PRODUCTS

IN this respect our customers get the fullest protection. All steel used is specially selected. It is actually higher priced stock than is considered standard.

It must be level and free from surface defects.
It must be galvanized to stand the copper sulphate test for coating.
Care in manufacture, retrimming of sheets and triple inspection guarantee a perfect fit.

"Pedlarize" your buildings by using the big "GEORGE" Shingle (24 in. x 24 in.) on your barns, and the smaller "OSHAWA" Shingle (16 in. x 20 in.) of identical pattern and quality on your houses, sheds and smaller buildings. They will outlast the building and the builder.

PEDLAR'S METAL SHINGLES PROTECT YOU FROM
FIRE, WIND, WATER AND LIGHTNING

Get our prices on Siding, Corrugated Iron, Vents, Eaves Trough, Conductor Pipe, Finials and Ornaments. Every article is standard throughout Canada.

The All-perfect Metal Shingle. No greater cost, but greater service and satisfaction. : : : :

The Pedlar People Limited
Oshawa - - Ontario
Established 1861

Large and varied stocks always carried at Oshawa, Montreal, Toronto, Chatham, London, Quebec, Calgary, Halifax, St. John, Sydney, Ottawa, Winnipeg, Vancouver.

G. H. Pedlar

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Bigger Profits
FROM YOUR LAND
MONEY IN POTATOES

Potatoes, if you grow them *right*, will yield a clear profit of over $125.00 an acre, at prevailing market prices.

O. K. CANADIAN
POTATO MACHINERY

is your surest aid to growing them *right*. With it you save labor, time and money. With it you insure perfect planting, cultivation, spraying, etc.—big crops. You accomplish the most at the lease expense.

This is because O.K. Canadian Machinery is carefully designed and carefully built. Seed Cutters, Planters, Cultivators, Hillers, Sprayers, Diggers, bearing the "O.K. Canadian" Trade Mark do their work swiftly and economically. Their excellence of material and workmanship guarantees you years and years of service from them. In those years they will save their cost many times over, in lessened labor and larger profits.

It will pay you to write for our free book, "Money in Potatoes." It contains almost everything there is to know about growing potatoes— from cutting seed to storing the crop. Write for it to-day.

CANADIAN POTATO MACHINERY CO. Limited
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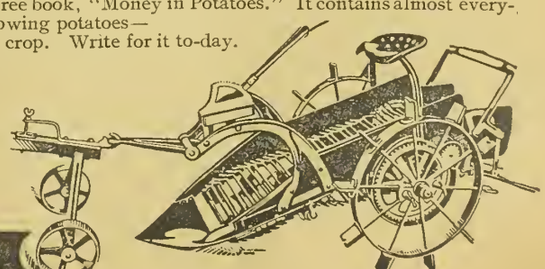


Breeding Pen Minorcas—Adult— W. B. Ross.

Young Birds—Wm. Scott.

Breeding Pen White Leghorns—Adult—J. Barrington.

Young Birds—Chas. Johnston; 2 & 3, J. Barrington.

Breeding Pens Brown Leghorns — Adult—H. W. Lovett, W. B. Ross.

Yong Birds—Fred Jackson, 2 and 3 H. J. Hunter.

Turkeys—All prizes went to J. L. Hare.

Ducks—Pekin, male—1 and 2, H. W. Lovett, J. Barrington.

Pekin, female—1 and 2, H. W. Lovett, J. Barrington.

Best Pair Fat Fowls—E. J. Johnston.

Best Pair Fat Chickens— E. J. Johnston.

Heaviest and Best Dozen Brown Eggs—1, 32 oz. C. W. Lovett, (R. I. Reds; 2nd, 29½ oz., Chas. Johnston, (R. I. Reds); 8, 29½ oz. H. W. Lovett, (R. I. Reds.)

Heaviest and Best Dozen White Eggs—1st, 27 oz., Melling & Gardner; 2nd, 28 oz., Chas. Johnston; 3rd 28 oz., W. B. Ross.

SPECIAL SILVER CUPS

Silver Cup donated by A. K. McLean, M. P., awarded for highest scoring bird in the show. Won in 2912 by T. C. Munn. Won in 1913 by W. McL. Vooght. Won in 1914 by Fred Jackson.

Silver Cup donated by the Maritime Poultry Supply Company, of Moncton, N. B., awarded for highest aggregate in the White Wyandotte Class. Won by Fred Jackson. ...

Silver Cup donated by R. H. Butts, Esq., M. P. P., awarded for the highest aggregate in the White Leghorn Class. Won by Chas. Johnston.

Silver Cup donated by the Cape Breton Poultry Association awarded for the highest aggregate in the Single Comb Brown Leghorn Class. Won by Fred Jackson.

Silver Cup donated by Mr. George I. Rice awarded to the exhibitor with the highest aggregate in the Barred Plymouth Rock Class—Won by W. M. Vooght.

Silver Cup donated by the Cape Breton Poultry Association awarded for the highest aggregate in the Single Comb Rhode Island Red Class. won by T. C. Munn.

N. B. Farmers and Dairymen in Annual Session.

(Continued from page 367)

bury, Henry Wilmot; Westmorland, J. R. Taylor; Victoria, A. J. Jensen; York, Ludlow Hoyt.

The convention, which closed on Friday, was one of the best in the history of the organization. The attendance reached over the 200 mark and a lot of practical work was accomplished. One measure which will be promptly dealt with is that con- in thegoods . A request will be made percentage of plant food is contained zers, so as to show exactly what cerning the proper marking of fertili- to tne Dominion Government tc amend the act so as to compel this. Hon. J. A. Murray has undertaken to present the claim in person at Ottawa and in response to his request that the association appoint a man to accompany the minister to Ottawa, Mr. Durost was named.

The last day of the convention was as busy as the others and many important subjects were discussed.

Potato culture was treated by Dr. Robert Newtown and C. Fred Fawcett, and these men brought many points in regard to the planting, cultivation and harvesting of potatoes.

Dr. Newton explained the best means of culture and advised each farmer to have an experimental plot of his own where he could try out different kinds of seed and methods. He thought this was a good plan for other crops besides potatoes.

The speaker soon had all the delegates interested and there was a discussion that brought out the different phases of the potato business that proved particularly helpful.

New Brunswick he thought presented ideal conditions for potato growing and he urged the farmers to secure as large a yield as possible.

During the meeting it was decided to rearrange the by-laws governing the organization and the following committee was appointed to draw up the new regulations and submit them at the next meeting: W. W. Hubbard R. G. Murray, S. L. Peters, Thos. Strong and A. R. Wetmore.

In the afternoon R. P. Gorham talked on potato diseases. He enumerated the different infections found in New Brunswick and described ways of treating these. He particularly warned the farmers of the Powdery Scab infection and urged them to unite with the Department of Agriculture in stamping out this plague.

After the judging of the seeds entered in the provincial seed fair, the meeting adjourned.

It is likely that a mid-summer meeting will be held when the members will assemble at the experimental farm at Doak and besides transacting business will have an opportunity of seeing the produce of the farm and investigate the methods of farming.

Farmers from all sections of the province had seed entered at the fair and the specimens were said to be better than usual.

The winners at the Provincial Seed Fair were as follows:

White Fife Wheat—1st, E. Lorne Hume, Florenceville; 2nd, Bertrand Goodspeed, Penniac; 3rd, Henry Gordon, Chatham; 4th, A. R. Gorham, Gorham's Bluff.

Red Fife Wheat—1st, Henry Gordoa, Chatham; 2nd, Donald Innis, Tobique.

White Russian Wheat—1st, T. Coy Goggin, Elgin; 2nd, H. B. Parlee, Sussex; 3rd, G. J. Dickson, Chatham; 4th, Henry Gordon, Chatham; 5th, Walter Payne, Lake Edward.

Any Other Variety Wheat—1st, Edward M. J. Jarvis, Stanley; 2nd, R. N. Underhill, Underhill.

Special Competition (open to all)—

"Staying" Quality

WHEN you buy a horse the important thing is—what will he do, and can he keep it up; not merely what is his price. A horse always looks like a horse, but what is *in* him cannot always be seen.

This also applies when selecting a fertilizer; they all *look* alike—but looks don't tell whether they are able to start a crop and keep it growing. Those that won't do it you do not want at *any* price.

A good fertilizer, like a good horse, has "staying qualities" and these qualities are possible only when the plant feeding elements are rightly balanced, with the right proportion made soluble and ready for rapid assimilation by the plant when it most needs them. When it wants to *grow* fast it must *feed* fast, and having made a good growth, must be fed to maturity. A good fertilizer will not forsake the crop half-way through its growing period.

BOWKER'S FERTILIZERS

are built on a quality basis; they are made to feed fast and also to hold out; they are made to bring the bushel cost low and the quality high.

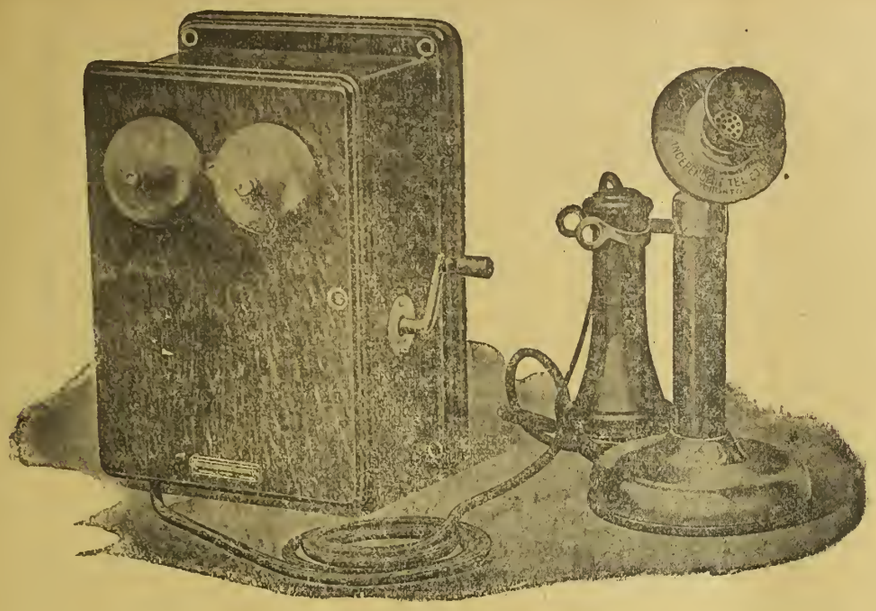
In our recent Potato Contests, fifty-three crops in fifty-three different parts of New England, raised by fifty-three different farmers averaged 326.2 bushels per acre. Weather and cultivation differed in each instance; the only condition that was alike in every case was the use of Bowker's Fertilizers. Can you beat such a record? Not with any other fertilizer.

Apply your horse-buying principles, and good "horse sense" in buying your fertilizers. All your life you have known Bowker's Fertilizers and their reputation—this year give your crops a chance to show what they can do in quantity and quality on Bowker's. Your profit can come only from your yield—therefore, you **must have able help in the soil.** This, Bowker's will give you—and through its use you get quick action and profitable yields.

Only a quality fertilizer can produce a quality crop.

Our Local agents will supply any quantity you desire. If, however, none are in your section write us for further information. Also, ask for our book "Plant Food." No advertising in it. It is helpful and it is sent free.

BOWKER FERTILIZER COMPANY
43 CHATHAM ST., BOSTON.



The Independent Desk Set.—The Very Latest thing in Magneto Desk Telephones

Merely to Show the Up-to-Dateness

WE print the above illustration of the very latest thing in desk telephones merely as an example of the up-to-dateness of our telephones and equipment. We claim that our telephones are superior in design, material and workmanship to any others on the market. We are prepared to furnish the proof by allowing you to try them on your line, free of charge. In that way you can judge their quality and efficiency before risking a cent. Write for illustrated description of this set.

Information Gladly Supplied

WE are prepared at all times to supply you with any information desired about telephones and telephone materials. We maintain a big, strong organization of experienced telephone men and qualified telephone engineers, who will plan the construction of your system on the most up-to-date lines, and solve any operation problem you may have.

The service we render our customers is certainly very complete and efficient But we are so closely interested in the success of all independent local and municipal companies, as their success means our success, that it is to our advantage to look after them well.

Write for our No. 3 Bulletin, which gives full particulars about the latest methods of building telephone lines. A copy will be mailed to you free on request. We also send you an illustrated description of our portable telephone or test set if you are interested.

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White Oats, Any Other Variety—st, H. B. Parlee; 2nd, H. Gordon; rd, D. Innes; 4th, N. F. Phillips; th, E. L. Hume; 6thi R. J. Shaw; th, J. W. Stevenson; 8th, A. R. orham; 9th, R. B. Shaw; 10th, W. . Parlee; 11th, W. H. Moore; 12th, W. Smith.

Early Bloom Oats—1st, D. Innes; nd, W. H. Moore; led, A. R. Gorham.

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Garden Peas—1st, H. B. Parlee; 2nd, A. R. Gorham.

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Potato Onion—1st, H. B. Parlee; 2nd, H. Gordon; 3rd, J. W. Smith; 4th, B. Goodspeed.

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To Make Perches for Poultry.

If there is anything about the furniture of the poultry house that needs careful attention it is the perches or roosts. On these the hens spend over half their time and it is necessary that they be given considerable attention.

The instinct of self preservation prompts fowls to perch on the highest point possible when taking their quarters for the night. They naturally desire to be above danger from below. For this reason the perches in the house should all be on the same level and not one higher than the other in the form of stairs, or there will be crowding and fighting for the high est positions. At some time the weaker hens will be pushed off these high perches, thus resulting in a cripple or death.

The perches should be low. There is no advantage in high roosts. Instead there are several disadvantages. Fowls of heavy breeds are almost certain to injure their feet flying down from a high roost to a hard floor, and the disease known as bumble feet then results. For the sake of superior ventilation perches should be low. The warmest air in the poultry house is near the roof, and the most impure air is there also. The lower air is purer, more plentiful and more enjoyable than that at the top of the house. Eighteen inches above the floor is plenty high enough to place the roosts.

Perches should be built so that they do not touch the walls at any place. When they do it is much easier for lice to thrive. The fewer creases and cracks wherein lice may find a lodging place about the perches, the better.

The roost poles should be two or three inches wide. Two or three scantling, slightly rounded on the upper edges, will make desirable perches. Then place them so they will be movable in order that they may be taken out of the house and cleaned once in a while.

Effect of Oats on Flavor of Milk.

It has been asserted by some dairymen that the feeding of crushed oats to cows will improve the flavor of milk. To ascertain the correctness of this theory a series of experiments was made by the Bureau of Animal Industry at the experimental dairy farm at Beltsville, Md. Six cows were used in the experiment; three were fed a grain ration of corn meal, bran and cottonseed meal; the other three were fed a grain mixture of five parts crushed oats and one part cottonseed meal. A number of samples of milk from the cows fed these rations were submitted to various persons in the dairy division and they were asked to indicate their preference. In all fifty opinions were passed on various samples. Of these, sixteen showed a preference for the milk from cows fed on crushed oats, twenty-five preferred that from the bran and corn ration, while nine expressed no choice. The results show that in these rations, not only was there no marked difference in favor of the crushed oats as a feed to improve flavor, but, if anything, the ration cantaining bran and corn was more successful in producing a fine flavored milk.

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POWDERY SCAB OF THE POTATO

Concerted Effort Needed For Its Extinction.

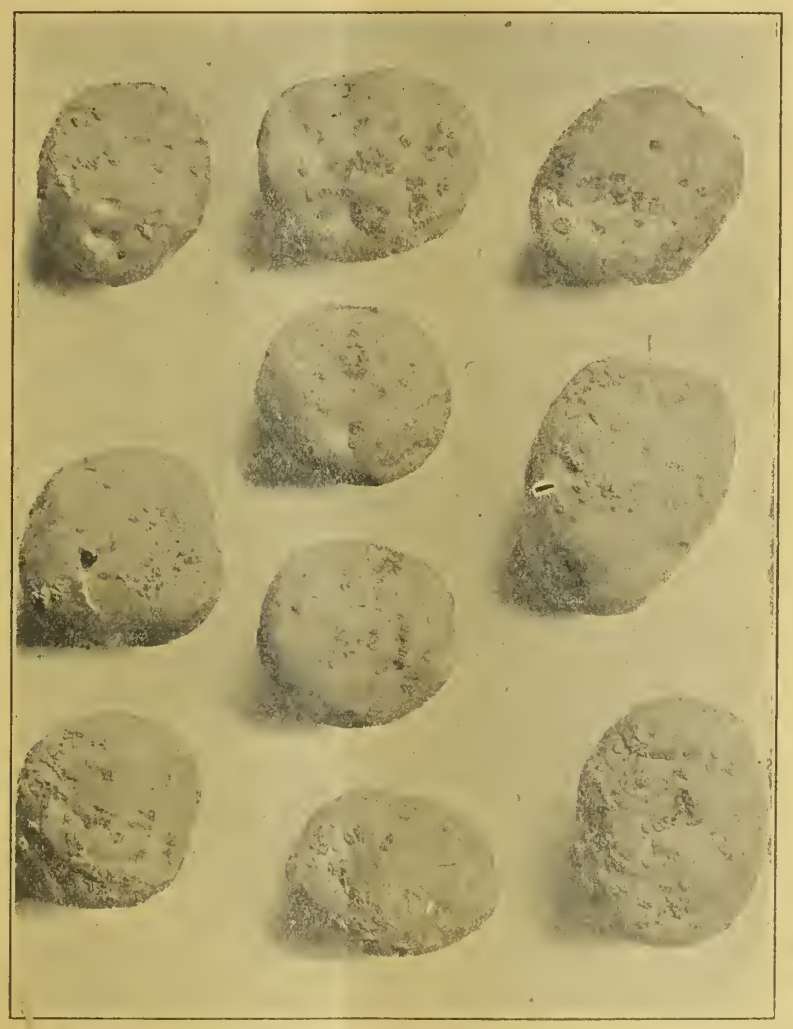
By A. G. Turney, Provincial Horticulturist, Fredericton, N. B.

This disease has been known for many years in parts of Europe and has had a number of different names. It was not until it invaded Ireland about twenty years ago, however, that it began to be recognized as a really serious disease of the potato.

The fungus causing the Powdery Scab of the potato is put in the genus spongospora which according to Professor Stevens, belongs to one of the lowest groups of soil organisms—the Myxomycetesi or slime fungi. None of the fungi belonging to this group form any regular mycelial or root like growth such as characterizes most other fungi. They are more nearly live some of the bacteria or low forms of ameboidal animal life and develop as small foreign bodies with n the cells of the host plant. By their growth they cause the production of abnormal forms or deformities such as the club-root of cabbage, the most common disease caused by fungi of this group. The particular fungus causing Powdery Scab on the potato closely follows this habit in its bad stages by producing gnarled and misshapen tubers showing large sores and areas of corky tissue.

The most characteristic feature of the disease in its mild form is the production of scab spots on the surface of the tubers. These spots vary in size but are usually about one-eighth inch in diameter and either raised or depressed. These burst up through the skin of the potato and if rubbed are found as dark raised sori with the skin at the edges turned back exposing the dark spore mass beneath. When rubbed the raised portions of these sori crumble into a mass of what appears to be dust. This leaves the spot as a slight depression in the skin of the potato. Each little grain of the dust-like powder rubbed off is a single "spore ball" and is composed of numerous spores bound together in a sponge-like mass. These are the spores that spread the disease from field to field and from farm to farm and that cause the soil where the diseased crop has been grown to become a source of infection for succeeding crops.

In the early stages, the disease takes the form of small pimples on the skin of the potato, later on these burst through and expose the mass of alive black spore balls. If the attack is only mild it does not amount to more than a number of these



Potatoes Affected by Mild Type of Powdery Scab

spots on the skin of the potato. Unfortunately, however, the disease often assumes a more injurious stage and causes the formation of open spores and misshapen tubers that are unsaleable and almost unfit for home use. A still worse feature about the disease is that the soil, where a diseased crop has been grown becomes infested with the spores and any succeeding crop of potatoes grown on the same field within eight years is almost sure to become affected. This makes it doubly hard to fight after more than one field on a farm has become infested. There is also the danger of introducing the disease on farms previously clean by the use of the infested seed. Tubers in themselves clean, may carry the spore balls adhering to the skin if they have been in contact with affected tubers or have been handled in barrels or bags previously used for diseased stock.

Inspection work in the province disclosed several districts where the use of a planter in common by a number of farmers appeared to be responsible for the spread of the fungus. In one district in particular over twenty farms were found along one road that showed more or less infestation, not generally amounting to more than 3 per cent. One farm was found where nearly 70 per cent. of the potatoes were infested. A planter had been used for two years on this farm and on all the others where the disease was found. This seemed to point to the badly infested farm as having been the seed ground from which the seed spread to the others. It was further learned that as all were growing the same variety of potatoes it was a common practice to carry on from farm to farm in the hopper of the machine whatever seed was left over from the last farm planted. To emphasize more strongly the spread of the disease in this way three farms were found in the midst of the infested area where a private planter had been used. This planter had never been used on any other farms or with any other than the seed grown on these farms. No signs of the disease were found on the potatoes there.

In another case the disease was found is a somewhat isolated district where it was hard to explain how it had gained an entrance. Enquiries brought out the information that each year a number of young men went from that district to help in the Maine potato harvest and that many of them brought back in their suit cases and grips samples of the Maine potato for seed. This seemed a possible explanation of the way in which the disease reached that district.

Some of the important features about the disease may be summarized as follows:

1. The disease in its mild stages causes unsightly scab spots on the skin of the potato.
2. In the severe stages of the disease it causes the production of deformed and spore-bearing potaeoes that are practically unsaleable.
3. The spores of the disease remain virile in the soil for eight or nine years at least and will start an infection in crops of potatoes planted on the land within that time.
4. The disease once established in one field is spread by succeeding potato crops to other fields until the whole farm becomes infested.
5. The presence of the disease in the soil of any one farm depreciates the value of that farm for any system of agriculture that involves the growing of potatoes.
6. The presence of the disease on one or two farms in a district depreciates the value of all the farms in that district for the sale of export of seed potatoes.

Mutton--From Field Across the Block to the Kitchen

By T. G. Paterson, Division of Animal Husbandry
University Farm, St. Paul, Minn.

Cuts by Courtesy of University of Minnesota

The food value of mutton is practically the same as that of beef except that as a rule mutton is a little fatter and consequently carries a smaller percentage of water than beef. Good mutton should be covered evenly with firm white fat. The color of the flesh varies from a very dark red in old, thin mutton to a cherry red in the best grade of fat, native mutton. It should be free from disagreeable odors and the carcass should be dry to the touch. In mutton of best quality the lean meat should be fine grained, smooth or velvety to the touch and have an admixture of fat with the lean is not so great as is found in beef.

All classes of sheep carcasses should carry an even, moderately thick covering of fat, to make really high class cut. Fat meat always has more flavor than thin meat. It contains less water and does not shrink much in cooking.

Mutton and lamb should be used to a greater extent by our people for the following reasons: It is as cheap as beef and the stewing cuts are generally the cheapest meats that can be purchased. Cleanly dressed mutton and lamb is just as palatable as any other class of meat and many people maintain that it is a better flavor.

Fig. 1. Handling a Sheep
(A) Right Way
(B) Wrong Way

Fig. 2. Sticking a Sheep on a Box to Prevent Soiling the Fleece.

Whole or half carcasses of mutton may be used by the family before the meat spoils. They furnish a change from the constant use of beef and pork. Sheep have very few contagious diseases and fewer sheep carcasses are condemned in packing plants than any other class of animals. Mutton is not excluded by any large class of people on religious grounds.

DRESSING SHEEP AND LAMBS

Tools.—The tools and conveniences necessary for dressing sheep are; a good sharp knife, a steel or whet stone, a small platform or box to keep the carcass off the ground, some convenience for hanging the carcass,

MUTTON OF QUALITY

strong piece of twine, a few wooden pegs or skewers, a pail of warm water, a cloth for washing the carcass, and a towel with which to keep the hands clean and dry.

Preparing the Sheep.—Wherever possible, it is advisable to take the sheep off feed for from twelve to twenty-four nours before slaughtering, with the exception of lambs, which will fret too much if taken from the dams and will consequently be in a feverish condition when slaughtered. As with all stock, however, sheep should be given all the water they want to drink.

Handling.—Always handle the sheep quietly so that they do not become excited and overheated before killing. Special care should be taken to see that sheep are not handled by the wool. Pulling the fleece by grabbing a sheep on the back or on the side as shown in Figure 1, B, will leave discolored, bruised spots on the carcass Kicking or pounding the animal has the same effect. Always catch a sheep by the neck, rear flank, or hind leg and hold it by placing one hand in the groove of the lower jaw and the other at the dock as in Figure A.

Besides causing bruises and discoloration of the carcass, handling by the wool is painful to the sheep. The fleeces of sheep selected for slaughter should be dry, as it is hard to obtain a clean, untainted carcass if the fleece is wet.

After such careful preparation for slaughter, the animal bleeds more thoroughly, the carcass cools out more rapidly, the entrails are easier to handle, the danger of cutting is lessened, the carcass makes a better appearance, and the flesh has a better color.

Dry, Clean, Killing-Place.—Sheep should be slaughtered on a dry, clean place and provision should be made to prevent the blood from coming in contact with the fleece. Remember that the cleaner and dryer the fleece is kept the easier it is to keep the carcass clean. An old door, a wagon box, or a few boards laid on the ground will make a suitable place on which to dress a sheep. A clean piece of grass sod could also be used.

Sticking.—The sheep should be laid on the left side on the edge of the killing floor or placed on a box as shown in Figure 2, to let the blood flow away from the fleece. Also see that there is nothing on which the sheep can get a foothold while struggling. Stand behind the sheep, place the knee firmly in the fore flank just back of the forelegs, pulling it over on its back with your knee until the feet are clear of the floor. Grasp the sheep by the under jaw with the left hand and turn the head slightly. This helps to keep the sheep on its side, but do not pull the head back so far that its wind is shut off causing violent struggling. Stick the knife into the angle of the jaw below and behind the ear, running the back of the knife close to the neck bone and then cut outward, thus severing all the veins and arteries.

Lay the knife down and break the sheep's neck by placing the right hand on the forehead and pulling upward with the other at the point of the jaw. Breaking the neck stuns the sheep and if for any reason the neck cannot be broken, the spinal cord should be cut at the atlas joint to accomplish the same result. Hold the sheep until it ceases to struggle, so that the fleece will not be spoiled with blood. Sheep may be stuck through the neck at the angle of the jaw without cutting out, but the other method is more successful for the beginner. Remember not to lay the sheep on the right side unless you are left-handed and never put the knife where the sheep is likely to hit it with its feet.

Fig. 4. Opening the Pelt Behind.

Opening the Fleece.—After the sheep is dead begin to open up the fleece with the knife. From this point on, it is best to have some definite system to avoid unnecessary work and the chance of forgeting to do things at the proper time. Start at the head and remove the tongue by cutting off the skin from the lower jaw, then cut down each side of the tongue close to the jaw bones loosening the tongue at the point and cutting it off at the root. The tongue should be cleaned in cold water by scraping it from the tip backwards with a knife.

Now start on the right front leg. Put the sheep's foot between your knees letting the carcass lean away from you and keep the leg pulled tight. Then start somewhere on a line between the knee and the shoulder point and cut out a small strip of skin down the front of the leg to the ankle, being sure to take all the pelt from the front of the knee as shown in Figure 3, B. Continue the opening down over the shoulder point to a point in the center of the neek in front of the brisket, and follow the opening down the center of the neck.

Fig. 3. Method of Opening the Fleece

The knife should run flat and the pelt raised as the cut is made so as to avoid cutting turough the fell, which covers the outside of the carcass, and making unsightly gashes in the carcass. Do the same thing on the left front leg, meeting the opening on the right side in front of the brisket. By opening the pelt in this manner a triangular shaped piece is obtained in front of the brisket as shown in Figure 3. A, which is necessary to secure easy skinning of the brisket.

To open the fleece on the hind leg, hold the hind leg by placing the foot between your knees, letting the body of the sheep lie away from you and pull the foot forward, so as to

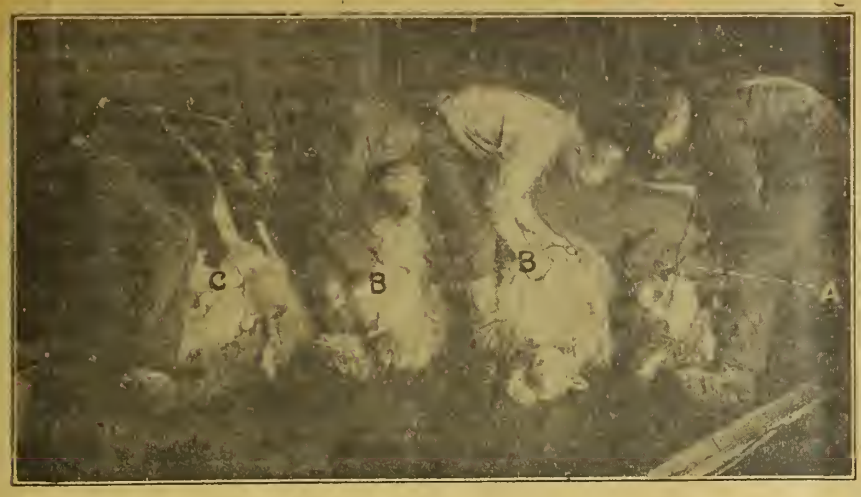


Fig. 5. Fisting-Off the Front End

tighten the pelt as shown in Figure 4, A. Start on the back of the leg somewhere on a l ne between the hock and the tail and cut out a piece of and pelt down to the foot being sure that both dew-claws are removed, then continue the opening to a point just below the tail, running the knife flat so as to avoid cutting the carcass. One should be more careful opening the hind leg than the front because it is the higher priced cut. This method leaves another triangular piece of pelt to aid in skinning off the flank as shown in Figure 4, B. Remember that the opening is made over the back of the hind leg and the front of the front leg. This is practically all the skinning that should be done with a knife.

Fisting-Off.—The next step is to fist-off the pelt from the under side of the sheep. Before beginning, the hands should be clean and dry and be kept so until the pelt is removed. Grasp the triangular shaped piece left in front of the brisket and pull the pelt back over the brisket as far as possible as shown in F g. 5, A. Standing with one foot on the sheep's head will hold the carcass steady. In case of young sheep and lambs the pelt can be pulled back over the brisket, but in case of older animals it may give a little trouble. Begin at either side of the brisket as shown in Figure 5, B, and work off the entire front part of the belly by working the fist between the pelt and carcass as shown in Figure 5, C, keeping the pelt tight with the left hand.

Very often a pelt that sticks at the brisket can be removed by working it loose behind and then pulling it forward. Fist down as far on the sides as is convenient. It is a good plan to fist-off a piece on each side of the opening made along the center of the neck. This will prevent tearing the neck when the pelt is pulled down the back.

Next, start at the V-shaped piece left in the rear and pull it upward, as shown at B in Figure 4, so as to start the pelt. Standing on the dock will hold down the carcass while starting the pelt. Be careful not to tear the flank or pull off the cord or udder, as the case may be, from the carcass. Start to fist along the middle line until the opening has been made that meets the loose pelt. Now work to either side, pushing down the side from the naval and working back across the flank, stifle, and the inside of the leg. If this method is followed there is little danger of teaing the flank muscles, which is nearly always done by a beginner who tries to fist-off the rear part by working straight in from behind.

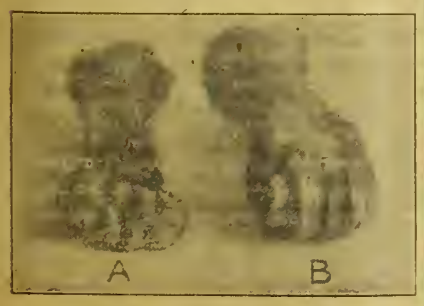


Fig. 6. (A) Break ot Lamb Joint
(B) Mutton or Round Joint

Next, loosen the tendons in the hind leg so that they may be tied together to hang up the sheep. To do this, hold the hind leg in the same position as when opening the pelt and skin around each side of the hock so that a finger can be inserted between the pelt and the hock, then loosen both tendons by cutting between the bone and the tendon on the back of the leg somewhere between the hock and the ankle. Then turn the knife so that the back of the blade is pointing towards the hock and pull the pelt off the leg starting at the place made by skinning around the hock. Skin the leg right down to the foot, then remove the foot at the lowest joint as shown at C in Figure 3. Never remove the foot at the ankle joint because the tendons will pull out and the sheep will then have to be hung by the hock. Next tie the tendons together with a stout cord and hang at a convenient height. By the method described no part of the carcass is exposed until the sheep is hung up.

Removing the Pelt from the Body.—Split the pelt down the center and remove the front toes. The joint, at which the toes are removed will depend on the age of the sheep. In the case of lambs, yearling wethers, and a few young yearling ewes, the toes should be removed at the lamb or break joint, Figure 6, A, by cutting across the raise on the cannon bone just above the ankle and twisting the foot. In the case of long-yearling ewes and all sheep over two years old ,this joint will not break. Therefore the toes will have to be removed at the ankle or mutton joint, Figure 6, B. The best guide in doing this is to cut below and under the dewclaws until the joint is exposed. The point at which the toes are taken off determines to a large extent the selling value of a carcass for it practically differentiates between lamb and mutton. If the break joint is porous and red it is a safe indication that the carcass is that of a lamb, and if dry and brittle the carcass is that of a yearling.

Fig. 7. Steps in Removing the Pelt

Fig. 8. Removing the Head.

The next step is to begin fisting the left side by starting somewhere near the center of the belly and working upward on the leg as shown in Figure 7, A. As a rule always work upward on the leg to avoid pulling the fell from the carcass. Continue fisting-off until the leg is clear and the pelt is loosened to the tailhead or dock on the rightside. Then begin to fist downward to the fore flank working the arm downward over the point of the shoulder through to the opening made in the neck, and pull the pelt from the front leg as shown in Figure 7, B. If the knee has been skinned off in opening the fleece and the toes have been removed, the front leg may be skinned out easily.

The right side should be fisted-off the same way using the left hand but in case you do not use your left hand readily there is no objection to continuing fisting from the left side round to the right side with the right hand. Be careful in fisting-off the pelt on the rump to avoid tearing the rump fat and always work the leg off first because the pelt will then roll away from the carcass and prevent undue soiling of the carcass by the wool. The tail w ll need to be loosened with a knife by cutting a piece from the under side. While doing this it is best to cut around the rectum and loosen it by pulling it out a short distance. Next pull the pelt from the tail down back to the head, being careful not to tear the fell. Pull the pelt down the head as far as possible, then cut off the head where it has previously been broken at the atlas joint. It is best to cut from the under side of the neck outward, as shown in Fugure 8, A, so as to leave all the muscle and fat on the neck, thus avoiding a scraggly, bony neck. After removing the head cut off the ends of the gullet and the windpipe as shown in Figure 8, B, then raise the front legs and make a deep incision immediately in front of the breastbone and continue to cut down the center of the neck. This allows the blood that may be held in the large arteries near the heart to escape and also loosens the windpipe and gullet so that they may be easily pulled out when removing the pluck.

Washing the carcass.—If the carcass has been neatly and cleanly dressed, there will be little need for washing. All that is necessary will be to wipe it with a dry, hot cloth but if it is badly soiled, it is best to wash it thoroughly with hot water being sure to dry it carefully. The hot water will bleach the carcass and give it a whiter appearance. In summertime it is possibly a good plan to wash the carcass on the outside with cold water as this will tend to cool it. If the veins and capillaries on the outside are filled with blood, it is a good plan to scrape along the vein with a knife pushing the blood back to improve the appearance.

Evisceration.—Before commencing to remove the vicera, be sure the windpipe and rectum have been loosened as already described. Begin by making an opening in front of the cod or udder, as the case may be, and open the carcass down the middle line to the breastbone, placing the point of the knife between the fingers to guard against cutting any of the internal organs.

In the case of lambs, or yearling wethers, that are not too fat, remove the caul fat from the stomach being careful not to tear it and lay it on the pelt to keep it warm In case the pelt is dirty, the fat may

(Continued on page 412)

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—"I saw" your adv. in the MARITIME FARMER.

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R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

MARCH 24, 1914.

DATES OF ISSUE.

April 7-21
May 5-26

THE VALUE OF GOOD SEED.

If you have not already prepared your seed grain do so without delay. Don't sow grain taken indiscriminately from the bin. If you do you will be perpetrating one of the leaks that rob the efficacy of your farm. Fifty percent of such grain is absolutely wasted when used for seed. In the rapid race of growth made by the grain when sowed under favorable conditions only the fittest survive. Small, shrunken grain is no more fit to produce a bumper crop than is unkempt scrubby stock to produce show ring winners. Always bear in mind that one of the laws of nature is that "like produces like," and you cannot change it. You may spend valuable time and money in preparing the soil on which you wish to grow a grain crop, but if you use inferior seed your efforts will be next to wasted. At this season of the year there is only one selection that you can make and that is a farming mill selection. There are sure to be some stormy days between now and seeding time when it will be too disagreeable to work out-of-doors, when it would not pay you to work outside, but if you apply yourself to the work of grading your seed grain on such days, we know of no work that you can do in the course of the year that will prove more remunerative.

If you have no grain that is fit to grade for seed it will pay you to buy from some reliable grower who practices a good system of selection. If there is no such farmer in your vicinity write to some reliable seed firm for your needs, you will find their ads. in the MARITIME FARMER.

What the MARITIME FARMER would advise its readers to do in this line would be to purchase some registered seed, get in touch with the Canadian Seed Growers' Association and in future select their own seed according to the methods recommended by that body.

"From small beginnings," we heard Dr. Robertson say at the annual meeting of the Association recently held in Ottawa, "the Association has grown until in 1913 no fewer than 1054 farms were growing special seed and it is estimated that the results of this better seed will put at least $3,000,000 more into the farmers' pockets the coming fall." He also said "the members of the Association are now growing better strains of grain than the world has ever known before.

The members of the Canadian Seed Growers' Association are today doing the best work that is being done on this Continent for the improvement of seed. It will not cost you anything to co-operate with them and it will mean bigger returns from your various crops. The MARITIME FARMER will be pleased to furnish you with any information you may require along this line. Start right by using good seed this spring and you will have no difficulty in keeping right.

VALUE OF EDUCATION.

It may be rather difficult to estimate the value of education for the farmer. It was not more than a hundred years ago when an education was considered undesirable for anyone who was not intended for one of the so-called learned professions, the ministry, law, or medicine, with an occasional exception in favor of the man or woman who was intended for a literary career. Literature as a profession, apart from the other learned professions, is something comparatively new, however, which accounts for the fact that so many of the great writers of the past have been doctors, lawyers or clergymen, or men who were originally intended for one or the other of those professions.

There was a time when it was not supposed to be necessary for a person to be even well educated in the ordinary acceptation of that term, in order to engage in literary work, certainly not to the extent of having a college education. As for the man in business, or the farmer, the three r's were supposed to be all that was at all desirable; for the farmer a very little of those was considered all that was necessary.

Great is the injury that has been done to the cause of the greatest industry, the most noble profession in the world—agriculture—by the malevolent influence of that anti-education idea. It has kept a great many otherwise sensible and enterprising men from accomplishing the most and best of which they have been capable. It has to a great extent kept the business of farming down to a grade below that of other less important and less elevating occupations. It has made of a great many farmers simply more of the laborers who have been struggling for the bare means of existence rather than supporters of the rest of the world, men and women who have not had the strength of character to rise above their enforced conditions. It has made of many a farmer a sordid, miserly, burden-bearing being, instead of the man he should be, capable of enjoying the finer things of life, capable of pleasure and satisfaction in his labor and appreciation of the good things of the world.

Read Page 439 of the MARITIME FARMER and read about how the campaign for better Agricultural Education for the farmer is progressing in Nova Scotia. Short courses and a continuous system of Institute meetings are being held in Prince Edward Island and much good is resulting therefrom. As we go to press a very successful series of short courses is being completed in the Fisher Vocational School, Woodstock, N. B., and the Dairy and Domestic Science School is opening in Sussex. Before we go to press with our first April issue the Maritime Horse Show will have been held in Amherst. It too is an educational function that you should attend. Remember the dates April 1st to 4th. The Prince Edward Island Horse Show will be held on the 25th and 26th inst.

LEARN TO DO THINGS.

The way to learn to do a thing is to do it. To know the theory of it will help, but after all one learns to walk by walking. The boy who has had a chance to do all manner of work on the farm is in a distinctly better case than the one who has been constantly in school. But the boy who has been to school and has worked hard and successfully on the farm too is happiest, for he can do and do with intelligence. There is a considerable demand for young men to manage farms. There is soon to be great demand for capable young men to undertake the uplift of counties. Assuredly they must have the theories right, but then they must also be able to do. The young man who meets the skeptical farmer in the field and quietly adjusts his defective plow so that it does good work has that man's confidence from then on. The young man who wishes to have the fun of helping in the big agricultural uplift should begin by getting into the game as an effective worker on the best managed farm he can find. There let him study efficiency, his own effciency chiefly. Happy is the boy whose father is a farmer; he can train himself in efficiency on the home acres. It brings out self-reliance and confidence in one's ability to do things.

FOOD FOR THOUGHT.

Some day we will learn that it is just as important for us to see that the child of somebody else is given an education as it is that our own should be trained.

The law that we should love our neighbor is not a Sunday School goody-goody platitude. It has teeth and claws.

We must keep all the children in school all the time, or we must pay the penalty.

We must train the other family's boy, if even only for self protection.—FRANK CRANE.

"I have been watching the career of young men in the city for 30 years and I find that the chief difference between the successful men and the failures lies in the single element of staying power."—THEODORE CUYLER.

"He also that is slothful in his work is brother to him that is a great waster." PROVERBS 18:9.

The farmer needs a discerning eye to tell friend from foe among insects, birds, brutes and men. Nearly all profess friendship for him.

Not much use in buying expensive farm machinery unless you take good care of it. Building sheds is lots cheaper than buying utensils that are rusted out—not worn out.

When a fellow is all wrapped up in himself he usually thinks he's a pretty warm proposition.

Review of Women's Institute Work in New Brunswick

This Branch of the Departmental work is under the regular charge and direct control of Miss Hazel E. Winter, of Fredereiton, who was appointed by the Government, as Supervisor in January 1913. Miss Winter devotes her entire time to the Institutes. The Secretaries send her monthly reports of their meetings and Miss Winter is always willing to assist in preparing programs for the year and to help any member anxious to obtain material in the preparation of a paper.

In June, 1911, two lady speakers were sent out to organize for the first time in the history of New Brunswick, what is known as "Women's Institutes." An organization which has for its object the introduction of higher ideals and nobler sentiments is bound to live, and as a result of New Brunswick's first trial sixteen organizations were formed. During the following months some of these affiliated, (being near together) while others, through lack of a leader, or for other reason, failed to exist, but those living proved to be a power of good to the individual and the community.

Again, in August, 1912, it was deemed advisable to send two more delegates to visit the Institutes already organized, and to assist in forming Societies in other localities where the women of these districts might desire. The field work of these ladies increased the branches in number to twenty-five. These, with the exception of two, have lived, and the field work accomplished last fall has shown that the Women's Institute is an organization that has come to stay. It exercises a beneficial influence upon the individual and the community, especially in rural districts, and although this work is yet in its infancy as compared with Ontario, the work in New Brunswick is rapidly coming to the front and has indeed a very important part to play in the lives of New Brunswick homemakers.

Not until within the last year has it been possible to obtain much money from the Government for Institute work. Being a new Society, they were somewhat afraid it might not succeed, but after being shown what ambitious and intelligent women are in the Province of New Brunswick, the Government readily set aside a substantial sum and the Department of Agriculture was then in a better position to aid the women in this noble work. A Grant of Five Dollars was given to each Branch having a paid-up membership of at least fifteen, and all Branches were provided with Minute Books, Report Forms, Hand Books and literature sent out from the Department.

Last February a Convention was held at Fredericton, which resulted in a large gathering of women from every part of the Province. The Convention was a success in every sense of the word, and the women were eager to return to their respective localities and tell their fellow-workers how the local Institute could be made a greater influence for good. Preparations are now being made for the second Annual Convention, to be again held at the Capital, in June. The members have increased so in numbers, that a much larger attendance is expected this year.

The months of September, October and November of 1913 were devoted to field work. It is a recognized fact that more good can be done by visiting the different Institutes than in any other way, and it has become a custom for lady lecturers to be sent

Miss Hazel Winter

Supervisor of Women's Institute for New Brunswick. A leader in the "For Home and County" Movement.

out once a year to visit the many localities where Institites are in existence. Four ladies, including an organizer, lecturer, demonstrator in Household Science and demonstrator in Home Nursing were sent out, at the time above mentioned, visiting in all fifty-one places and effecting organizations at eighteen new places. There are at the present time, forty-one Branches of Women's Institutes in New Brunswick, with a membership of one thousand.

Last September, at the Fredericton Exhibition, four rooms, comprising Model Kitchen, Dining-room, Bedroom and Ladies' Rest Room were provided for the Women's Institutes Demonstrations were given each day along nursing and cooking lines, which members as well as visitors were much benefited by. It is the intention of the Department to have a Ladies' Rest Room at the St. John Exhibition this fall.

Bulletins have been printed and distributed among the members on,—"Making Homes Attractive," "Valuable Hints on Nursing," "Uses of Fruits in the Household," and "Children." During the year more are to be printed along lines of special interest to all homemakers.

It was also the intention of the Department to spend part of the funds on a Travelling Library, but afterwards it was decided to make a present of six books to each Branch and to pay half the price on all books bought by the different Branches, thus encouraging them to start a Library of their own. These books are to be given to the delegates representing the different Institutes at the Convention in June.

The Department of Agriculture is giving and is prepared to give special attention to the developing and extending of Women's Institute work. The work has grown steadily since its organization. The subjects taken up at the meeting are such as bear directly upon the every dav activities of the women and cannot but be of great assistance to those who take advantage of these meetings.

The following is a programme mapped out by the Upper Keswick and Scotch Lake Branch of the New Brunswick Women's Institute. It will give one an idea of the range of subjects dealt with:—

January:—Resolved that 1914 be the best year yet; Care of Child during firstyear, Mrs. E. Jewett; Invalid Cookery, Mrs. H. Jewett.

February:—How to put out a fire, All; Remedies for Scalds and Burns, All.

March:—Window Box Plants, Mrs. H. Sargent; The value of keeping Household Accounts, Mrs. Robertson; The disease "Rheumatism" discussed, Dr. Robertson.

April:—Governing of New Brunswick; our advantages living in New Brunswick, Mr. Wm. Moore; Systematic Housecleaning.

May:—Fly Peril; Prevention of Moths, Mrs. F. Coburn; Beautifying of Highways, All.

June:—Noted Women of Canada, Mrs. Robertson; Sweeping and Dusting; Care of Lamps, Mrs. F. Gordon.

July:—Simple desserts for warm weather, Mrs. C. Sloat; Defects in Buttermaking, Mrs. Wm. Coburn.

August:—Picnic.

September:—The relation of the parent to the public school, Miss N. Moore; Canning of peas, beans, tomatoes, etc., All.

October:—Poultry Hints, All; Demonstration, Pumpkin Pie, Mrs. H. Jewett; Good Books that we should read, All.

November:—Cooking without eggs, Mrs. G. Hagerman; The 20th Century Farmer's Wife, Mrs. J. Jewett.

December:—Simple meals, well cooked and nicely served, their refining influence, Mrs. Jackson; Infectious Diseases, Dr. Robertson.

One may ask the question, "In what way have the communities where organizations have been formed been benefited by the Women's Institute?" Ans.—Circulating Libraries; building and repairing Public Halls as well as furnishing them; suppressing the sale of cigarettes and tobacco to minors; improving parks and schools; planting of trees; giving prizes to schools for nicely kept gardens; presenting the schools with flags, drinking cups, etc., providing fountains, lights, side-walks and last but not least, erecting a band-stand for the town.

"The Institute is for women what the public school is to the nation. All denominations and classes meet together and they are one. Class, social position, wealth, religion, are all swept aside, and each one must find her own level and each one must be taken on her own merits." The Institute is not for the amusement of a select few; it is a strong, live, active organization, and every woman and girl, whether in village, town or city, should be brought under its beneficial influence.

Mothers and daughters who are not members of this grand body of women, should make a special effort to get in touch with Secretaries near their homes and become members. Mothers and daughters who live too far away from a Women's Institute to join, but are eager to belong to an organization which stands for all that is noble and high and good, should communicate with Miss Winter, the Supervisor, who will be only too glad to go to their locality with the view of organizing a Branch which has for its motto, "Home and Country."

FERTILIZER ANALYSIS

Editor The Maritime Farmer:—

In buying fertilizer the object is to obtain actual plant food. It is not sufficient to purchase merely fertilizer or even Jones' Bumper Crop Produce or Smith's Potato Grower since all mixtures contain plant food in varying quantities. The analysis should be the factor influencing the choice of fertilizer. By selecting a fertilizer according to the analysis the most economical and efficient one for the crop and soil intended can more easily be chosen.

The fertilizer act requires that every package, bag, barrel, etc., of fertilizer should carry a statement of the analysis of the fertilizer contained giving the percentage of plant food therein. This applies to the separate ingredients as well as to the complete fertilizers which contain the three plant food essentials, nitrogen, phosphoric acid, and potash.

The following is an example of a statement of analysis is found on a bag of fertilizers.

Niteogen	2.47 to 5.29 p.c.
Equal to Ammonia ...	3.00 to 4.00 p.c.
Soluble Phosphoric Acid	6.00 to 7.00 p.c.
Reverted	2.00 to 3.00 p.c.
Available	8.00 to 10.00 p.c.
Insoluble	1.00 to 2.00 p.c.
Total	9.00 to 12.00 p.c.
Actual Potash	3.00 to 4.00 p.c.
Equal to Sulphate of Potash	5.55 to 7.40 p.c.

The analysis as published by the various manufacturers differ. Some use a long complicated statement as the above while others have simplified their statements to little more than the essentials. All that is of value in the fertilizes analysis is as follows:

Available Phosphoric Acid .....p. c.
Nitrogen .... p. c.
Actual Potash .... p. c.

It should be noted, however, that some manufacturers express the nitrogen only as "equal to ammonia." The only value of the ammonia is the nitrogen contained. It should be remembered that when the nitrogen is expressed as equal to ammonia the percentage reads a little higher though actually of the same value.

In the above, two percentages are given lowest and the possible highest Since the manufacturer is responsible only for the percentages of plant food as expressed in the first column only those percentages need be considered.

Each fertilizer manufacturer puts out a number of different mixtures varying in the plant food content. In a general way these can be grouped as low grade, medium grade and high grade mixtures. These terms are in no way indicative of the availability of the plant food content nor of the quality of the ingredients used but refer only to the percentage of plant food contained.

The following would be examples:—

Grade	Per cent. Nitrogen	Per cent. Available Phos. Acid	Per cent. Actual Potash
Low	1.5	7	3
Medium..	2.0	8	5
High.....	3.25	8	10

The high grade mixtures are the cheapest. Necessarily they cost more per ton, but the cost of the actual plant food per pound is less. This is easily understood since the cost of actual mixing, bagging, freighting, and selling is the same in all cases. This makes the cost of all mixed fertilizers the same up to a certain point. The difference in the price of the different brands, then, is due to the different amounts of plant food contained. With a high grade fertili-

(Continued on page 434)

Mutton.

(Continued from page 409)

be put into a pail of lukewarm water.

Next, tear the paunch loose at the spleen, and then pull the large intestine downward being careful to leave all the fat possible and also be careful not to loosen the kidney fat. It will be necessary to loosen the viscera just back of the pancreas with a knife and then loosen the liver and pull the viscera forward and cut the gullet below the stomach. It is much safer for a beginner to remove the liver with the stomach and intestines and detach it from the remainder of the viscera after they have been taken from the carcass. Remove the gall bladder from the liver and examine the liver thoroughly for parasites. If it is healthy it should be put in a pail of cold water so that it will cool out quickly.

Fig. 9. The Caul Fat.
(A) Caul Fat Not Wrapped About Hind Legs.
(B) Wrapped About the Hind Legs as Usual in Case of Lambs.

To remove the pluck, cut around the inner edge of the muscle of the diaphragm leaving the hanging tenloin, the thick muscle that supports the diaphragm, on the carcass. Then cut across the large blood vessel and loosen it from the backbone and the pluck can be pulled out.

Wipe blood stains from the inside of the carcass with a dry cloth and see that the bottom of the chest cavity is open to allow any blood to drain out. Never wash the inside of the carcass, unless it has become badly soiled and then be sure to dry it thoroughly.

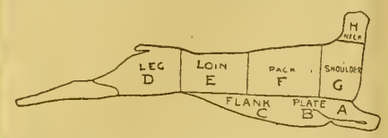

Fig .11. Side of Mutton Showing Main Divisions

(A) Front Leg	(E) Loin
(B) Plate	(F) Rack
(C) Flank	(G) Shoulder
(D) Leg of Mutton	(H) Neck

See that the bladder has not been missed in removing the viscera. Wipe the carcass thoroughly, then, it is a lamb or a yearling wether, attach the caul fat to the hind legs and flank, wrapping the heavy end of the fat around the hind legs, spreading the thin end over the flank and cutting a few holes in the caul to aid in cooling the carcass as shown in Figure 9, B. The caul fat is not put on mature sheep carcasses, bnt they are left plain as shown in Figure 10. Fold back the legs and fasten them to the shank with a skewer or a clean nail. Folding the front legs gives the carcass a thicker and neater appearance. Ordinarily a sheep's carcass is opened as just described but it will cool out more quickly if it is split part way to the breastbone and a spreader put in to hold it open. In warm weather it is a good policy to split the carcass in halves so as to allow it to cool more quickly. Any dry, clean, cool place is suitable for hanging the carcass until it is cool, but any bad odors should be avoided as they are rapidly absorbed. If the carcass is to be sent to a local butcher it should be kept clean and fresh in appearance perhaps by wrapping in cheap white muslin which will keep it clean and prevent it from becoming fly blown, at a slight extra expense.

Fig. 10. A Fancy Mutton Carcass

Fig. 12. The Front Leg.

CUTTING THE CARCASS

The sheep carcass is the easiest of all carcasses to prepare for the table as each main division yields roasts and stews right in size for the average family without further subdivision. This holds true of all cuts of mutton with the exception of those which may be used for chops. For instance, the round or beef is divided into rump, round steak, pot roast, and shank, and some of these divisions have to be subdivided to make cuts that are ready for the table, while the leg of mutton, which corresponds to the round of beef is nearly always used whole for roasting.

The tools necessary for cutting mutton are a meat saw and a sharp knife. A solid bench or block should also be provided.

Two general rules may be given for cutting any kind of carcass: (1) Always cut across the grain of the meat and (2) separate the thinner from the thicker parts of the carcass. Always try to make clean, smooth cuts and to leave as few ragged edges on the meat as possible because these ragged edges are more or less wasted in cooking. The method of cutting will depend to a certain extent upon the class of trade or the size of the family that is consuming the meat, but in general the following method has proved very satisfactory. No matter how good the method, however, neat cuts cannot be obtained unless one is interested in the work and does it carefully.

A sheep carcass is not ordinarily split before cutting it when it is intended for home use, it is best to split it and cut from each half as needed, for by this method there is less surface exposed, the meat keeps much better and there is less waste by evaporation.

The mutton carcass is divided into the general cuts shown in Figure 11.

The method of removing these follows:

The Flank, Plate, and Front Leg—The flank, plate, and front leg may be removed by starting with the udder or cod and cutting out straight to the edge of the flank, just deep enough to expose the large gland that lies in the flank region. Then cut forward to the end of the last rib and continue to cut forward to a point just above the elbow, taking the front leg, plate, and flank off together. Then cut the front leg from the plate. If the caracss is thin this cut should be made higher upon the ribs than mentioned above.

The Leg.—The leg of mutton is ordinarily cut off at the point where the first sacral vertebra begins, that is, where the spinal column bends upward to form the pelvic arch. If a small leg of mutton is wanted, cut farther back, and if a large leg is wanted, cut farther forward.

The Shoulder.—The shoulder is removed by cutting between the third and fourth ribs. This cut may be made longer or shorter, but if made as above, a shoulder of convenient size is obtained and very little of the shoulder blade is left on the rack. The neck is removed by turning the shoulder front side downward and cutting the neck off squarely level with the back. This leaves a square shoulder.

The Loin, Rack, and Kidney Fat—The loin, rack, and kidney fat make up the middle piece. The back part of this piece, including one rib, constitutes the loin, and the front part, the rack. The kidney fat should be pulled from the loin, but enough should be left on the loin for roasts and chops.

TRIMMING AND USES OF SHEEP CUTS

The Front Leg—The front leg, or the front shank, as it is also called, is a tough piece of meat that contains a large percentage of bone. It is used altogether for broths and stews. The leg bone Figure 12, A, is removed at the knee and the shank, is cut into three or four pieces as shown in Figure 12, B. Always use a saw when cutting this bone because round bones will shatter when cut with an axe or cleaver and the small pieces of bones are very objectionable even in broths or stews. This is a comparatively cheap piece of meat.

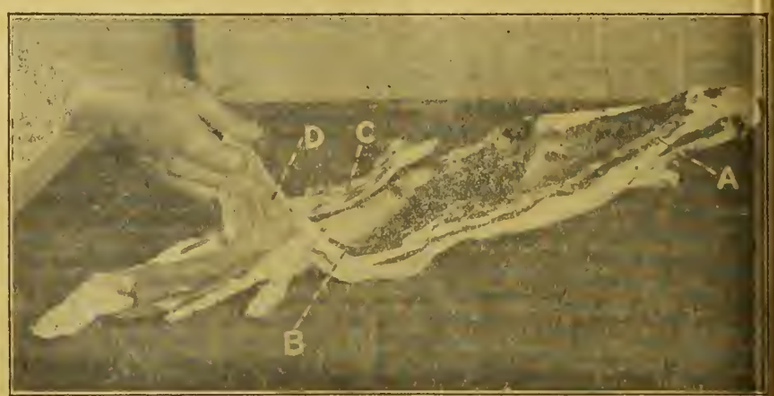

Fig. 13. (A) The Plate (B) Flank

The Flank and Plate.—The flank and plate are ordinarily cut up into small pieces and used for stews. The plate of the lamb is very often called the breast and this cut is used for a pocket of lamb. In trimming the flank and plate, cut a narrow strip, Figure 13, C, along the inside edge from the udder to the breastbone. Then the thin tough membrance should be pulled from the inside of the flank. To do this, start just back of the diaphragm at the breastbone and pull back the membrance until a heavier, whiter membrane is reached. Cut across this membrane and pull it off as illustrated in Figure 13, D. This thin membrane is tough and removing it improves the quality of the stew. If the plate and flank are to be used for stews they should be cut up into small squares. The pocket of lamb is made from the breast or brisket end of the plate by parting the muscles so as to form a pocket to hold dressing. The plate and flank make one of the very best pieces to use for stew. It is one of our cheapesr and most economical cuts of meat for which the demand is

Fig. 14. The Leg of Mutton as Removed from the Carcass

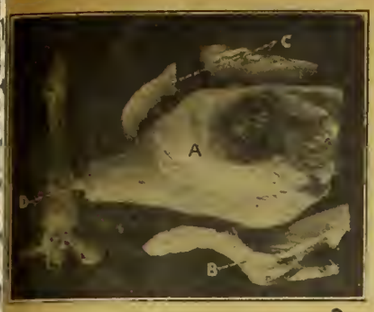

Fig. 15. French Leg of Mutton, Illustrating Method of Trimming.

unsteady. Consequently there are times when this cut can be bought very cheaply, especially at markets that have a heavy chop and roast trade.

The Leg of Mutton.—The leg of mutton is one of the most popular cuts of the sheep carcass as it is thick and meaty. It is largely used for roasting, though it is also sought for boiling purposes and for steak. The steaks should be cut from the loin end or front of the leg. In case a leg of mutton makes too large a roast for the family, a few steaks may be cut from it. In this way a leg of mutton can be used to better advantage than if the whole leg were roasted. A leg from an old, thin animal should be boiled rather than roasted.

While the leg of mutton is one of the high-priced cuts for which there

Fig. 16. A Plain or American Trimmed Leg of Mutton

is a rather steady demand, in economy it compares favorably with some of the cheaper cuts owing to the relatively small percentage of bone in a trimmed leg.

The leg of mutton as it is cut from the carcass has some of the thin flank muscles, the tail bone, and the shank attached to it. These should be trimmed off before cooking. The leg is trimmed to make two different styles of roast. The French-trimmed leg of mutton is shown in Figure 15, A, and the American or plain-trimmed leg of mutton in Figure 16, the difference being altogether in the way the shank end of the leg is trimmed.

In trimming the body of a leg of mutton, start just back of the cod or udder, trimming off the soiled and surplus fat and continue this cut around to the flank, taking off the

Fig. 17. Removing the Fell from a French-Trimmed leg of Mutton

thin part of the flank as shown in Figure 15, B, then trim around on the other side taking off part of the tail bone as shown in Figure 15, C. Trim off any loose end or soiled part that may be left in the leg, making it neat and round in appearance but be careful not to expose or cut into the lean meat as it will shrink more in cooking and the roast will be less juicy than if the lean muscle is left covered.

To make a French-trimmed leg of mutton cut around the leg where the large tendon enters the muscle just above the hock. Scrape back the flesh clean from the bone and saw off the shank leaving the bone projecting half or three-quarters of an inch as shown in Figure 15, D. This bone serves as a handle to aid the carver.

The American or plain-trimmed leg of mutton is made by unjointing the stifle and cutting out the bone as shown in Figure 16, A. The piece of meat left hanging is then skewered over the joint. To unjoint the stifle cut about a half or three-quarters of an inch in front of the bony projection just below the stifle The French method gives a trimmer and neater roast. The sheep carcass is covered by a thin membrane or fell which may be removed from the leg of mutton if there is any reason to believe that it is tainted. Begin at the front end of the leg and pull the fell backward, being careful not to tear the fat, as shown in Figure 17. While this removes the possibility of taint the roast will shrink slightly more in cooking, especially if it is not very fat.

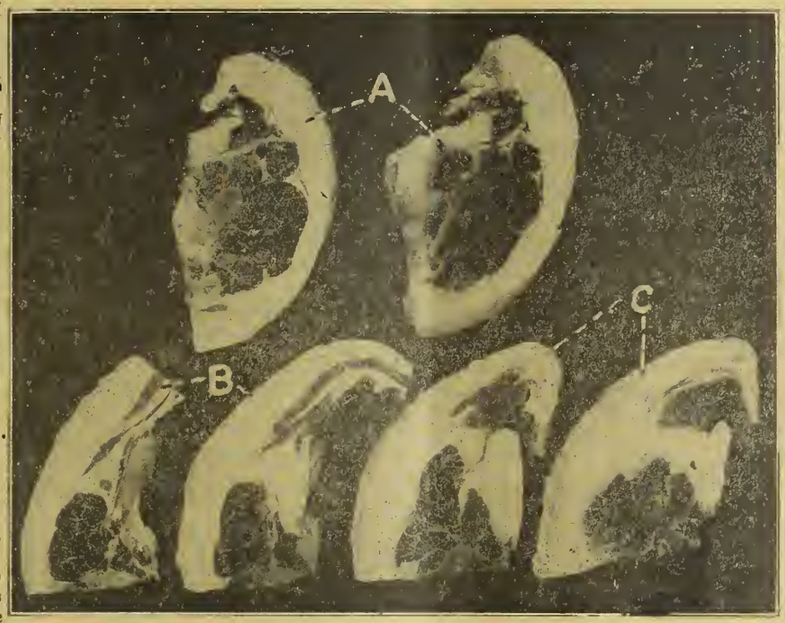

Fig. 19. Loin Chops.

The Loin.—The loin is usually the highest priced cut of the sheep carcass for the reason that it is a tender piece of meat and because it is cut into the best chops and it is also makes one of the best roasts. The loin can always be recognized by the tenderloin, Figure 18, A, which is the small muscle located underneath the spinous processes, in this region. There is very little trimming to be done on the loin. To prepare this cut for roasting cut it in suitable pieces, then cut through the joints along the backbone to aid in carving the meat after it is cooked, being careful not to cut deeply into the flesh as this exposes the lean muscle, causing more waste in cooking and making the roast less juicy.

If the loin is cut for chops the thickness of the chops will depend upon the taste of the people using them, but good chops should not be cut less than three-quarters of an inch thick. The loin chops vary in quality and appearance as can readily be seen in Figure 19. The chops that are cut from the rear end, Figure 19, A, and the rib end of the loin, Figure 19, B, are not as good as the chops cut from the center of the loin, Figure 19, C, owing to the fact that they have more tough muscle and there is less of the tenderloin in them. To make chops of the very best quality, the fell should be removed as shown in Figure 20.

The Rack or Rib.—The rack or rib is used for the same purpose as the loin. Some people prefer the loin while others prefer the rib. As a roast the rib is used either as a plain rib roast, Figure 21, or as a crown roast or coronet, Figure 22. To prepare for roasting, cut through the joints along the backbone and once across the rib. Whenever conditions will permit, it is a good plan to cut off the lower, thinner part of the ribs and use them for stew. The remaining piece makes a neater roast of better quality than the whole rib.

The crown or coronet is made by rolling back the flesh from the lower end of the ribs. The joints in the backbone are opened and the rib is bent backwards and the ends tied or skewered together as is shown in Figure 22.

Rib Chops.—Rib chops are ordinarily cut one chop to each rib but if this makes too thick a chop to suit the taste, one chop may be cut with the rib and one between theribs. However, chops cut this way are too thin to make a high-class, juicy chop The chops that are cut from the tenth, eleventh, and twelth rib, Figure 23, A, are the best, as the lean part of the meat is composed of one big tender muscle, while those that are cut near the shoulder, Figure 23, B, contain more muscles which are inclined to be tougher than the chops mentioned above. From the standpoint of amount of lean meat obtained, however, the chops cut from the shoulder end of the rib are more economical than those cut from the loin end. The fell should be removed from these chops the same as from the loin chops. The French chop, Figure 23, C, is made from the rib chop by cutting away the meat about an inch from the end of the rib. This gives a neat appearance and the rib serves as a handle, which is often decorated after it is cooked. Rib chops are often boned, rolled, and held together with a small

Fig. 18. The Loin
(A) The Tenderloin

skewer. These are known as rolled chops. Ordinarily, it is the thinner chops that are treated in this way.

The Shoulder.—This cut of a sheep carcass may be rightfully called a handy piece of meat for it may be roasted, stewed, or cut into steaks, depending upon the ability of the cook to handle this comparatively cheap cut of the sheep carcass. A good lamb or mutton shoulder of good quality, such as that shown in Figure 25, makes a very good roast though it is harder to carve than a leg of mutton on account of the many

Fig. 20. Method of Removing the Fell from a Chop

small muscles and the arrangement of the bone. However, the shoulder may be boned before cooking to obviate this inconvenience. If used for a roast all the soiled and bloody parts should be trimmed off. The ribs should be sawed across once and the backbone should be unjointed with a cleaver.

Two kinds of steak are cut from the shoulder, the shoulder blade steak, shown at A, in Figure 25, which is cut with the rib and the shoulder or arm steak, shown at D, cut across the lower part of the

Fig. 21. Rack or Rib.

Continued on page 420)

HORTICULTURE.

Fertilization of Orchards.

Editor The Maritime Farmer:—

The fertility needs of an orchard may be the most important check on its prodcction.

In general the characteristics of an orchard that needs fertilizer are those of starvation.

They are found most commonly in the older orchards, especially in those that have once borne well but are no longer doing so, although still fairly free from diseases or improper drainage. The foliage is sparse and pale green in such orchards, and the annual growth stops early and is short, often not over an inch or so long. In such orchards one can apply fertilizers rather liberally with confidence of profits providing other conditions are right. Under opposite conditions such as obtain in some young orchards or in any orchard that is making rapid growth and retaining its foliage late in the season fertilization is less likely to show a profit.

The best method of application is merely to scatter the fertilizer or manure broadcast over the surface of the ground, taking care not to get it too close to the tree trunks, where there are few feeding roots and extending the applications well out beyond the spread of the branches, but by examination it will be found that the feeding roots of an orchard from fifteen years old and upward extend over the whole surface even when the trees are 33 feet apart. This fertilization is usually harrowed in with cutaway harrows. With this done it should be remembered that the fertilizer applied in any given season can hardly materially affect the yeild of that year. Since the fruit buds are formed in the latter part of the preceding season, important results therefore should not be expected before the following season, at the earliest.

It has been stated on good authority that there is still in the average soil enough dormant plant food to supply the trees for long periods of time to come. Yet in actual practice we have never been able to break it up sufficiently fast to supply the actual demands of the trees for plant food. It is, therefore, very important that once a year fertilizers in various forms and humus in barn manures or cover crops be added that the young trees may have a liberal amount of food that they need to supply bud formation, wood, leaves, roots and fruit.

The total plant food draft of a mature and active orchard is greater than a 25 bushel crop of wheat in every important constituent except phosphorus. It is practically inevetible, therefore, that soooer or later the output will be reduced in any productive orchard because of lack of sufficient plant food.

The mineral requirements of wood are comparatively low. This largely accounts for the fact that young trees do not make a profitable response to fertilizer applications, although they respond to manure or methods of conserving moisture.

The relative amounts of the various food elements required by the other parts of the apple tree are also of interest, but as a whole they are not reliable for making fertilizer applications. The latter is best determined by experiment.

The application of nitrogen and phosphates and also of manure have been very beneficial in the orchards under my immediate care. In my orchards potash does not seem to be of much service but in some soils the use of potash is very important. The time required for results to appear are generally short where fertilizers were really needed not later than the middle of the second season.

Phosphoric acid when applied alone does not seem of much benefit but when nitrogen is added then results are plainly visible.

Basic Slag is now being used on orchards in the Annapolis Valley with profitable results in most orchards. Large applications of Muriate of Potash have been used and the slag containing free lime tends to neutralize the acids in the soil left by the use of Muriate. The lime also helps the growth of leguminous intercrops.

High grade Sulphate of Potash does not by experiment show any superiority over Muriate as a carrier of Potash. The low grade Sulphate may be superior on account of its magnesia content, but this is not positively known.

The influence of proper fertilization is not transcient. The gains from it seem to be greater as the years go by and when the crops of full years are not too high the yields have usually been greatly steadied by proper fertilization.

In using barn manure the action has proved to be as good as commercial fertilizers rich in nitrogen and phosphoric acid.

The application of ground fish and slag has proved a good fertilizer on my orchard.

As a rule, the influences that have materially increased the yields of fruit have also increased the growth of wood.

There does not seem to be anything in fertilizers to determine the size of the fruit. The size of the crop on the tree determines the size of the fruit. Proper trimming and moisture conditions are the important means of increasing the average size of the fruit.

The red color of apples cannot be increased materially by the kind of fertilizer applications though potash and phosphates may be of some slight assistance. These colors are directly dependent on sunlight and maturity, with the latter occuring preferably on the tree. Late picking, open pruning, light soils, sod culture and mildly injurious sprays tend to increase the red color of fruits, while thick trees, early picking, clay soils, excessive culture and over fertilization with nitrogen tend to opposite results.

From our experience of thirty years in orchard fertilization it would appear that the fertilization of a given orchard is still largely a local problem.

As a result of using fertilizers for a long period, I would recommend per acre, the following:

Nitrate of Soda ....100 lbs
Fish Fertilizer ....200 lbs
Basic Slag or Acid Phosphate 500 lbs
Muriate of Potash ....150 lbs

To the above fertilizers the cover crop of vetches or clover will be ploughed under in the autumn, which will add more plant food and give the humus needed. If you would keep up the soil fertility the supply of humus must be overlooked; it is the most important problem confronting the orchardist of the present day.

Great results have been obtained with nitrogen and cover crops alone on some soils.

The amount of manure per acre varies with the condition of the soil but twelve tons per acre is considered a liberal dreesing. The time of application, we believe, to be of distinct importance, especially in the case of nitrates. There are good indications that nitrates can easily be applied too early in the season and thus be wholly lost to the trees. From our experience, we feel that nitrates should not be applied earlier than petal fall in apples and not later than the middle of July. In using nitrate of soda two applications are better than one as this fertilizer is so easily dissolved and is in danger of being washed over by rains. An incidental advantage of the delayed applications appears in the fact that it gives an opportunity to vary the rate somewhat in accordance with the size of the crop set on the trees. When the crop is light much smaller applications are required because of the natural tendency of the trees to develop a sufficient number of fruit buds in the off season. In the full year on the other hand the applications should be rather liberal in order to prevent the total abstinence of a crop the following year and in the long run to steady the yields.

In the case of the mineral fertilizers with their slower solubility and slower action the time of application is less important. Some orchardists apply these fertilizers in the fall with good results. We feel that the time of application of mineral fertilizers is not of much importance as they are quickly fixed in the soil. Manure can be applied at any time except in late summer, which is never done.

In the use of fertilizers in my orchards, I am of opinion that the liberal fertilization pays best. The plant food is not all used up the season it is applied and as it is fixed in the soil it is not lost and an orchard where a regular application of fertilizers is made the crop increases as the years go by. It is poor policy that, because the prospect of a crop is not promising, that the supply of fertilizer should be withdrawn. Steady and regular feeding of an orchard results in profit and is as sensible as the steady and regular feeding of a horse.—W. H. Woodworth, Berwick, N. S.

The Brown Tail Moth Situation.

Editor The "Maritime Farmer,"

I shouldbe pleased if you would permit me to call the attention of your readers to the Brown-tail Moth situation in the Province. The serious character af this insect as a pest of fruit and shade trees, and as a

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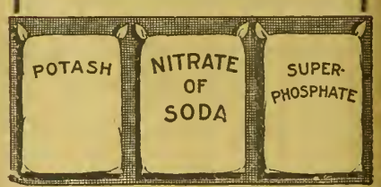

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cause of physical discomfort and possible illness, owing to the poisonous nature of the hairs of the caterpillar, needs no emphazing, as most of your readers will be acquaninted with the experiences of the New England States in regard to this insect and the Gypsy Moth.

The Dominion and Provincial Departments of Agriculture are making every possible effort to keep the insect in check by collecting the winter webs or nests on the trees, each of which webs contains on the average about 250 young caterpillars. On this work a body of ten inspectors employed by the Dominion and Provincial Governments, is engaged, and they are covering the whole of the infested territory. Owing to the enormous flight of moths which were blown across the Bay of Fundy irom Maine in July, 1913, the infestation has been very greatly increased. With the annual increase of the infestation in Maine we may expect a recurrence of such a re-infestation by wind-carried female moths in the future, and it is therefore more than ever necessary to call the attention of the owners of orchards and trees to the requirements of the law in this regard.

Regulation 8 of the Dominion "Destructive Insect and Pest Act" states:

"Any inspector entering any lands nursery or other premises where there is reason to believe that any of the insects, pests or diseases hereinafter specified or may be present, shall give instruction for the treatment or destruction of any tree, bush, crop or other vegetation or vegetable matter or the containers thereof, which may be found or suspected to be infested with any of the insects, pests or diseases hereinafter specified, and such instructions shall be carried out by the owner or lessee of the infected or suspected vegetation, vegetable matter or containers thereof, and such remedial treatment shall be carried out and continued until the insect, pest or disease shall be deemed by the inspector to have been exterminated."

The penalty for contravention of the regulations under the Act upon summary conviction is a fine not exceeding one hundred dollars or imprisonment for six months, or both fine and imprisonment.

The conditions in the Province are such as to demand the strict observance of this law. While the respective Governments are leaving no stone unturned, the duties of their officers are to inspect, and the fact that they are collecting the webs on infested premises does not relieve the owners of such premises of the necessity of conforming with the aforementioned regulation and taking steps to eradicate the Brown-tail Moth when the same occurs in their premises.

Orders have been issued to the inspectors to instruct the owners of properties on which the Brown-tail Moth has been found in any abundance to spray their trees thoroughly with a spray solution containing not less than two pounds of arsenate of lead (the arsenate of lead is to contain not less than 15 per cent. of arsenic oxide) to every forty gallons of water after the leaves appear and before the blossoming of the trees. This spraying is to be carried out in a satisfactory manner, and all cases in which the instructions have not been carried out will be reported by our officers in charge to the Department.

Those fruit growers who are accustomed to spray thoroughly and at the proper time need fear no defoliation or trouble, but it is to their interests to co-operate with the Dominion and Provincial Departments of Agriculture in seeing that the less progressive persons carry out the necessary requirements.

Yours faithfully,
C. GORDON HEWITT,
Dominion Entomologist.
Department of Agriculture, Ottawa.

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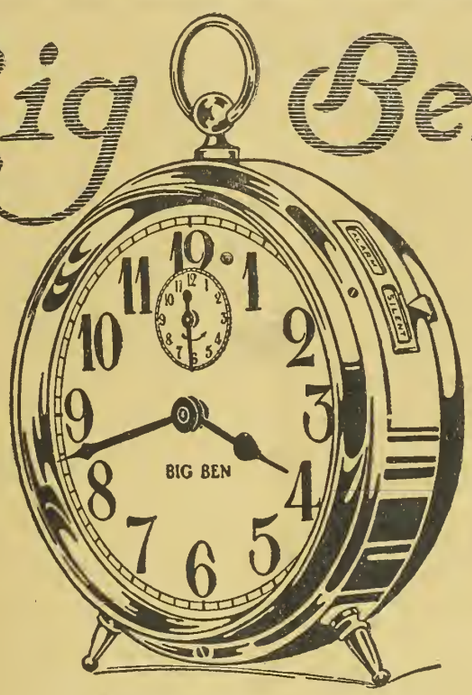

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DAIRYING.

Cost of Milk Production.

Editor Maritime Farmer:—

In these times when the dairy farmer is facing the high costs of foodstuffs and labour and the proportionately low values of his milk, it is necessary that he should strike a careful balance between costs of production and gross returns. Only by such a step can he eliminate the unprofitable cows or methods in order to cheapen the gross costs.

The following tables are submitted from data gathered from the Experimental Farm system and careful calculations made from the same. Table 2 is an estimate balance sheet, which cannot be absolute and may be remodelled slightly to suit more closely the different conditions in the Maritime Provinces. Table 1, the actual production sheet, is correct, and warrants the estimate of cost of feed for production as in table 2.

PURE MILK.

It mustbe carefully noted that this is for the production of pure milk, not necessarily certified milk. This means a good, wholesome milk that is clean and has good keeping qualities. The average milk in Eastern Canada is not such, nor could it be where such a high percentage of the barns and cattle are dirty, barns dark and not ventilated, and the milking conducted in dusty and dirty stalls by attendants wearing dusty and dirty clothes, and with dirty hands; to say nothing of many of the utensils being either dusty or ill sterilized.

CREDIT TO COW

1:	Value on her milk at $1.00 per cwt.	57.27
2:	...Chemical value of manure, 10 tons in 300 days @2.25	22.50
3.	Humus value of manure (300 days)	22.50
4.	1 Grade calf yearly	5.00
5.	Bedding not calculated as it is worth its average estimate as manure	
	Total credit per year	107.27
	Profit not considering mortality and other risks per cow	5.16

VALUATION OF MILK

Milk is often estimated at $2.00 per cwt., but to suit Maritime conditions it might be set at $1.00 per cwt., which is about what is paid by cheese factories. Nevertheless this does not strike a fair average, for milk suppliers to the cities undoubtedly get more than this valuation, which as you will see amounts to only 10 cents per gallon, or 2½ cents per quart. You are at liberty to change this to suit your individual condition. In table 1, milk was valued on a butter basis, in which butter sold for from 26 to 30 cents per pound.

VALUATION OF FEEDS

Table 1 is compiled from the following valuations of foodstuffs:—

Hay	$7.00 per ton
Green feed	3.00 per ton
Roots and corn ensilage	2.00 per ton
Meals and grains	$20 to $25 per ton

Note particularly that pasture on the Central Experimental Farm, Ottawa, is very limited, which undoubtedly increases the cost af production during the summer months. Roughly speaking, there is no more than one month's pasture for the dairy cows. Hence tne somewhat high cost of foodstuffs per annum.

AVERAGE OF PRODUCTION OF MILK
CENERAL EXPERIMENTAL FARM, OTTAWA
1805 to 1913.

Breeds—all ages	No. of Years	Days in Milk	Lbs. Milk	% Fat	Cost of Feed	Cost of 100 lbs. Milk.	Profit on Cow above feed
Average 3 best Canadians	8	303	6,871	4.54	50.53	74.	54.41
Average 3 best Ayrshires	8	317	8,887	3.94	57.30	64.6	64.11
Average 3 best Guernseys	8	322	6,167	4.93	49.43	82.6	52.03
Average 3 best Shorthorns	6	300	6,454	3.9	50.44	80.	30.73
Average 3 best Holsteins	1	429	14,125	3.48	84.41	60.8	115.81
Average 3 best Grades (Ayrshires and Guernsey)	6	310	6,655	4.66	52.63	76.5	47.54
Average 368 Lactations (all breeds and grades)	8	280	5.565	4 26	45.99	87.	34.41

TOTAL ESTIMATED EXPENSES BASED ON AN AVERAGE GOOD GRADE HERD OF 24 COWS, AND PRODUCING PURE MILK (NOT CERTIFIED).

1.	Cost of feed for cow producing 5.727 lbs. milk	52.21
2'	Barn for housing cows and feed (45.00 per cow) Interest,taxes and depreciation, repairs, insurance, etc. 10 per cent.	4.50
3.	Value of cow (65.00 per grade cow) Interest @ 6 per cent	3.90
	Depreciation @ 10 per cent	6.50
4.	Value of tools, dairy implements, etc., per cow (5.00) Interest and depreciation on same @ 10 per cent	.50
5.	Value of brushes, aprons, towels, ice, record sheets, soap, veterinary supplies etc	1.00
6:	Cost of pure bred bull per cow (including 6 per cent int. of $150. and maintenance)	3.00
7.	Care of cow and milk for year, Men at 16c. per hour	30.50
	Total cost per year	$102.11
	or total cost per 100 lbs. milk	1.78

VALUATION OF BRAN.

This valuation of $45.00 per cow on a good fair dairy barn is all too conservative, but you can remodel this to suit your individual conditions. It is doubtful if many Maritime Province dairy farmers at the present time could begin to build a good dairy barn for this sum or even 50 per cent more.

VALUATION OF COW.

Probably the average cow of the above type, on the market, is worth a little more than $65.00 per head, but I am informed by authorities that good cows, producing as above, can be purchased on an average for this valuation, namely, $65.00.

VALUATION OF LABOUR

Here is an item that demands your full consideration. The average farmer in the Maritime Provinces has a large amount of assistance in the milking, cleaning out of the barns, feeding, handling of the milk, washing milk utensils, driving milk to the station or the factory, from members of his own family, such as the boys and girls and in many cases the housewife. It is doubtful if one per cent of these farmers ever estimate the value of this labour. Certainly, every cow in every herd should give full account for the labour, not only expended in milking, cleaning out of the barns and the feeding, but also of the handling and marketing of the milk from the same.

VALUATION OF MANURE

It is admitted that the above valuations of manure seem abnormally high. Nevertheless, one is safe in saying that the majority of farmers in the Maritime Provinces buy a certain amount of commercial fertilizer. If these farmers pay 18 cents a pound for their nitrogen and proportionately for potash and phosphates included in their commercial fertilizer, why should they not value the same ingredients in their manure as highly? Hence my valuations are based on this conclusion. It is plain to be seen that the average farmer in eastern Canada does not take this stand, else we would see fewer manure stacks under the eaves of the barn or manure pits which are seeping away the liquid manure, the best by 50 per cent of the total manure value. If the average farmer considered the above statement, he would not only take better care of manure before being applied to the land, but he would work his manure into the soil with greater consideration, and hence would get a great deal more value from this most important farm by-product.

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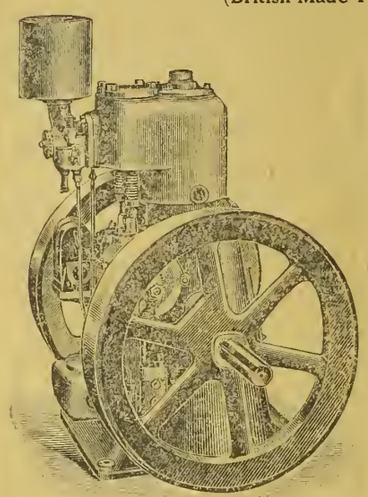

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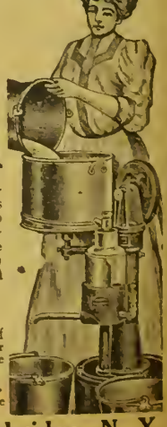

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116

CHEAPENING PRODUCTION.

How we can show a greater profit per cow should be the outcome of such calculations and discussions. Briefly, the methods which we are using are as follows:—

BETTER FARMING

Better farming will certainly cheapen the cost of roughages. This can only be done by thorough, systematic and careful methods, incorporated in which shall be better rotations of crops, better seed, better methods of cultivation, the use of larger and more improved implements, the use of more horse power and less manual labour, and all such features, with which we are acquainted.

MORE SUCCULENT AND ROUGHAGE FEEDS

The most important method of cutting down cost of production is the raising of more succulents. It must be admitted that the average farmer in these provinces does not produce the quantity of turnips and mangels which he could feed most profitably to his dairy cows. Again, the average farmer feeds altogether too much grass hays to his cattle. The best quality of clover hay gives greater profits than any other quality of hay. It is well known that clovers give a double profit in this way, for not only are they worth a half more for milk production, but a good crop of clover hay leaves on the land, in the fertilizing value of roots, the equivalent of approximately ten tons of barnyard manure per acre. When the times comes, if it does, when the Eastern Provinces can raise corn ensilage and alfalfa hay as economically as they can now raise turnips and clover hay, another most radical step in the cheapening of cost of production will be taken. Another point in which the most of us dairy producers in eastern Canada are backward is the production of green feeds for summer use to tide over shortage of pasture, poor quality of pasture and droughts. The growing of such green feeds materially cheapens production from every viewpoint, for not only is it a cheap foodstuff, but at the same time it holds cows up in their milk to tide over a shortage of succulent feeds, thus holding them to a higher production when environments are more advantageous toward economic production of milk.

GRAINS.

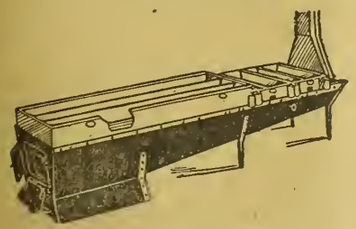
It is undoubtedly most economical for the average dairyman to purchase quite a large proportion of the meals fed to the cows, nevertheless closer study of markets and better methods of buying meals would save many dollars, which the dairy cow must pay for. Again, often it may be noticed that meal feeds are so high that it would pay farmers to feed a large proportion of their home-grown grains, such as ground oats, ground barley and ground pease. This is a big subject in itself and one which demands closest attention.

PASTURE

The question of better pasture is one also which will materially assist you in cutting down the cost of foodstuffs per annum for your dairy cows The renovating of old pastures, either by reseeding, applications of direct or indirect commercial fertilizers, orthe application of a light top-dressing of manure, to suit you own individual and local couditions, is money well spent andwill return to you a very heavy percentage in the form of a cheaper summer food for your dairy cows.

From a careful study of the above figures and valuations you will agree with me that there are only three ways in which we can hope for larger profite from our cows, namely, (1) to cheapen the cost of production, (2 to use as much up-to-date dairy machinery as will decrease our labour account, and (3) to have better cows. We cannot decrease the cost of buildings, for the average buildings in this province demand greater expenditure in order to make possible the production of a good pure product. We cannot hope for an immediate or marked advance in the value of milk, although undoubtedly for city consumption above valuations are ridiculously low. Applying every effort toward the improving of our cows, cheapening of food stuffs and better ing our methods through the closer study of each term of the above accounts and through the assistance of cow testing associations, or cow testing methods, is the only salvation.—E. S. Archibald, Dominion Animal Husbandman, Ottawa.

SUGAR MAKERS ATTENTION



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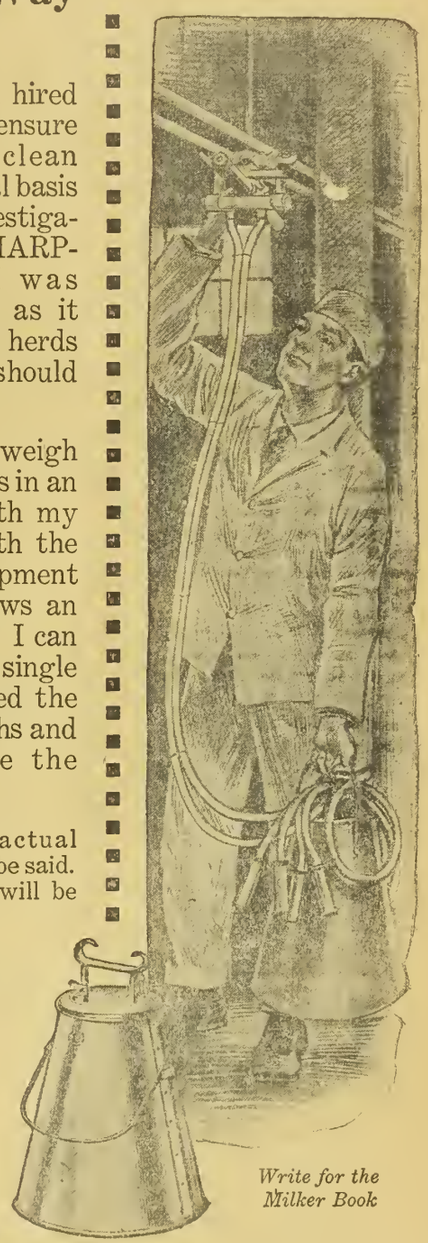
"To get away from hired help troubles and to ensure the production of clean milk on an economical basis I decided, after investigation, to put in the SHARPLES MILKER. I was convinced inasmuch as it is milking the best herds in the country, it should be worth a trial.

"I can milk, strip and weigh the milk from 25 cows in an hour and a half with my two-unit outfit. With the regular one-man equipment of three units 30 cows an hour can be milked. I can do this work easily single handed. I have used the machine seven months and intend to increase the equipment."

Such endorsement by actual users says all that need be said. The name of this user will be furnished on request.



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THE HORSE.

Special Kinds of Horse Shoes.

In a recent article dealing with the form of horse shoes in ordinary use, allusion was made to various other kinds of horse shoes of modified pattern or special design, the use of which is resorted to in certain contingencies, notably in cases of defective action or in the case of specific forms of unsoundness, and it is proposed in this article to give a brief description of the shoes included in this category. The contingency which most frequently necessitates a modified form of shoeing is when horses brush or cut themselves on the leg, in which case recourse is often had to what is known as a

FEATHER-EDGED OR KNOCKED-UP SHOE.

In this pattern the inside quarter and heel are made quite narrow or skate-shaped (feathed-edged), and instead of the nail-holes being arranged in the usual manner, only a couple are punched on this side, which are placed at the toe, an extra nail-hole very usually being made on the outer half of the shoe as a compensation. This shoe is so fittted as to keep the inside half well within the circumference of the wall of the foot, the protruding horn subsequently being raped away until it is flush with the edge of the shoe. Another kind of shoe occasionally used with a view to counteracting the tendency to brush is the three-quarter shoe. This is aptly described by its name, it having a portion of one of its branches cut off, leaving it only about half as long as usual on that side of the toe, while the other branch is left the full length. Thus the entire circumference of the shoe is not much more than about three-quarters of that of an ordinary one. While it may sometimes prove useful in a case of brushiog, the three-quarter shoe, is, however, principally for use in the case of horses suffering from corns. By applying this pattern to the affected foot, that part of the heel where the corn is located is not touched by the shoe, and thus is relieved of all pressure from the latter. This will, in the majority of cases, afford immediate relief, and ensure the horse going sound again as soon as the acute pain in the bruised corn has subsided.

THE BAR-SHOE.

Another well-known special pattern is the so-called bar-shoe, the distinceive feature of which consists in the ends of the branches being connected by a bar of iron. Thus there is no open space between the heels, as is ordinarily the case, but we have instead a completely closed rim of iron. The purpose of this bar is to obtain an increased bearing surface for the foot, and to take some of the weight or bearing of the parts where the bar, upom which the frog largely bears, where as this part does not, of course, take any bearing on a shoe of the usual type. Consequently, by using a bar shoe we, to a certain extent, relieve those parts of the hoof which usually have to take all the bearing. There are two kinds of this form of shoe, namely, the straight and the heart-shaped. In the first the connecting bar between the heels is straight; in the second it is curved inwarns, the purpose of this being to prevent the risk of the horse catching the toe of the hind foot in the bar and pulling off the shoe, a contingency not unlikely to happen with the straight bar-shoe, more particularly if the horse is used at fast paces. A bar-shoe is used in various complaints or forms of unsoundness affecting the foot, in cluding cases of corn, sand crack, false quarter, seedy toe, and chronic laminitis; and it is found to be particularly valuable under these circumstances if the heels are low and inherently weak. Both horses employed in slow work and in fast work may suitably be shod with it, should its use be indicated, the latter preferably with the heart-shaped pattern. One great drawback connected with the bar-shoe is the fact that it impairs the security of the foothold on streets and slippery tarred roads.

HIGH-HEELED SHOE.

Next there is the high-heeled shoe, distinguished by its having very high heels, to which recourse is often had when horses are lame with curb or suffer from a sprain of the back sinews. The object of this shoe is to raise the heel of the foot well off the ground, and so to relax, relieve and partially rest the strained structures thus accelerating their recovery. When a high-heeled shoe is applied in it exclusively falls when an ordinary shoe is used, and to transfer it on to

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Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid)

is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't imitate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

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describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

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Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

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a case of sprained back tendons, it is however, necessary to take good care that it does not reamin on too long, otherwise, instead of proving beneficial, it may easily entail serious mischief through causing the tendons to become contracted, for the fact of their being kept constantly relaxed, and not at their normal degree of tension will naturally tend to induce contraction in them, more especially as there is usually an inherent tendency that way in the case of bad sprains. High-heeled shoes, having a bar at the back, which joins the two heels—a principal type of this description of shoe—are known also as pattern shoes, but, although in repect of the heel bar between the branches, the pattern shoe is some what similar to a bar-shoe, its similarity with the latter ends here, and the two kinds of shoe are not to be confused with one another, for they serve entirely different purposes. At one time the use of high-heeled or pattern shoes in cases of lameness from sprains was in very common vogue, but more recently their use has become much restricted.

THE ROCKER SHOE.

Another occasional type of shoe is the rocker or rocking shoe, which is designed for use in cheonic laminitis. Its special feature is that it imparts a rocking motion to the foot, it being made extra thick—about double the usual thickness—in the middle, while it is thinned off in gradual fashion, both towards the toes and the heels. This naturally causes it to rock, like the rocker of a cradle. The iron used in making a rocker shoe is extra wide, so that, in addition to the wall of the foot, the sole also takes a comparatively wide bearing upon the shoe. It is often made in the form of a bar-shoe, and in this shape probably proves the most efficient. Rocker shoes are adapted for use only in the case of a horse worked at a walking pace, and they are altogether comparatively seldom seen nowadays. A somewhat similar pattern is that known as Broad's shoe, which is also used in cases of chronic laminitis and kindred foot troubles.

THE CHARLIER METHOD.

At one period a great deal was heard of the Charlier shoe and the special method of shoeing which its use involved. It never, however, gained any extended vogue, despite the stir it made, and, although its possibilities are still sometimes dilated upon by theorists, it can no longer be regarded as a practical proposition, and has become obsolete. Horses used for hacking are sometimes shod with tips instegd of with full-sized shoes, and occasionally these are also applied to the feet of hunters. Tips may be described as light and thin plates, only about half the size of the ordinary shoe, as regards the length of the branches, and they protect only the anterior portion of the foot, leaving the heel part uncovered. In its way this type of shoe is useful and practical, its chief advantage consisting in the fact that it does not interfere in any wise with the natural functions and play of the foot, and allows the frog to take a full bearing upon the ground, the same as if the horse were not shod at all, which is very beneficial. Horses given to cutting or brushing will also, in the majority of cases, be found to be less liable to do so when shod with tips than when wearing the ordinary shoe. But tips, on account of their thinness, have little wear in them, and consequently they can be used only on horses which are kept almost entirely to soft going. Apart from this, they will not afford enough protection to the feet of horses used on roads and streets. Even as regards saddle horses, confined mainly to going of a soft order, they would, in many cases, not sufficiently protect them in the long run, so that discretion must be used in having recourse to them. Finally, a new kind of non-slipping shoe may briefly be referred to which has recently been introduced. It is of the ordinary form, but is studded with transverse ridges or projections on the ground surface, intended to confer a better grip. This shoe appears to be a practical one, but whether it will stand the test of general use and gain any favour remains to be seen.—Argus in Farm and Home, England.

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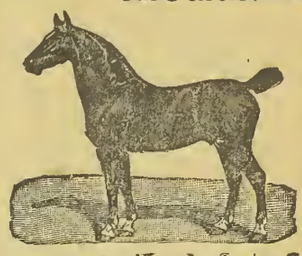

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IN THE FIELD MAKING MONEY—

or in the Barn Wasting It

Whether your horses work or not, their feed costs you big money. When a horse is laid up you not only lose the cost of *feed*, but also the profit that the horse would have paid if *able* to work in the field.

Since there is no way to *prevent* spavin, curb, splint, ringbone, sprains and lameness, your thought should be given to the quickest, surest and most economical *cure*. And for over 35 years, thousands of horsemen have depended on Kendall's Spavin Cure. It's the old, reliable, *safe* remedy that has saved thousands of dollars' worth of *horse flesh*, to say nothing of the *worry*, *time* and *trouble* it has saved horse owners. *You* should get and keep a bottle of—

Kendall's Spavin Cure

for emergencies. You never can tell when you'll need it, and when the time does come, you'll be mighty glad you had the foresight to prepare. Here are samples of the thousands of letters we receive from grateful horse owners every year Mr. C. E. Hull, Kingston, Ont., writes:—"I have used Kendall's Spavin Cure for years with never failing success." Mr. E. A. Coon, Carnduff, Sask., says:—"I have used your Spavin Cure with great success on my stock as well as for domestic purposes. It is the best thing I can get for Sprains and Rheumatism—also for Splints, Galls and Sore Shoulder in horses." Mr. W. Shaults, Hand Hill, Alta., writes:—"I have used your Spavin Cure for years and keep it on hand at all times. It is good for man and beast." And Mr. Wm. Booth, of Grovette, Ark., writes:—"I have cured both Blood and Bone Spavins, taking the bunch all off and leaving the horse as sound as he ever was. The horse does not need entire rest while using Kendall's Spavin Cure. Light work and careful handling are better than standing in the barn. If the horse was in the pasture, not many people would take proper care of him. I use the Spavin Cure a week at least, sometimes three, according to the severity of the trouble. There is enough in one bottle to cure three large Spavins if used according to directions. It is excellent for bruises, both for man and beast. Your Spavin Cure will cure Thoropin in a hurry. With over twenty years' experience with this remedy I know what I say to be true. If one doubts my my word he may bring me a horse with a Blood Spavin on one leg, Bone Spavin on the other and Thoropin on both and I can make him a sound horse in six months. What I have done, I can do again and what I have done others can do."

Why experiment with other remedies—when you know what Kendall's has done and can do. You can get Kendall's Spavin Cure at any druggist's. $1.00 per bottle, 6 for $5.00. Ask for free book. "Treatise on the Horse," or write direct to

Dr. B. J. Kendall Company, Enosburg Falls, Vt., U. S. A.

71

Mutton.

Continued ftom page 413)

shoulder. These steaks should not be cut as thick as loin chops or rib chops because coming as they do ... the
from the shoulder the muscles are tougher and stringier than the muscles in the loin or rib chops. However, these chops are economical and serve as a change in kind of meat served when the more popular and higher-priced loin and rib chop

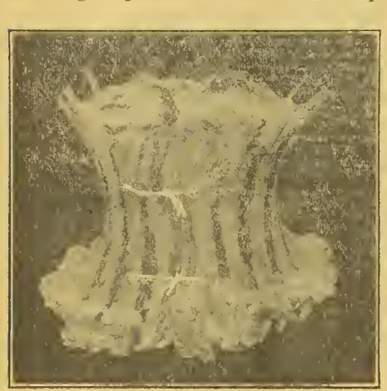

Fig. 22. A Crown Roast

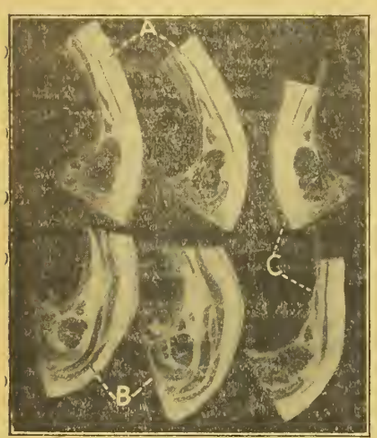

Fig. 23. Rib Chops.

cannot be afforded. The shoulders are also largely used for stews. When used for this purpose, they should be cut into small squares to suit the consumer. It should be remembered that commercially the shoulders are cut one or two ribs shorter than just described.

The Neck.—The neck is used entirely for stews and broths. All soiled parts should be trimmed off and the neck cup up in convenient sizes. The quality of the stew is improved by removing some of the large bones from the neck.

Trimmings.—All the lean, clean trimmings obtained in the preparation of sheep cuts for the table, should be used for stew. Such trimm ngs as those coming from the leg, the shoulder, or the rib ends, that are taken off in making French crops should not be wasted. These trimmings make as good stews as the plate or flank. The kidneys may be fried, stewed, or used for soup. The

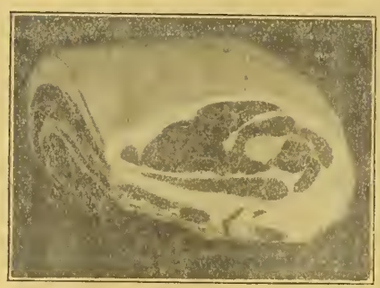

Fig. 24. The Shoulder.

Fig. 25. Shoulder Steaks

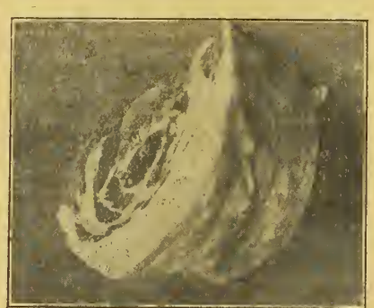

Fig. 26. The Neck

heart and tongue may be used fresh or pickled. Care should be taken to see that these are kept clean while dressing the sheep and they should be cooled out as quickly as possible afterwards. The liver can be used for the same purpose as livers from other animals, though they should not be used unless healthy and free from parasites.

Construction of Silos.

In compliance with the requests of of several of our Lunenburg County readers we publish the following article on The Construction of Silos:—

The silo and silage are matters of great interest to the stock raiser, as there is no branch of the business that strikes deeper into the pocketbook than that of feed. All over the country the most progressive farmers are using silage as a prominent part of the dairy feed, as the average cost of raising silage will not be much over $1.25 per ton when properly conducted. Good silage ought to yield at the rate of from ten to twelve or more tons per acre.

THE SILO

A full grown cow will consume from one and one-half to two cubic feet of ensilage per day, but generally it has been found advisable to make one of three feedings per day.

At one and one-half cubic feet per day, a cow would consume in six months, 270 cubic feet, allowing for waste, say 300 cubic feet. If we multiply 300 cubic feet by the number of animals we wish to feed, it will give the size that is required to build in cubic feet.

The following table gives the capacity in tons of different sized silos. It is reckoned at forty cubic feet per ton and a ton to each cow one month That is about sixty-six pounds per day, which is liberal feeding. The quantity is computed for six months, estimating fifteen tons per acre.

As to height, the modern ensilage cutters have carriers to almost any length. The silo should not be too large on top. It is best to uncover

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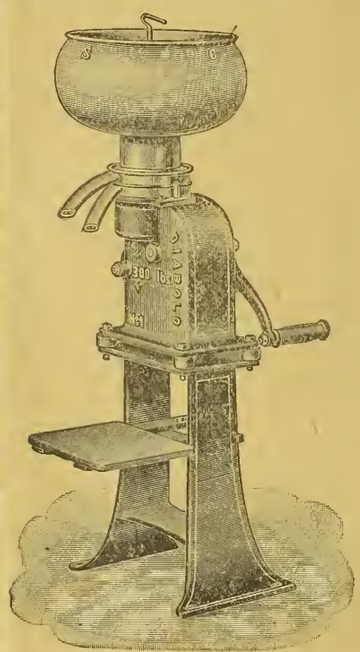

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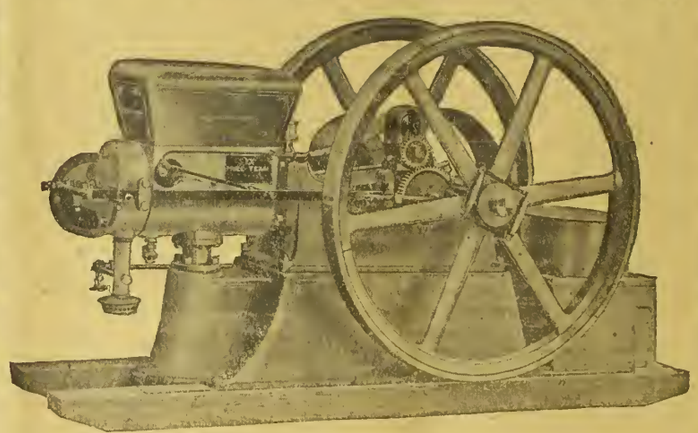

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THE WILLIAM EWING CO., LIMITED
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McGILL STREET, MONTREAL.

38

	Size		Capacity			
	Diameter	Height	Cubic Feet	Tons Contained	Cows Numbered	Acres Required
1	10	20	1,455	30	5	2
2	10	24	1,475	43	7	3
3	12	20	2,160	54	9	4
4	12	24	2,532	63	11	4½
5	12	30	3,240	80	13	5
6	16	20	3,840	90	15	6
7	16	24	4,608	115	19	8
8	16	30	5,760	144	24	10

the whole at a time, taking off the entire top each day.

In locating the silo, it should by all means be placed so as to open into the cow stable and on a level with it, but not directly into the stable. The idea is to keep the odor from the barn except when feeding.; that is, in a barn for dairy cows, as the milk, while being taken from the cows, absorbs the odor, and has been the cause of condemned milk from ensilage fed cows. This contamination comes from the odor in the barn and not because the animals feed on ensilage.

STAVE SILOS

There are several styles of silos in use, which are constructed of various materials. The style which is preferable will depend to a certain extent upon circumstances. The round stave silo has certain advantages. It is [illegible] construction and is cheapest. The cost will be about $1.00 per ton. That is a silo of one hundred tons capacity will cost about $100.00. Most farmers will have no difficulty in constructing a round stave silo. The staves are cut generally two by six inches, the length varying according to the height of the silo. For a thirty foot silo use staves sixteen and fourteen feet joined alternately, so that the joints will not be opposite each other. The joints are made by sawing a groove in the ends, and fitting in a piece of hoop iron. It is advisable to have a cement floor in the silo. The hoops may be made of heavy band iron or three-quarter inch round, each hoop in two sections, so arranged that they can be tightened or loosened as required. In making connections use a block of wood or castings. Openings eighteen by twenty four inches each, three feet apart, can be cut after the silo is built, to throw out the silage. Cut in a slant so that they will fit closely.

The stave silo can be improved very materially, by bricking it up inside, four inches thick, the same as wells are bricked and plastered inside with cement. This makes the silo airtight and frost-proof, which are two very important factors necessary to secure and maintain a good quality of silage.

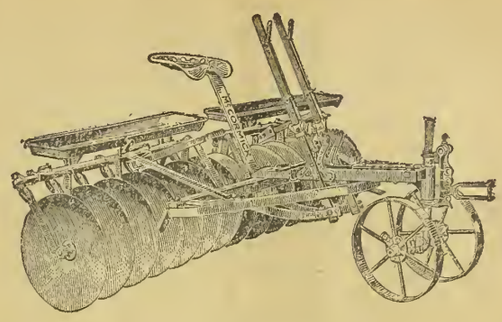
A second form of wooden silo is more substantial than the stave silo and is perfectly airtight. The frame work is made of two by six upright and fifteen inch centres for a silo thirty feet high. The uprights may be farther apart for a lower silo. The inside sheeting is two layers of half inch lumber with tar paper between. The outside is of half-inch matched lumber. Openings must be made at the top and bottom for air, between the outside and inside sheetings. These should be covered with wire screen to prevent mice getting in. The cost of the above silo is about one dollar and one-half per ton capacity.

A recent issue of The Farmers Advocate had the following description of a new type of silo. The particular described is 38 feet high and 13 feet in diameter, and was built by the owner for the comparatively small sum of $150.

"The method of construction is rather unique to those who are not familiar with such a silo. The outside is hemlock, tongued and grooved lumber, and bands to which this is

(Continued on page 428)

McCormick Tillage Implements



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Proper use of a disk harrow means the purchase of a McCormick disk harrow because they are the ones built to do the best work. The frames are strong, to stand the strain of following the binder or of disking hard ground. The set levers keep the gangs to their work at even depth. The bearings are the most durable that can be put on a disk harrow.

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Then sit right down now, fill out the coupon, mail it to to our Toronto office, and get our latest Style book and patterns. With this book is a letter explaining our system of doing business and a self-measurement form which is so simple that you can't go wrong in using it. We'll also send testimonials from a hundred satisfied Canadians who regularly buy from us.

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MAWEL [illegible] CNT. 4

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

My passion takes away my appetite and makes me wear my new neckkerchief continually. I have no relief but in putting on my best clothes and in having my boots cleaned over and over again. I seem then, to be worthier of the eldest Miss Larkins. Everything that belongs to her, or is connected with her, is precious to me. Mr. Larkins, a gruff old gentleman with a double chin, and one of his eyes immovable in his head, is fraught with interest to me. When I can't meet his daughter, I go where I am likely to meet him. To say "How do you do, Mr. Larkins? Are the young ladies and all the family quite well?" seems so pointed, that I blush.

I think continually about my age. Say I am seventeen, and say that seventeen is young for the eldest Miss Larkins, what of that? Besides, I shall be one-and-twenty in no time almost. I regularly take walks outside Mr. Larkin's house in the evening, though it cuts me to the heart to see the officers go in, or to hear them up in the drwaing-room, where the eldest Miss Larkins plays the harp. I even walk, on two or three occasions, in a sickly, spoony manner round and round the house after the family are gone to bed, wondering which is the eldest Miss Larkins' chamber (and pitching, I dare say now, on Mr. Larkins's instead); wishing that a fire would burst out; and the assembled crowd would stand appalled; that I, dashing through them with a ladder, might rear it against her window, save her in my arms, go back for something she had left behind, and perish in the flames. For I am generally disinterested in my love, and th nk I could be content to make a figure before Miss Larkins and expire. Generally, but not always. Sometimes brighter visions rise before me. When I dress (the occupation of two hours), for a great ball given at the Larkins's (the anticipation of three weeks), I indulge my fancy with pleasing images I picture myself taking courage to make a declaration to Miss Larkins. I picture Miss Larkins sinking her head on my shoulder, and saying, "Oh, Mr. Copperfield, can I believe my ears!" I picture Mr. Larkins waiting on me next morning, and saying, "My dear Copperfield, my daughter has told me all. Youth is no objection. Here are twenty thousand pounds. Be happy!" I picture my aunt relenting, and blessing us; and Mr. Dick and Doctor Strong being present at the marriage ceremony. I am a sensible fellow, I believe—I believe, on looking back, I mean—and modest I am sure; but all this goes on notwithstanding.

I repair to the enchanted house, where there are lights, chattering, music, flowers, officers (I am sorry to see), and the eldest Miss Larkins, a blaze of beauty. She is dressed in blue, with blue flowers in her hair—forget-me-nots—As if she had any need to wear forget-me-nots! It is the first really grown-up party that I have ever been invited to, and I am a little uncomfortable; for I appear not to belong to anybody, and nobody appears to have anything to say to me, except Mr. Larkins, who asks me how my school-fellows are, which he needn't do, as I have not come there to be insulted.

But after I have stood in the doorway for some time, and feasted my eyes upon the goddess of my heart, she approaches me—she, the eldest Miss Larkins!—and asks me pleasantly, if I dance?

I stammer, with a bow, "With you, Miss Larkins."

"With no one else?" enquires Miss Larkins.

"I should have no pleasure in dancing with anyone else?"

Miss Larkins laughs and blushes (or I think she blushes), and says, "Next time but one, I shall be very glad."

The time arrives. "It is a waltz." I think," Miss Larkins doubtfully observes, when I present myself. "Do you waltz? if not, Captain Bailey—"

But I do waltz (pretty well, too, as it happens), and I take Miss Lark ns out. I take her sternly from the side of Captain Bailey. He is wretched, I have no doubt; but he is nothing to me. I have been wretched too. I waltz with the eldest Miss Larkins! I don't know where, among whom, or how long. I only know that I swim about in space, with a blue angel, in a state of blissful delirium, until I find myself alone with her in a little room, resting on a sofa. She admires a flower (pink camellia japonica, price half-a-crown), in my button-hole. I give it her, and say:

"I ask an inestimable price for it, Miss Larkins."

"Indeed! What is that?" returns Miss Larkins.

"A flower of yours, that I may treasure it as a miser hoards gold."

"You're a bold boy," says Miss Larkins. "There."

She gives it to me; not displeased; and I put it to my lips, and then into my breast. Miss Larkins, laughing, draws her hand through my arm, and says, "Now take me back to Captain Bailey."

I am lost in the recollection of this delicious interview, and the waltz, when she comes to me again, with a plain elderly gentleman, who has been playing whist all night, upon her arm, and says:

"Oh here is my bold friend! Mr. Chestle wants to know you, Mr. Copperfield."

I feel at once that he is a friend of the family, and am much gratified.

"I admire your taste, sir," says Mr. Chestle. "It does you credit. I suppose you don't take much interest in hops; but I am a pretty large grower myself; and if you ever like to come over to our neighborhood—neighborhood of Ashford—and take a run about our place, we shall be glad for you to stop as long as you like."

I thank Mr. Chestle warmly, and shake hands I think I am in a happy dream. I waltz with the eldest Miss Larkins once again. She says I waltz so well! I go home in a state of unspeakable bliss, and waltz in imagination, all night long, with my arm around the blue waist of my dear divinity. For some days afterwards, I am lost in rapturous reflections; but I neither see her in the street, nor when I call. I am imperfectly consoled for this disappointment by the sacred pledge, the perished flower.

"Trotwood," says Agnes, one day after dinner. "Who do you think is going to be married to-morrow? Some one you admire."

"Not you, I suppose, Agnes?"

"Not me!" raising her cheerful face from the music she is copying. "Do you hear him, Papa?—The eldest Miss Larkins."

"To—to Captain Bailey?" Ihave just power to ask.

"No; to no Captain. To Mr. Chestle, a hop-grower."

I am terribly dejected for about a week or two. I take off my ring, I wear my worst clothes, I use no bear's grease, and I frequently lament over the late Miss Larkins's faded flower. Being, by that time, rather tired of this kind of life, and having received new provocation from the butcher, I throw the flower away, go out with the butcher, and gloriously defeat him.

This, and the resumption of my ring, as well as of the bear's grease in moderation, are the last marks I can discern, now, in my progress to seventeen.

CHAPTER XIX

I Look About Me, and Make a Discovery.

I am doubtful whether I was at heart glad or sorry, when my school days drew to an end, and the time came for my leaving Doctor Strong's I had been very happy there, I had a great attachment for the Doctor. and I was eminent and distinguished in that little world. For these reasons I was sorry to go; but for other reasons, unsubstantial enough, I was glad. Misty ideas of being a young man at my own disposal, of the importance attaching to a young man at his own disposal, of the wonderful things to be seen and done by that magnificent animal, and the wonderful effects he could not fail to make on society, lured me away. So powerful were these visionary considerations in my boyish mind, that I seem, according to my present way of thinking, to have left school without natural regret. The separation has not made the impression on me, that other separations have. I try in vain to recall how I felt about it, and what its circumstances were; but it is not momentous in my recollection. I supposed the opening prospect confused me. I know that my juvenile experiences went for little or nothing then; and that life was more like a great fairy story, which I was just about to begin to read, than anything else.

My aunt and I held many grave deliberations on the calling to which I should be devoted. For a year or more I had endeavoured to find a satisfactory answer to her oft-repeat- nuestion, "What I would ,ike to be?" But I had no particular liking, that I could discover, for anything. If I could have been inspired with a knowledge of the science of navigation, taken the command of a fast-sailing expedition, and gone round the world on a triumphant voyage of discovery, I think I might have considered myself completely suited. But in the absense of any such miraculous provision, my desire was to apply myself to some pursuit that would not lie too heavily upon her purse; and to do my duty in it, whatever it might be.

Mr. Dick had readily assisted at our councils, with a meditative and sage demeanour. He never made a suggestion but once; and on that occasion (I don't know what put it into his head), he suddenly proposed that I should be a "Brazier." My aunt received this proposal so very ungraciously, that he never ventured on a second; but ever afterwards confined himself to looking watchfully at her for her suggestions, and rattling his money.

"Trot, I tell you what, my dear," said my aunt, one morning in the Christmas season when I left school; "as this knotty point s still unsettled, and as we must not make a mistake at our decision if we can help it. I think we had better take a little breathing-time. In the meanwhile, you must try to look at it from a new point of view, and not as a schoolboy."

"I will, aunt."

"It has ocurred to me," pursued my aunt, "that a little change, and a glimpse of life out of doors, may be useful, in helping you to know your own mind, and from a cooler jndgment. Suppose you were to take a little journey now. Suppose you

A WOMAN'S MESSAGE TO WOMEN.

If you are troubled with weak, tired feelings, headache, backache, bearing down sensations, bladder weakness, constipation, catarrhal conditions, pain in the sides regularly or irregularly, bloating or unnatural enlargements, sense of falling or misplacement of internal organs, nervousness, desire to cry, palpitation, hot flashes, dark rings under the eyes, or a loss of interest in life, I invite you to write and ask for my simple method of home treatment, with ten days' trial entirely free and postpaid, also references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by this method. Write to-day. Address: Mrs. M. Summers, Box. . 509 Windsor, Ont.

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There is nothing more charming than a happy and healthy mother of children, and indeed child-birth under the right conditions need be no hazard to health or beauty. The unexplainable thing is that, with all the evidence of shattered nerves and broken health resulting from an unprepared condition, and with ample time in which to prepare, women will persist in going blindly to the trial.

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were to go down in the old part of the country again, for instance, and see that —that out-of-the-way woman with the savagest of names." said my aunt, rubbing her nose, for she could never thoroughly forgive Peggotty for being so called.

"Of all things in the world, aunt, I should like it best!"

"Well," said my aunt, "that's lucky, for I should like it too. But it's natural and rational that you should like it. And I am very well persuaded that whatever you do, Trot, will always be natural and rational."

"I hope so, aunt."

"Your sister, Betsey Trotwood," said my aunt, "would have been as natural and rational a girl as ever breathed. You'll be worthy of her, won't you?"

"I hope I shall be worthy of you, aunt. That will be enough for me."

"It's a mercy that poor dear baby of a mother of your's didn't live," said my aunt, looking at me approvingly, "or she'd have been so vain of her boy by this time, that her soft little head would have been completely turned, if there was anything left of it to turn." (My aunt always excused any weakness of her own in my behalf, by transferring it in this way to my poor mother). "Bless me, Trotwood, how you do remind me of her!"

"Pleasantly, I hope, aunt?" said I

"He's as like her, Dick," said my aunt, emphatically, "he's as like her, as she was that afternoon, before she began to fret. Bless my heart, he's as like her as he can look at me out of his two eyes."

"Is he indeed?" said Mr. Dick.

"And he's like David, too," said my aunt decisively.

"He is very like David!" said Mr. Dick.

"But what I want you to be, Trot," resumed my aunt, "—I don't mean physically, but morally; you are very well physically—is, a firm fellow. A fine firm fellow, with a will of your own. With resolution," said my aunt, shaking her cap at me, and clenching her hand, "With determination. With character, Trot. With strength of character that is not to be influenced, except on good reason, by anybody, or anything. That's what I mean you to be. That's what your father and mother might both have been, Heaven knows, and been the better for it."

I intimated that I hoped I should be what she described.

"That you may begin, in a small way, to have a reliance upon your self, and to act for yourself," said my aunt, "I shall send you upon your trip, alone. I did think, once, of Mr. Dick's going with you; but on second thoughts, I shall keep him to take care of me."

Mr. Dick, for a moment, looked a little disappointed; until the honor and dignity of having to take care of the most wonderful woman in the world, restored the sunshine to his face.

"Besides," said my aunt, "there's the Memorial."

"Oh, certainly," said Mr. Dick, in a hurry, "I intend, Trotwood, to get that done immediately—it really must be done immediately! And then it will go in, you know—and then—," said Mr. Dick, after checking himself, and pausing a long time, "there'll be a pretty kettle of fish!"

In pursuance of my aunt's kind scheme, I was shortly afterwards fitted out with a handsome purse of money, and a portmanteau, and tenderly dismissed upon my expedition. At parting, my aunt gave me some good advice, and a good many kisses: and said that as her object was that I should look about me, and should think a little, she would recommend me to stay a few days in

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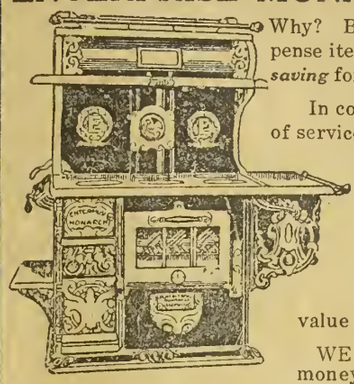

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London, if I liked it, either on my way down into Suffolk, or in coming back. In a word, I was at liberty to do what I would, for three weeks or a month; and no other conditions were imposed upon my freedom than the before-mentioned thinking and looking about me, and a pledge to write three times a week and faithfully report myself.

I went to Canterbury first, that I might take leave of Agnes and Mr. Wickfield (my old room in whose house I had not yet relinquished), and also of the good Doctor. Agnes was very glad to see me, and told me that the house had not been like itself since I left it.

"I am sure I am not like myself when I am away," said I. "I seem to want my right hand, when I miss you. Tough that's not saying much much; for there's no head in my right hand and no heart. Every one who knows you, consults with you, and is guided by you, Agnes."

"Every one who knows me, spoils me, I believe," she answered smiling.

"No. It's because you are like no one else. You are so good, and so sweet-tempered. You have such a gentle nature, and you are always right."

"You talk," said Agnes, breaking into a pleasant laugh, as she sat at work, "as if I were the late Miss Larkins."

"Come!" It's not fair to abuse my confidence," I answered, reddening at the recollection of my blue enslaver "But I shall confide in you, just the same, Agnes. I can never grow out of that. Whenever I fall into trouble, or fall in love, I shall always tell youi if you'll let me—even when I come to fall in love in earnest."

"Why, you have always been in earnest!" said Agnes, laughing again.

"Oh! that was a child, or a schoolboy," said I, laughing in my turn, not without being a little shamefaced. "Times are altering now, and I suppose I shall be in a terrible state of earnestness one day or other. My wonder is, that you are not in earnest yourself, by this time, Agnes."

Agnes laughed again, and shook her head.

"Oh, I know you are not!" said I "because if you had been, you would have told me. Or at least," for I saw a faint blush in her face, "you would have let me find it out for myself. But there is no one that I know of, who deserves to love you, Agnes. Some one of a nobler character, and more worthy altogether than anyone I have ever seen here, must rise up, before I give my consent. In the time to come, I shall have a wary eye on all admirers; and shall exact a great deal from the successful one, I assure you."

We had gone on, so far, in a mixture of confidential jest and earnest. that had long grown naturally, out of our familiar relations, begun as mere children. But Agnes, suddenly lifting up her eyes to mine, and speaking in a different manner, said:

"Trotwood, there is something that I want to ask you, and that I may not have another opportunity of asking you for a long time, perhaps. Something I would ask, I think, of no one else. Have you observed any gradual alteration in Papa?"

I had observed it, and had often wondered whether she had too. I must have shown as much, now, in my face, for her eyes were in a moment cast down, and I saw tears in them.

"Tell me what it is," she said, in a low voice.

"I think—shall I be quite plain, Agnes, liking him so much?"

"Yes," she said.

"I think he does himself no good by the habit that has increased upon him since I first came here. He is often very nervous, or I fancy so."

"It is not fancy," said Agnes, shaking her head.

"His hand trembles, his speech is not plain, and his eyes look wild. I have remarked that at those times, and when he is least like himself, he is most certain to be wanted on some business."

"By Uriah," said Agnes.

"Yes; and the sense of being unfit

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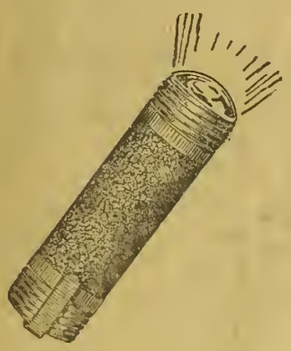

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for it, or of not having understood iti or having shown his condition in spite of himself, seems to make him so uneasy, that next day he is worse, and next day worse, and so he becomes jaded and haggard. Do not be alarmed by what I say, Agnes, but in this state I saw him, only the other evening, lay down his head upon his desk, and shed tears like a child."

Her hand passed softly before my lips while I was yet speaking, and in a moment she had met her father at the door of the room, and was hanging on his shodlder. The expression of her face, as they both looked towards me, I felt to be very touching. There was such a deep fondness for him, and gratitude to him for all his love and care, in her beautiful look; and there was such a fervent appeal to me to deal tenderly by him, even in my inmost thoughts, and to let no harsh construction find any place against him; she was at once, so proud of him and devoted to him yet so passionate and sorry, and so reliant upon me to be so, too; that nothing she could have said would have expressed more to me, or moved me more.

We were to drink tea at the Doctor's. We went there at the usual hour; and round the study-fire found the Doctor, and his young wife, and her mother. The Doctor, who made as much of my going away as if I were going to China, received me as an honored guest; and called for a log of wood to be thrown on the fire that he might see the face of his old pupil reddening in the blaze.

"I shall not see many more new faces in Trotwood's stead, Wickfield" said the Doctor, warming his hands; "I'm getting lazy, and want ease. I shall relinquish all my young people in another six months, and lead a quiter life,"

"You have said so, any time these ten years, Doctor," Mr. Wickfield answered.

"But now I mean to do it," returned the Doctqr. "My first master will succeed me—I am in earnest at last—so you'll soon have to arrange our contracts, and bind us firmly to them, like a couple of knaves."

"And to take care," said Mr. Wickfield, "that you are not imposed on, eh! As you certainly would be, in any contract you should make for yourself. Well! I am ready. There are worse tasks than that in my calling."

"I shall have nothing to think of, then," said the Doctor, with a smile, "but my Dictionary; and this other contract-bargain—Annie."

As Mr. Wickfield glanced towards her, sitting at the tea-table by Agnes, she seemed to avoid his look with such unwonted hesitation and timidity, that his attention became fixed upon her, as if something were suggested to his thoughts.

"There is a post come in from India, I observe," he said, after a short silence.

"By-the-bye! and letters from Mr. Jack Maldon!" said the Doctor.

"Indeed!"

"Poor dear Jack!" said Mrs. Markleham, shaking her head. "That trying climate! Like living, they tell me, on a sand-heap underneath a burning glass He looked strong, but he wasn't. My dear Doctor, it was his spirit, not his constitution, that ventured on so boldly. Annie, my dear, I am sure you must perfectly recollect that your cousin never was strong; not what can be called robust, you know," said Mrs. Markleham, with emphasis, and looking round upon us generally; "from the time that my daughter and himself were children, together, and walking about, arm-in-arm, the live-long day."

Annie, thus addressed, made no reply.

"Do I gather from what you say, ma'am, that Mr. Maldon is ill?" asked Mr. Wickfield.

"Ill!" replied the old soldier. "My dear sir, he's all sorts of things."

"Except well?" said Mr. Wickfield.

"Except well, indeed!" said the old Soldier. "He has had dreadful strokes of the sun, no doubt, and jungle fevers and agues, and every thing you can mention. As to his liver," said the Old Soldier, resignedly, "that, of course, he gave up altogether, when he first went out."

"Does be say all this?" asked Mr. Wickfield.

"Say? My dear sir," returned Mrs. Markleham, shaking her head and her fan, "you little know my poor Jack Maldon when you ask that question. Say? Not he. You might drag him at the heels of four wild horses first."

"Mamma!" said Mrs. Strong.

(Continued in next issue)

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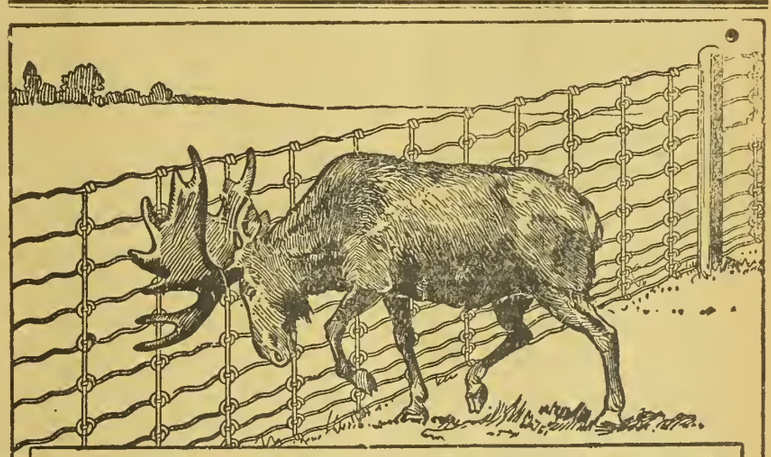

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You no doubt have a dress that is hardly worn at all, but is out of fashion as to color and pattern. Here is where Home Dyeing steps in to help things out. Rip it up, Dye it a fashionable shade, and with a new pattern make it up into a most stylish gown, that will be the envy of your lady friends.

White Summer Dresses can be Dyed delicate shades of any color by using the dye very weak—say about an eighth of a package to about five gallons of water.

When on shopping expeditions, you have often noticed on the "Bargain Counters" Remnants offered at ridiculously prices. The reason for these low prices, was not by any means on account of the materials being of poor quality, but because the shades or colors were out of style; the materials often being of superior quality.

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It is not alone to Wearing Apparel that Home Dyes lend their service. Portiers, Couch Covers, Table Covers, Shade Curtains, Draperies or in fact anything that is made of cloth can be made to look just like New by the aid of these Dyes.

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Just as soon as you have decided what you are going to Dye, you will want to know how much you will require. For lighter shades and for small articles such as Ribbons, Silk or Cotton Gloves, Stockings, Blouses, etc., one package as a rule will be enough. For Heavy Suits, Coats, Curtains, etc., it is best, if possible, to weigh the goods before they are wet, and use a package for about a pound of goods.

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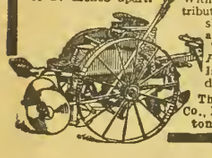

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All we need to do, from the beginning of the year to its end, is to look at the thermometer, and no matter how varying the changes may be, it informs us correctly of the state of the atmosphere whether out of doors or in.

Seventeen hundred years appears to have been a long time to wait for such a convenient little instrument; and one too, which is, of course, of interest to everybody. Having become so accustomed to its use, we, of course, are unable to understand how the people of the seventeenth century ever managed to get along without a thermometer.

To be sure many attempts were made by scientific men to produce an instrument for measuring cold, but none of them were successful. And if Gabriel Daniel Fahrenheit had not failed in business as a merchant, there is no telling how we of to-day would be speaking of the weather.

Sir Isaac Newton tried to produce an instrument that would measure heat, but he made out no better than

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If It Is Lazy, Slow or Torpid Stir It Up By the Use of Milburn's Laxa-Liver Pills.

A lazy, slow or torpid liver is a terrible affliction, as it holds back the bile, which is required to move the bowels, and lets it into the blood instead, thus causing Constipation, Catarrh of the Stomach, Sick Headache, Langour, Pain under the Right Shoulder, etc.

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Halley, another noted astromer who failed in a like attempt.

After Fahrenheit, the name which every thermometer bears, and who was a native of Dantzig, failed in business, he turned his attention to mechanics and chemistry. Fahrenheit was a poor man and had lived a very obscure life, and while he had a taste for the higher learning he had never been able to gratify his love for study in any particular branch.

Now, however, he began a series of experiments for the production of the thermometer. And it is owing to his determination to succeed, and to his loyalty to the conviction that he must give to the world the instrument which has proved so serviceable to mankind, that we are enabled to have a definite way of speaking of hot, or very hot; cold, or very cold.

For his first instrument Fahrenheit used alcohol. But before long, he became convinced that a more suitable article to use in the glass tube was a semi-solid mercury.

By this time, about the year 1720, Fahrenheit had moved from Dantzig to Amsterdam. And here, in the capital city of Holland, he made the mercury thermometers. And all the thermometers which ever since have been produced were made like the original one that Fahrenheit fashioned in Amsterdam over two centuries ago.

The basis of Fahrenheit's plan was this: "To work on the tube the two points respectively at which water is congealed and boiled, and graduate the space between." He commenced with an arbitrary marking, beginning with 32 deg., because he found that the mercury descended 32 deg. before coming to what he thought the extreme cold resulting from a mixture of ice, water, and sal ammoniac. In 1724 he published a distinct treatise on the conclusions that had resulted therefrom.

Not long afterwards Celsus, a Swedish scientist, produced the centigrade thermometer, which suggested the graduation of 100 deg. between the freezing and boiling point. Reaumur, a French scientist, also proposed another graduation, and one which has been accepted by the French.

But Fahrenheit's scale, with 32 deg. as freezing, 55 deg. as temperate, 96 deg. as blood heat, and 212 deg. as boiling point, has been accepted, and is being used, by far the largest part of the civilized world.

Fashion Notes.

Nightgowns of pink and blue batiste are in favor.

Cashmere shawl designs are coming back with printed taffetas.

Baroque pearls ornamented with jewelled wreaths make charming hatpins.

The best tailored suits for sports wear are those with an extra large armhole.

Large women should avoid the bright colors; modified colors are the safest for them.

There is no diminution in the liking for ratine; if anything, it increases in popularity.

For negligees the favorite colors are canary yellow, green, blue, pink coral and poppy pink.

The boudoir caps are now worn with any type of negligee dress, from bed jacket to tea gown.

Bruce's Seed Oats

Bruce's Conqueror. A new variety from Northern Europe, very heavy yielder, straw is strong, of medium height, grain is plump, thin skinned, pearly white, and makes splendid Oat Meal. It is hardy and ripens medium early. Peck 40c, bushel $1.25 here.

New O.A.C. No. 72. A new variety, of exceptional merit, an immense yielder and of fine appearance. It is a branching White Oat, early, and the straw is good and strong, the hull is thin and the grain weighs well. Peck 60c, bushel $2.00 here.

New 2¼ bushel cotton bags 30c each extra.

Prices of above postpaid, 1 lb. 30c, 2lbs. 55c, 3 lbs. 80c, 4 lbs. 95c, 5 lbs. $1.10, 6 lbs. $1.25.

We can also offer Daubeney, Americau Banner, Siberian, Abundance, Scottish Chief and Green Mountain, also Black Tartarian and Black Victor.

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HAMILTON, - ONTARIO

502.6 Bushels Potatoes

From One Acre of Ground

TWENTY DIFFERENT FARMERS in 20 different parts of New England competed the past year in growing potatoes. The crops were widely separated as to climatic and weather conditions. Each one planted, cultivated and took care of his crop in his own way; *but all used*

Bowker's Fertilizers

And No Other Dressing

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Send for our Book of the Contest. Also tell us what your crops are, and your fertilizer requirements and we will send you our helpful book on Plant Food and our new Illustrated Catalogue.

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The old-time remedy for keeping horses free from sores. Don't lose the services of your high-priced horses. Bickmore's Gall Cure cures Galls and Sore Shoulders while the horse works. Approved remedy for Cuts, Wounds, Scratches, etc. Money back if it fails. Be sure to ask at the store for Bickmore's Gall Cure. Gray Horse trade mark on every box. Sample and 84-page horse book sent on receipt of a stamp for postage.

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From Rose and Single Comb Rhode Island Reds. Silver cup winners at Amherst Winter Fair. Best pens $3.00 per 15 eggs. Second pens $2.00 per 15 eggs. No mating list. Write for particulars.

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JEFFRIES BROS., Mount Pleasant Farm, Sussex, N. B

Advertise in the Maritime Farmer

Construction of Silos.

(Continued from page 421)

nailed are half-inch elm, six inches wide. These are placed around the outside of 2x4 scantling which are used as the studding, and the inside of the entire silo is lathed and plastered with a cement plaster. The laths used were of elm cut in strips 12 feet long. This construction allows of a five-inch air space between outside hemlock sheeting and inside cement plaster. The bands of elm are placed about two feet at the bottom, and from three to four feet apart at the top. Besides the cement used in plastering five bushels of lime and one-half bushel of hair were required. The plaster when finished is about one-half inch thick. The studding, is lapped one length upon another and is placed 14 inches apart from centre to centre.

"The entire plastering of the inside cost a little over $15. To do it a platform was hung from the top of the silo with ropes and lowered as required, the plaster being pulled up with ropes and pulleys with a large pail. Bracing with 2x4 scantling is done at the bottom and about the centre of the silo. This makes a cheap silo, and one in which silage has kept the past winter in first-class condition. While a little frost gets into the silage not nearly so much has been found therein as where silage is kept in an ordinary stave silo or in a cement silo. The elm bands are doubled and joints broken so that the whole makes a very strong silo, and the owner states that if the building should blow down he believed it would remain intact, as all the staves are nailed securely to the elm bands. This silo sits on a cement foundation eight feet deep.

"Several similar silos were mentioned, among which was one 55 feet high and 14 feet in diameter, which has been filled six times and is still giving the best of satisfaction. It might be worth while for some of our readers contemplating building a silo to look further into this type of building. It is advisable to have the outside sheeting cut quite narrow, so that if the lumber happens to be green shrinkage will not be great enough to draw the tongues from the grooves."

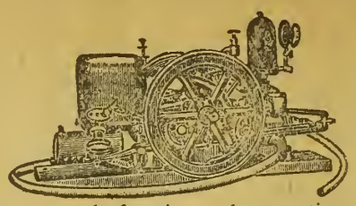
THE CEMENT SILO.

For a silo that is durable and satisfactory in every respect we would recommend the cement silo and the following description of one built by J. H. Manchester, and described in these columns a year or two ago will be of interest to the readers who asked for this information.

"I had planned on building a silo for a number of years, and considered the different makes from every standpoint and then came to the conclusion that a reinforced concrete silo had every good point claimed for other makes, and that, while the initial cost of a wooden silo might be less, the repairs that would surely follow would more than cut out the original saving, while the concrete one would never need a cent for repairs and would keep on improving.

We built our reinforced concrete silo in August, 1912, using Canadian Cement. It is circular, 12x30 ft., 8 inch walls, ten of the 30 feet below the ground with a square pitched shingled roof, built at the west end of a 30x100 stock barn. It is joined to the barn by a chute 3 feet wide, the door from the silo opening into it, and chute doors opening into gangway between two rows of cattle. There are three windows in chute on south side, and window in gable of the silo roof to receive blower pipe when filling. The moulds were made by a local wheelwright. They consist of two circles, one for the inside and one for the outside, and each circle is di-

Protect your trees and garden



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The spraying machine illustrated here can be used for practically every spray use on any farm, and will quickly pay for itself in improved crops.

You can buy a Fairbanks-Morse or Gould Spraying Pump, from a brass hand pump costing a few dollars up to an engine-operated, truck-mounted outfit of the highest efficiency.

Send for free catalogue of spraying outfits and appliances. It contains much valuable information, tells you what to spray, what chemical compounds to use, how to prepare them, when to do the spraying, etc. We are the largest Canadian dealers in farm engines, scales, and mechanical goods of every kind.

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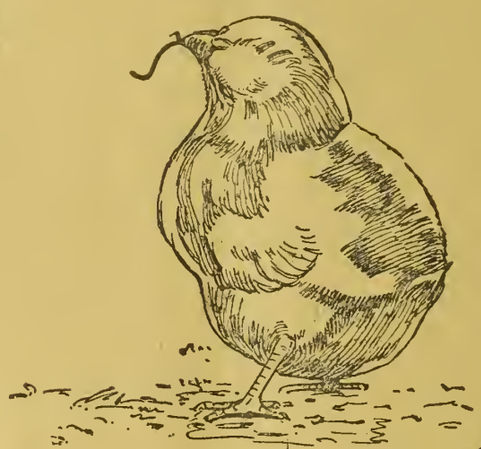
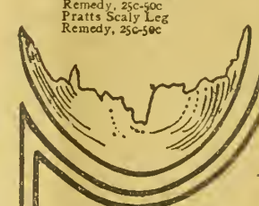
Pratts White Diarrhoea Remedy, 25c-50c
Pratts Poultry Disinfectant, $1.50 gal.
Pratts Cholera Remedy, 25c-50c
Pratts Head Lice Ointment, 25c
Pratts Gape Remedy, 25c-50c
Pratts Bronchitis Remedy, 25c-50c
Pratts Condition Tablets, 25c-50c
Pratts Sore Head Remedy, 25c-50c
Pratts Scaly Leg Remedy, 25c-50c





Raise The Little Chicks

Don't lose sight of the fact that the youngsters of to-day are the producers of to-morrow. Raising them is a simple matter if correct methods are followed. The unnecessarily heavy death rate in baby chicks is largely due to *improper feeding.*

Pratts Baby Chick Food

is a scientific ration for the successful raising of young chicks. Fed for the first three weeks, it lays the foundation for vigorous health, furnishing the same elements of nutrition, in the same proportions, as supplied by the mother hen. *Pratts Baby Chick Food* is *not* a cure-all, but it does *prevent* disease by building bone and muscle and imparting the stamina necessary to resist intestinal disorders and other ailments common to the newly hatched. Order a package TO-DAY.

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We have three, 14 to 16 months, good lookers, good condition, well bred and the right age for service, also females all ages at reasonable prices.

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vided into four sections. The sections consisted of one inch boards, five inches wide and three feet long, bolted with small bolts on two bands of ⅜x2 inch iron, the top band within six inches of top of the boards, and the other six inches from bottom. The ends of the band iron turns out where they join each other that they may be bolted together. The bolts have a continuous thread cut on them and four nuts on each—two between the band iron and one on each end of the bolts. These nuts are to tighten and loosen the form when desired. There are also half-inch bolts put through the wall, three in the bottom and three in the top of each section and through the band iron. When the form is raised these bolts are taken out and the form loosened by slacking the nuts on the bolts, where the sections join. To raise the form, we stood four uprights on the inside of the silo where the sections meet and about six or seven feet above the wall, we nailed on planks, allowing the planks to project over the wall; we fastened a small pair of blocks to the ends of these planks. A man at each rope could raise the form easily. After which the bolts were again tightened. With a little care, anyone can build a silo as true and smooth as a crock. We used Canada cement, sand gravel and broken stone for the floor and foundation a 1, 3, 7 mixture; for the walls a 1, 2½, 4½ mixture; for finishing floor an a 1, 2 mixture and for painting silo inside and out a 1, 1 mixture.

Our mixing board, 12 ft. x 12 ft. was double boarded and level, built close to the excavation. We first put on sand, 2½ barrels (by wheelbarrow means) spread it out and put on four bags cement and mixed together dry then open out and filled centre with water and worked it together into a paste, then put 4½ barrels broken stone and gravel, and when stone and gravel was covered with mixture it was ready to place. After we had about 9 inches in moulds, we put in 4 strands of No. 8 coiled wire, twisted together, letting it come on the outside of the vertical reinforcement, which consisted of the same number of wires and placed every 30 inches, about 3 inches from the outside mould, the horizontal wires were placed every 3 inches for the first 21 feet and every 12 inches for the last 9 feet.

Had the silo been built all above ground more steel would have been necessary for the first 20 feet. A ten quart galvanized pail was used for handling cement and we used a spade for working and keeping stones from side of forms. Four men mixed and placed concrete for each ring of 3 feet in five hours. We left it in position for three days, before raising forms.

The only tools used were two shovels, one spade, two hoes and one wheelbarrow and when completed the silo cost me, considering the building itself, the moderate amount of $304.87 as follows:

35 bbls. Canada Cement $1.95	$68.25
9 loads sand, $1.00	9.00
20 loads gravel, $1.00	20.00
4 cwt wire, $2.60	10.40
4 windows, 2nd hand, $1.00	4.00
5M Shingles, $2.25	11.25
Boards, scantlings, nails,	34.37
Labor for concrete work, 262 hours @ 15 cts.	38.30
Raising form and staging	39.30
Cost of form	45.00
Excavating	10.00
Building chute, roof and shingling	12.00
Matched 2 in. pine for doors	5.00
Total	304.87

We had no experience with concrete work, neither had we seen a silo of any kind and if any farmer wishes to undertake to build one I believe he can do so for the amount named, as we did. If we were doing the like again it is possible to cut our expenses considerably, as we have a lot of lumber left and the forms that cost $45.00 are as good as ever.

The DeLaval Dairy Supply Co., occasionally advertise a very good silo in these columns.

At The Fisher Vocational School, Woodstock.

The first week of the short course at the new Agricultural School at Woodstock, N. B., March 9th to 14th was devoted to horticulture in its various branches. The attendance was good, 52 regular students registering at the principal's office while a number of others who were especially interested in certain subjects came in for the lectures or periods of work devoted to those subjects. The evening lectures were nearly all illustrated by lantern slides and were quite largely attended by the townsfalk of Woodstock. A keen interest was shown by students in all phases of the work and many expressions of appreciation were addressed to the principal and to the instructors. In addition to the regular staff of the Agricultural Department, special instruction was given by the following: F. C. Nunnick, on "The Work of the Commission of Conservation," R. A. Fillmore on "The Propagation and Care of Nursery Trees," S. L. Peters on "The Packing of Fruit and Fruit Packages," and Major O. W. Wetmore on "Vegetable Gardening and Small Fruits."

In connection with the work on the grading of apples, a judging competition was held and participated in with great interest. The following were the prize winners:

1st—B. J. Heartt, Woodstock.
2nd—B. T. Griffith, Woodstock.
3rd—E. M. Pringle, Stanley, York Co.
4th—Basil Palmer, Waterville, Carleton County.

RENNIES "XXX" SEEDS

Our "XXX" Vegetable, Clovers and Timothy Seeds are approved by the Dominion Government for Purity and Germination. Ask your dealer, or write direct for catalogue.

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You will no doubt be interested in our catalogue, which shows many different styles of Farm, Hog and Poultry Fence and other Ideal products, including Farm, Stock and Lawn Gates, Ornamental Lawn Fence, Flower Bed Guards, Vine Treillis, Window Guards, Stall Guards, Barb Wire, Coiled Wire, Post Hole Diggers, Stretchers, Staples and all Fence Supplies. Send for this valuable book No. 10 to day, a post card will bring it

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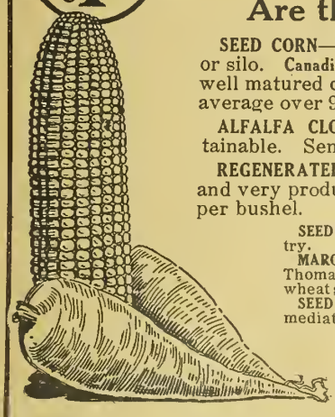

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ALFALFA CLOVER TIMOTHY—One grade only, the best obtainable. Send for samples.

REGENERATED SEED OATS—Six splendid varities. Early and very productive, with grain weighing 40 lbs. and over per bushel.

SEED BARLEY—The kinds proven best by test for this country.

MARQUIS WHEAT—Winner of $1,000 prize given by Sir Thomas Shaugnessy at the New York Show for the best wheat grown on the Continents of North and South America.

SEED POTATOES—Seven high grade varities. Early, intermediate and late in any quantities.

SUPERLATIVE SWEDE TURNIP — Richer in saccharine than any other Swede in cultivation.

D & F catalogue on application.

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POULTRY

Breeding for High Records.

In order to have a hen average 200 eggs, in a flock, it will be necessary to have a number of individual layers that will reach 250 eggs or more, for each hen would not lay 200 eggs and then stop, and a great many would be somewhat short of that amount. It would be the same to secure a 150-egg record; quite a number would necessarily have to lay 200 eggs each.

While a judicious breeding for good records is to be commended, at the same time it is more advisable to have our hens average 120 eggs a year, a flock record, and remain in good, sound health, than it is to have their system drained of vitality in the race to pass the 200 mark.

If all the energies are to be put in the direccion of eggs, what will become of the supply of meat? If we spend our food and attention in the direction of creating ideal meat carcasses, we certa nly cripple our egg yield, and vice versa. Furthermore, if our hens are bred up to the top notch of egg production, surely the fertility will be hurt, and there will be weak and puny chicks.

For years the plan of the writer has been to each year pick out his best hens to breed from. These are birds that not only show good characteristics of the breed, but also have done good laying, as pullets. Trap nests have been the guide, and these are used, as a rule, from January 1 to June 1; and again from October 1 to the end of the year. Occasionally they are used in some pens the entire year, but that is done only where a special test is made of a new selection, or a new breed. What we wish mostly to know is not so much how many eggs a hen will lay in a year, as how many she will lay in winter when the prices of eggs are the highest. From the latter stock we breed. During the summer months the traps are discarded, and only open nests are used.

Now, by selecting out best cold weather layers and breeding from them, we each year increase our winegg supply. There is more money in it, and it is a fact that our hens, in consequence of our careful selection of winter, have become poor summer layers, a condition we would rather have them in than to have a great year-round record and a poor constitution in consequence.

By the use of trap, and by careful selection of the breeding stock, any breed can be bred up to prolific work.

Now, where the great danger comes in is this ambition to secure 200 egg layers as a flock. The stock is quite frequently forced by condiments, meat and other articles of a highly stimulating nature. While it will in many cases produce the eggs, it will at the same time bring an early decline. But by working for a stronger winter egg crop we are getting the bulk of our eggs at a certain season, and the hen has the rest of the season to recuperate.

Another method adopted by some of those ambitious for great results, is to hatch the eggs from one or more phenomenal layers, and mate up the offspring, brothers and sisters, and repeating for two or three years. We do not know of a more sure way to deteriorate the stock than in such inbreeding. It may bring good results the first year or two, but it cannot hold out, and the collapse will be as it in the cases of prize fighters, which we have used as an illustration.—Poultry Advocate.

Chicks Should be Hatched Early.

As the hens on the farms of the country become more and more mixed with pure bred stock and begin to lay better, the period at wh ch broody season is set back weeks later and later in the year, until now farm flocks produce hens which keep laying later in the spring, and the broody season is set back weeks later than it was thirty years ago. As a result early-hatched chicks of to-day would have been called rather late-hatched in those days. Another results that we do not get our chicks out early enough for them to make a good growth before the extremely hot days come, and they do not make the rapid and perfect growth they would if they had been hatched in the first half of April. I have found at shows a great many birds hatched last spring which were under weight.

Another mistake that a great many owners of farm flocks make is in the eggs they use for hatching. The hen that lays eggs in winter is the one we want to use for producing eggs for hatching, as pullets from these hens are more likely to make winter layers than pullets from summer laying hens. If a hen does not make a pretty good record before March 1, it is impossible for her to make a good record as a layer. Watch the winter layers, and about the time hatching should begin pen them by themselves where they can have a little extra care, and be kept laying. Use their eggs for hatching, and the chicks will have an inherited tendency to be like their dams, the pullets produc ng eggs in winter. As a rule a dozen eggs produced in December or January is valued at about three times as much as a dozen laid almost any any time after Easter. I would undertake to manage any farm flock and within three years produce pullets which would lay an average of ten dozen or more eggs in a year. A flock of this kind is worth having. The average now is about seven dozen eggs, something like six dozen of these being produced at a time when eggs are falling in price.—Miller Purvis.

Egg Fertility.

If you set the incubator very early and did not get the number of fertile eggs you felt that by rignt was due, don't blame the incubator. The incubator has nothing to do with eggs that on test show as clear as if laid yesterday. The fault lies in the flock. If the flock has been laying heavily through the winter, or under some conditions even after moderate laying, you are going to have a large per cent of infertile eggs for the early hatches, and if the pullets have contributed their share of the eggs, then the fertility will be pronounced. If there could any way be found to know a fertile egg before setting hens and incubators, what a saving of eggs there would be to put on the market. The writer has learned to be a little careful about setting these early eggs. While not every spring are the early eggs as provokingly infertile as they are other springs, yet it is a good idea to not waste too many eggs in the incubator or under a dozen hens until you have tested some first. A few brooded under the hens will, if broken after three or four days, give you an idea about how high the fertility is running. Some flocks show low fertility every spring until the chickens get far out on the range, then the fertility shows strong. The eggs in a cold spring, especially the February and early March eggs will hatch better from pens in which you have turned one good male with even as high as fifteen hens than if you put a dozen males with from seven to eight hens apiece, and allow all to mix in the houses and yards.

How Long to Keep.

An egg has been known to hatch after being kept for six weeks. Indeed, longer time than this is told of. I cannot speak for the truth of a longer time; neither can I of a good hatch, or even a medium hatch, if kept six weeks. Usually, if the chicks come out of eggs set at this age, they come weak and small. The reason for this is because of the tendency of cell life to die after a certain time, and in the egg this is hurried by the evaporation of moisture in which the germ swims. Three weeks in winter or early spring is usually too long to keep eggs, although they will keep in hatchable state better then than later. I do not like to keep eggs over fourteen days, as over this time they are slow in starting, and thus slow in coming out. A slow hatch is seldom a satisfactory hatch.

Eggs that are old will do better under hens than in an incubator. I want all the eggs I set in an incubator not to be over ten or eleven days old. Eggs hatch best for me that are not over one to four days old. This is the rule, although from a healthy,

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If this bread is high in quality and large in quantity, we use the shipment. Otherwise we sell it.

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"More Bread and Better Bread" and "Better Pastry Too" 525

OUR TRAPPER'S FRIEND AND GUIDE FREE

MODERN TRAPPING METHODS — This GUIDE is as different from other guides as automobiles are different from old time stage coaches. It is unequalled. Guide is FREE, while they last, if you return this advertisement and answer question. Have you written us before?.....SQUARE DEAL FUR HOUSE

WELL BROS. & CO. DEPT., 405 FT. WAYNE. IND.

A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $3.00 to $14. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

No.6 Drill and Wheel Hoe

The Bateman-Wilkinson Co., Limited 432 Symington Av., Toronto, Can.

FREDERICTON BUSINESS COLLEGE

IS

Growing in Efficiency.
Growing in Popularity.
Growing in Influence.
Growing in Attendance.

NEXT TERM OPENS APRIL FIRST

Full information given on application, address

W. J. OSBORNE
PRINCIPAL
Fredericton, N. B.

RED ROSE TEA "is good tea"

An Income For the Farmer's Wife

THE wife of every farmer should have her own income and her own bank account.

And it does not matter how busy you are in the home, or how little time you have to devote to the raising of poultry we can show you how you can make a good income and build up a substantial bank account by poultry raising the Peerless Way.

We can show you how to be independent of the money your husband gets for his crops and other farm produce, so that when you wish to buy clothes, or take a shopping trip to town, you can just stop at the bank and draw all the money you will require.

The Peerless Way Makes Poultry Pay

If you know the right way to raise and keep poultry it requires very little outlay or money, and takes but very little of your time. The right way is the Peerless Way, that is, by hatching the eggs in a Peerless Incubator and rearing chickens in a Peerless Brooder.

Send For Booklet

We have prepared a book for you entitled "Money In Eggs," if you would be interested in learning how other women like you are making independent incomes from the sale of eggs and plump chickens. Experience is not essential. We are practical poultry raisers ourselves and will furnish you all the information necessary to make your chickens pay you handsome profits.

Fill in and send this coupon now for full particulars.

Lee Manfg. Co. Ltd., Pembroke, Ont.

Please send me the booklet "Money in Eggs."

Name.....

Address.....

.....

LEE MANUFACTURING CO. LTD. 115 PEMBROKE ROAD
PEMBROKE ONTARIO CANADA

strong flock, and in warm weather, I have had at times good hatches from the two-week-old eggs. The reason that eggs from a large flock hatch better than from a small flock, all other things being equal, is because the eggs are fresher when set. The fresh egg hatches from six hours to twenty-four earlier than the several-day-old egg.

Spring Cold Storage.

When the grass comes, then comes the largest number of eggs. Eggs are wanted at this time for hatching purposes, ae well as for the market, and they are wanted in plenty for the market, for April and May are the logical months to put eggs in cold storage. This is not a questionable undertaking at all; it is just as honest as putting up fruit or meat or anything else for future use. About 15 per cent of the eggs put on the spring market go into cold storage. The cost of storage is not heavy. If in good condition and properly handled, these eggs will stay good for several months. It is not the cold storag itself that is in question; it is the combinations of storage men that, taking advantage, make the price soar when they came out.

Parcel Post in Relation to Poultry Industry.

Many of us do not realize the value of, and what a great boon the new parcel post system is going to be in helping to market our poultry products. For such a long, long time we have been hearing the cry that the middleman was getting all the profits. I am not going to say anything about the middleman, as he is a very necessary person, and we cannot get along without him, but now is the opportunity for the producer and consumer to be brought close together. We shouldn't lose a minute in taking advantage of this opportunity, as it means greater satisfaction all around. I am very much interested in the Toronto Housewives League, which is doing so much for our city cousins in distributing country produce at reasonable prices. Surely such organizations as this and the new parcel post will do much to solve the problem of expensive living. Just the other day a friend of mine said she would give anything if she could get her butter, eggs and poultry direct from tne country, but the trouble was how was she going to locate the farmer?

Now is the time for the farmers' wives to get their city customers, who will be more than glad to pay good prices for first class produce, when it can reach them without delay. With such a facility as this, we can mail direct to our customers new laid eggs, and the next day they will be relished for breakfast, when they are not more than twenty-four or forty-eight hours old.—Farmer's Wife.

A Few Hints on the Care and Marketing of Eggs.

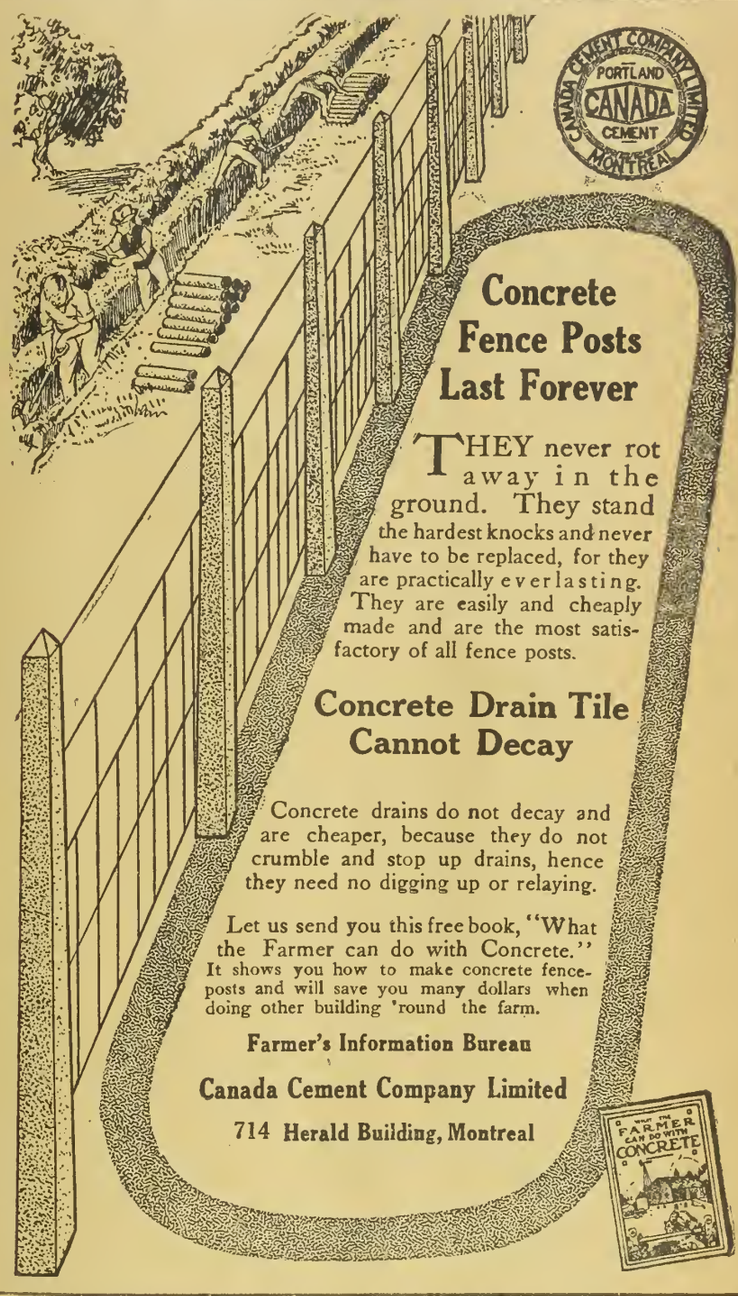
1. Keep the nests clean. Change the straw, or shavings, once a month.
2. Gather the eggs twice a day.
3. Keep the eggs in a coal, dry place.
4. Never keep eggs near onions, fish, kerosene or anything with a strong odor, as the shell is porous and they absorb odors.
6. Keep the extra small and extra large eggs at home, as they will spoil the appearance of a nice, uniform shipment.

130-Egg Incubator and Brooder Both For $13.90

FREIGHT AND DUTY PAID

If ordered together we send both machines for only $13.90 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Five year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of $13.90 is for **both** Incubator and Brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time.

Write us today. Don't delay. **WISCONSIN INCUBATOR CO., Box 326, Racine, Wis., U. S. A.**



Concrete Fence Posts Last Forever

THEY never rot away in the ground. They stand the hardest knocks and never have to be replaced, for they are practically everlasting. They are easily and cheaply made and are the most satisfactory of all fence posts.

Concrete Drain Tile Cannot Decay

Concrete drains do not decay and are cheaper, because they do not crumble and stop up drains, hence they need no digging up or relaying.

Let us send you this free book, "What the Farmer can do with Concrete." It shows you how to make concrete fence-posts and will save you many dollars when doing other building 'round the farm.

Farmer's Information Bureau

Canada Cement Company Limited

714 Herald Building, Montreal

FARMERS—

come to our store and let us show you *real high grade* Fertilizers, and how you can raise better *grain* and *hay* Crops. We can show you how to prepare a properly balanced Fertilizer suitable for your soil. Most Crops take far more POTASH from the soil than Phosphoric Acid, therefore, it is necessary to use

HIGH GRADE POTASH FERTILIZERS

to insure the biggest and best crops—it assists in better reproduction of seed—better grain—and stiffer straw. For Potatoes, Roots and Vegetables POTASH is even more necessary.

From 400 to 600 lbs. per acre of high grade fertilizer is a good dressing. Potash, Nitrate of Soda, Acid Phosphate and Basic Slag for sale at lowest prices in bag, ton or car lots.

A. R. WETMORE, .- - CLIFTON, N. B

Think of Spraying, Think of SPRAMOTOR---
Think of Spramotor, Think of SPRAYING!

What is going to increase the yield from non-sprayed trees, row crops and vineyards? Spraying!

Is it ever too late for spraying? Not while trees, row crops or vineyards still bear. While there's life there's hope—of better crops.

What proofs exist of the benefits of spraying? There are actual proofs at almost every agricultural exhibition and country fair. See exhibits of sprayed and unsprayed fruit side by side. Notice the stunted, retarded development of fruit and vegetables which have not been sprayed. See the blight, caker, worm-eaten appearance and meagreness of grown things that have been left to the mercy of pests and parasites.

Then contrast them with the ***protected, sprayed,*** product of field and orchard. Here you see plump, fully developed specimens brought to perfection unhampered in their growth by gnawing insects, rotting fungoids and withering disease.

There are proofs for you even if you never attend a Fall Fair in your life. The farm papers in every part of the country are full of photographs showing sprayed and unsprayed crops side by side. There are articles by the score published every year, urging spraying for better results, and giving the actual experiences of men who have tried both ways, offering freely the advice of the foremost authorities in the land.

When You Are Ready to Spray Get a Spramotor

Realize what the following means:—***We make Spraying Machines and nothing else!*** Perfecting the SPRAMOTOR has been our whole concern since we started in business, years ago. There has been no side issue to distract, no other line of business to claim part of our attention and engage part of our thought.

We have labored to some purpose, because today we present in the SPRAMOTOR, the highest type of efficient spraying outfit on the market.

Do not think we make this statement without the best of reasons, The SPRAMOTOR has been awarded over one hundred Gold Medals and First Awards at the hands of competent, critical judges. For instance:—

First award at Canadian Government Spraying Contest, Grimsby, Ontario, (17 Entries).
First Award at International Exhibition, Glasgow, Scotland.
Gold Medal at Pan-American Exposition, Buffalo, N. Y.
Gold Medal at Canadian Industrial Exhibition, Toronto, Ont.
Gold Medal at Halifax Exhibition.
Gold Medal at St. John, N. B., Exhibition.
Gold Medal at Western Fair, London, Ont.
Gold Medal at Central Exhibition, Ottawa.
2 Gold Medals at Council Bluffs, National Horticultural Congress.

The above results come from being ***Specialists*** in spraying machine construction and manufacture. We do not make a line of pumps or gasoline engines or windmills in addition to our spraying outfits. No! SPRAMOTOR gets all our attention and all the time we have for experimentation in the endeavor to still further perfect our output.

The judges at all the above exhibitions and at many others where SPRAMOTORS carried off first honors, were able, impartial men who gave credit where credit was due. Yet it is not from these men that the highest praise of SPRAMOTORS comes. It is from men out in the field and the orchard, men who actually use our machines year by year in betterment of their crops, men who have *seen* the improvement of the trees and plants upon which they depend for their livelihood.

It is a wise man who buys a SPRAMOTOR. It is a wiser man who gets all from a SPRAMOTOR that it will perform. This is the man who paints and whitewashes with his SPRAMOTOR during the idle season, disinfecting, fireproofing and brightening up his barns, hen houses, stables and outbuildings generally. You can apply lime, whitewash and paint, better, quicker and far more economically with a SPRAMOTOR than in any other way.

We Give a Written Guarantee With Every Spramotor Sold

For your protecrion and to ensure that every purchaser of a SPRAMOTOR will be a SPRAMOTOR booster, we bind ourselves to this condition:—***Every machine we ship is to be exactly as represented or money refunded***

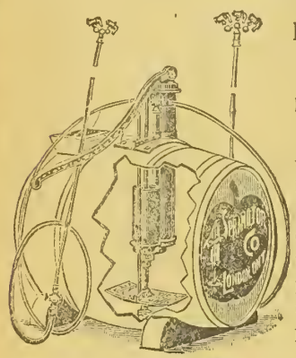
Furthermore, we undertake this:
All Spramotors are guaranteed for life. ***Any part proving to be defective in either material or workmanship will be replaced free of charge.***

Now, since we do not wish to be troubled with constant repairs and changing of parts, you can see how it pays us to test every machine carefully before it goes out.

There is a SPRAMOTOR for every need for the small farm as well as the largest

PRICES FROM $6 TO $350

We make outfits in all sizes and capacities, from a Hand SPRAMOTOR costing only $6 to the $350 gasoline machine. No matter which SPRAMOTOR you buy, be assured that you are getting ***the best spraying outfit on the market*** at the price.



HAND SPRAMOTOR OUTFIT NO. 117

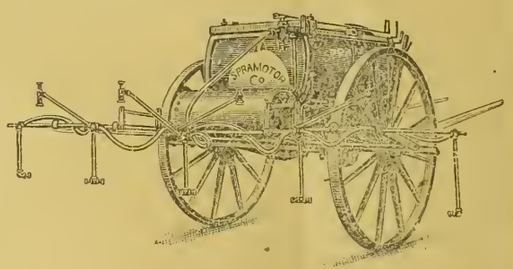
For High Spraying 1000 trees or less

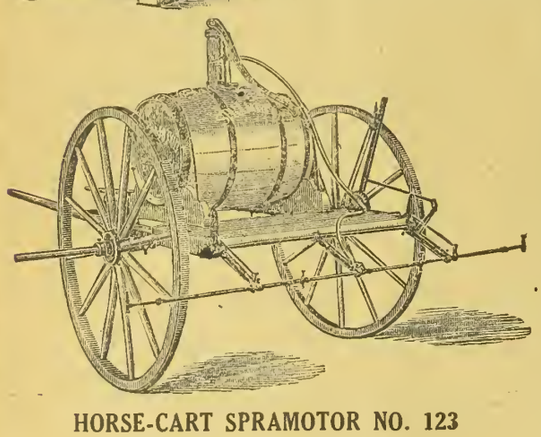
This machine comes to you with house lines, each 10 feet long with couplings attached, patent hand valves, two bamboo extension rods with inside brass tube, brass cupped ends and patent drip guard, two double nozzle clusters, everything complete and ready to work $26.oc.

HORSE-POWER SPRAMOTOR

For all forms of spraying on a large scale.

With this outfit, the grower can meet every spraying need, whether row crps, vineyards or orchards. The horse does all the work, operator merely has to direct the spray. Twelve nozzles may be operated at once, spraying with a searching pressure of 150 lbs Extra nozzles may be added for weed destruction and operated at 100 lbs. pressure. For full description of this splendid outfit see page 69 of our catalogue. Price complete as shown.....$140.00 to $170.00





HORSE-CART SPRAMOTOR NO. 123

Can be arranged for all kinds of spraying.

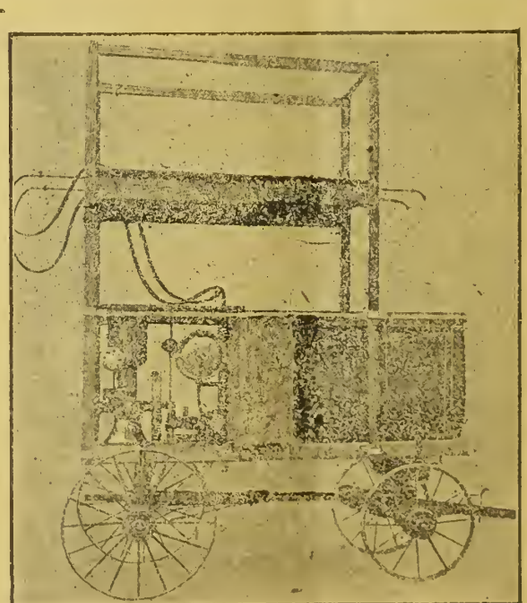
We built this machine to supply the demand for a good, moderate-price rig that could be used by hand, as many growers need a spraying outfit suitable for all kinds of work—row crops, orchards, vineyards, potatoes, etc., also painting and whitewashing. Outfit consists of 50 gal. cask on substantial hardwood frame, with 52 inch wheels. Equipment varies according to needs specified (see catalogue, page 57.) Prices from $50 50 to $82.45.

GASOLINE SPRAMOTOR Model C.

The highest type spraying outfit made today.

Driven by double-acting, single pistou motor of original design, (all parts standardized and renewable). 12 gallon Air Chamber relieves working parts of motor and pump of all shock and jar. Automatic regulator placed on pump and gear frame provided with emergency valve set at 250 lbs. pressure. Spraying deck is three feet wide by six feet long, enclosed by rail 34 inches high. Everything about this outfit is the result of years of practical experience and efficient work in the field.
Complete outfit consists of the following:—

4 inch platform, 200 gallon tank, caboose with SPRAMOTOR, geared jack, automatic regulator, 12 gallon air chamber, strainer, agitator, emergency valve, two lines best 300 lb. hose and couplings 12 feet each, two leakless stopcocks, two 10 ft. bamboo rods with drip guards, two 4-nozzle clusters, derrick, 2½ H. P. hopper-cooled engine (attached) and low down waggou with heavy iron 4-inch wheels. ***The whole gaaranteed for the life*** of the outfit against defects in materials and workmanship. Price complete and ready to run.....$340.00



THESE FOUR MODELS are simply representative outfits chosen out of our entire range. There are dozens of others. There is a spraying outfit in the SPRAMOTOR line that will exactly fit your requirements, and we'll sell it to you at the same price as you would have to pay for an inferior machine.

FREE While you are thinking about it, today, write us stating your exact needs in the way of a spraying outfit. This will not obligate you in any way. By return mail we will send you a copy of our valuable, illustrated treatise on "Crop Diseases" without charge.

The London Spramotor, 1720 King St. E., London, Can.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

B. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Milking Shorthorns.

E. W. Heurtley, P. O. Sutherland's River, N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Cheviot Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Southdown Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Yorkshires.

R. J. Messenger, Lawrencetown, N. S.
E. W. Heurtley, P. O. Sutherland's River, N. S.
Steward Bros., Murray River, R. R. No. 1, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Thos. W. Prowse, Union Road, P. E. I.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
A. A. H. Margison, East Centreville, Carleton Co., N. B.

Shropshires

C. A. Archibald, Truro, N. S.

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

LAWNDALE STOCK FARM

SHORTHORNS

Roan Heifer, dropped April 1912, All Red Heifer dropped September, 1910, Dark Red Roan Cow age 3 years, Roan Cow age 6 years, All Red Bull age 2 years, two young Heifer Calves, one all ed, one roan, dropped January 1914.
Special prices quoted.

I. M. LOVITT, M. D., Prop.
YARMOUTH. - - NOVA SCOTIA

PURE BRED STOCK FOR SALE

Guernsey and Ayrshire Bulls ranging from four months to twenty months old.
One Pure Bred Ayrshire Cow 5 yrs. old (Fresh milch.)
Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, - Shubenacadie, N. S.

Riverview Stock Farm

High Class Holstein Cattle and Yorkshire Pigs

Several young Bulls fit for service for sale, sired by Bob Dorindo, 9532, several times champion and a son of the well known champion Mercena Vale 5828. Dams are heavy producers and show ring winners.

D. R. NICHOLSON, Coxheath, N. S.

ROSE BANK FARM

Jerseys and Yorkshires for Sale

Bulls from cows in Record of Merit and Young pigs ready to ship in September.

JOSSELYN & YOUNG

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

TO MAKE ROOM WE Offer the Following

2 fine Houdan Cockerels.....3.00 each
1st and 2nd prizes at Fredericton
Pair Houdans 5.00
Cockerel 1st at Moncton
Pair Silver Pencilled Wyandottes.....6.00
Each won first at Moncton
Trio Columbian Wyandottes 6.00
1st cockerel and pullet at Moncton
Four Indian Runner Drakes each 2.00

Maritime Poultry Supply Co.
MONCTON, N. B.

SHORTHORN CATTLE

Stock bull, Doune Gladiator, (imp.) 79308. No superior in Maritime Provinces.
Also choice lot of heifers, best blood of the breed obtainable, with size, style and quality. Also a few high class milking grades.
Prices within reach of any farmer who wishes to improve or renew his stock.

J. E. Hetherington,
Cody's N. B.

EGGS FOR HATCHING

Buff Orpingtons, $1.50 per 15.
White Wyandottes, $1.50 per 15.
Sicillian Buttercups, $2.00 per 15.
Get your order in early.

HIGHLAND VIEW DAIRY,
R. R. BLACK, - Amherst, N. S.

FOR SALE

A handsome Grey African Gander, a high class bird and perfect in every way. Am only selling because he lost his mate by an accident, $6.00 if taken at once.

SARAH E. MOSES SMITH,
Woodward's Cove, Car. Co., N. B.

BARRED PLYMOUTH ROCK EGGS

We are now offering eggs from pens of select birds at $3.00 per sitting of 15 eggs; from pure bred utility pens $1.50 per 15. Prices given on application for larger quantities.

CRAIG BROS.,
Amherst, N. S.

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

"Homestead Farm"

Holstein-Friesian Cattle
Clydesdale Horses
Shropshire Sheep
Berkshire Pigs

We have for sale at present a few young bulls fit for service, and some heifers of different ages also some young cows.
If you want to get into an A1 Clydesdale Stallion in a year or two, now, is your chance. We have a yearling that will make them all go. Write for price. Our first litter of Berks is due in April.
Let us know what you want and we will give description and price, or better come and see our stock.

Long Distance 'Phone.

LOGAN BROS., Amherst, N. S.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Are You Keeping Poultry for Profit or Pleasure?

We Can Suit You Either Way

FOR PROFIT

We offer eggs for hatching from Birds bought from The World's Champion Layers

Tom Barron's S. C. White Leghorns—Winners at the leading Egg Laying Contests in England and America. Every hen guaranteed off 260 egg strain and the Cocks full Brothers to the hen that laid 282 eggs at Storrs. Conn. last fall.

J. W. Park's Barred Plymouth Rocks—The World famous 200 Egg Strain. We hold Records and Guarantee for every bird purchased.

With eggs selling at 60 cents a dozen and the above Stock all **Guaranteed** well over the 200 egg per year limit just figure out the **Profit you can earn** by keeping stock of this quality. One hen of this standard equal to three scrubs is a modest estimate.

FOR PLEASURE

Exhibition with heavy egg laying qualities combined

We offer eggs for hatching from birds bought from **The King of S. C. White Leghorn Breeders, George B. Ferris.** Winner at all the leading Shows in America. His latest record 35 First Prizes, 41 Second Prizes at 13 Shows.

E. B. Thompson's Imperial Ringlet Barred Plymouth Rocks—The Best and most popular Strain of Barred Rocks in the World. See our Poultry Pamphlet for particulars of the winnings of this strain at Madison Square and other leading shows this winter.

Regardless of cost we have bought the best stock that money could buy. The best was not too good for us, the best in not too good for you. We have the goods and guarantee you a square deal. Our price is consistent with the quality offered as we are only charging about one half of what you would have to pay if you bought direct from the Breeders of our Stock birds and you get the eggs practically at your own door.

Send for our Poultry Pamphlet giving full particulars of breeding stock.

The Fertilizer Experimental Farm, Ltd.

SYDNEY, - - NOVA SCOTIA

SCOTCH COLLIE PUPPIES

We have some fine Scotch Collie Puppies for sale, the puppies are from the finest stock in Canada both sire and Dam being prize winners at the recent dog show at St. John, N. B. as well as other big shows in Upper Canada. These Puppies are finely marked, dark in color and should make very fine dogs. Write for prices, pedigree and full particulars.

Kingsdale Poultry & Supply Co.
SUSSEX, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.
Chester White Swine—Orders booked for spring litters.
Several choice Barred Plymouth Rock Cockerels. Correspondence solicited. 'Pone 111.

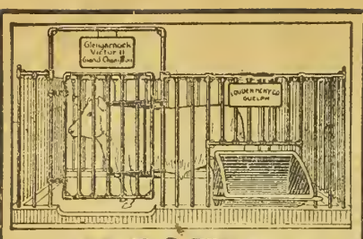
J. FRANK ROACH, - - Sussex, N. B.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.



LOUDEN

Sanitary

Steel Pens

— for —

Bulls, Cows, Calves and Hogs

Comfortable, Permanent, Secure

THE best animals in the country are stabled in LOUDEN pens, because the owners appreciate the convenience and protection secured, and the animals the comfort and freedom so necessary, when they are continually shut up.

Louden pens are constructed of the best tubular steel, and dust and germ proof malleable couplings, finished in aluminum. For quality, strength and service they lead.

Write for catalogue and for Free Barn Plans if you are building or re-modelling farm buildings.

The LOUDEN MACHINERY CO.
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RAW FURS

Our specialty is CANADIAN RAW FURS. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

HALLMAN FUR CO., Toronto Ontario

N. Hallman, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

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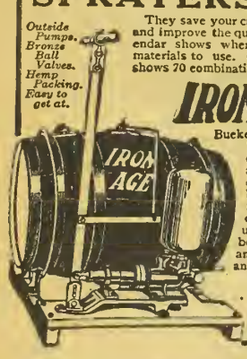
Outside Pump. Bronze Ball Valves. Hemp Packing. Easy to get at.

They save your crop, increase the yield and improve the quality. Our Spray Calendar shows when to spray and what materials to use. Our "Spray" booklet shows 70 combinations of

IRON AGE



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Advertise in the Maritime Farmer.

Fertilizer Analysis.

(Continued from page 411)

zer, the cost of manufacturing is spread over a greater amount of fertilizing material thereby reducing the cost per pound of plant food.

High grade fertilizers are generally much more efficient owing to the larger plant food content. In many cases fertilizers have been found unsatisfactory simply because a light application of a low grade fertilizer was used. The trouble was that not enough plant food was furnished.

Take the following example of a low grade fertilizer.

Plant Food	Percent	Pounds Per Ton.
Nitrogen	1.64 p.c. ...	32.8
Avail. Phos. Acid	8 p.c.	160.
Actual Potash	2 p.c.	40.

At the rate of four hundred pounds per acre this fertilizer furnishes 6½ pounds of nitrogen and 8 pounds of potash in both cases less than is those circumstances, profitable refound in one ton of manure. Under sults can hardly be expected. However, by using a fairly heavy application of one of the better of the medium grade fertilizers, profitable results are to be obtained.

In buying fertilizers the mixtures should be selected not according to the name of the brand but according to the analysis. Keeping in mind the fact that high grade mixtures are more economical as well as more efficient than the low grade mixtures.—E. A. Lods.

The in Foal Mare.

As the period of gestation varies in individuals, and sometimes in the same mare in successive periods, no one can state with reasonable preciseness when foaling will take place.

The approximate period is usually stated at 11 months, or 330 days, and it may be most safely stated that it will vary from 322 to 346 days. In extreme cases foaling has been delayed until 400 days have elapsed, and first pregnancies often last a year. Where parturition is delayed it is often accepted as an indication of a male foal.

A farmer who, in his anxiety to give intelligent care to the mare that he believes is in foal, wishes to register the earlies symptoms of pregnancy, should, says Mr. H. W. Potts, in the "Agricultural Gazette" of New South Wales, on the cessation of oestrum or heat, note any enlargement of the abdomen three or four months after, although this is not always noticeable, particularly with fillies. A slight falling beneath the loins and hollowness of the back may be present, or the udder may be observed to change in shape, becoming rounded, firm, and free from wrinkles, and the teats more prominent. These changes in the udder come and go during the period of gestation. A steady increase in weight daily after the fourth or fifth month is a sound indication, as well as the swollen and reddish state of the vaginal mucous membrane.

After the seventh or eighth month the movements of the foal may be detected by the hand or fist being pressed firmly against the abdominal wall in front of the left stifle. An examination after the mare has had a drink, or during feeding, will find the foal moving in the womb.

DURING GESTATION.

Treatment during the period of gestation must be directed on common-sense lines. A draught mare may be given steady work up to within a few days of foaling—in fact, she is all the better for it—but a walking pace should not be exceeded, and any strain or strenuous effort should be avoided, especially as the

AN EDITORIAL

which appeared in the "American Swineherd," July, 1913, the leading paper of the United States on swine raising.

"Successful Pig Feeders."

"A number of leading expert pig feeders, in giving their method of feeding and handling pigs to protect their health and increase their growth rapidly without fattening them and preventing scours, which is very necessary to the prompt and rapid growth of the pig, was brought about by feeding a small quantity of International Stock Food.

Men like Lucien Arbuckle, who has been called the champion pig raiser because of his ability to carry the pig over his pighood, without losing his baby fat, into his shoathood, uses regularly for the purpose of protecting the health and forcing the growth, International Stock Food.

Another one of the champion pig feeders and developers who puts them to the front and meets with success is Charles Kellar, of Newark, Ohio, and from his long experience has found that International Stock Food is a dependable and reliable aid in producing pigs. It furnishes a tonic that stimulates the appetite, regulates the bowels and prevents scours and is relished by the pigs. It aids in the growth and these gentlemen believe that it is a saving of time, a preveution of disease and is a help in the growth and development of the pig that is profitable for them to use.

These two names are leading successful breeders, feeders and developerswhile the names of those who use it are legion and are scattered all over the country. Not only in feeding pigs and hogs but for horses and cattle it is widely used.

This is in reply to a party who asks if Lucien Arbuckle, whose article some time ago was published, in which he gave as one of the reasons for preventing scours his use of International Stock Food and they want to know if he is still using it.

Our Mr. Cantrall was out to see him this month where he has charge of the herd of W. P. Cowan, near Wheaton, Ill., and he informed us that the buckets of International Stock Food were observed around at convenient points so that the pigs were not deprived of it."

Any comment on this by us would be useless.

International Stock Food Tonic (3 feeds for 1 cent) is sold by dealers everywhere on a spot cash guarantee of your money back if you are not satisfied with its results. 121

INTERNATIONAL STOCK FOOD COMPANY, LIMITED - TORONTO, ONT.

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"FAVORITE" CHURN (with Bow Lever)

—makes churning a pleasure. It's so simple to drive—requires so little effort to produce the butter. Agricultural Colleges and Government Inspectors recommend it. Used in Denmark, Australia, New Zealand, S. Africa, and all over Canada.

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"ORANGE LILY SAVED MY LIFE"

These words or expressions having the same meaning are contained in hundreds of the letters I have received during the past year. Many were from women who had suffered agonies from falling of womb; others from women who had escaped dangerous surgical operations, as the tumors and ulcers had been removed by the action of Orange Lily; and others who had suffered from suppressed menstruation, leucorrhoea, painful periods, etc. For all these and the other troubles known in general as Women's Disorders, Orange Lily furnishes a positive scientific, never-failing cure. It is applied direct to the suffering organs, and its operation is certain and beneficial. As a trial actually proves its merit, I hereby offer to send, absolutely free, a box worth 25c., sufficient for ten days' treatment, to every suffering woman who will write for it. Enclose 2 stamps. MRS. FRANCES E. CURRAH, Windsor, Ont.

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SAVE $20 ON SHOE BILLS

"The World's Greatest Workshoe"

Lighter than Leather	For Men and Boys
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Free Ten-Day Try-on Offer

No man or boy should think of buying ANY workshoes until he SEES and TRIES my "steels" at home. My "steels" are better in every way than any all-leather workshoe or rubber boot you ever wore. I will send a pair of "steels" your size, for your Free Ten-day Try-on, without cost, risk or obligation on your part to prove them an ABSOLUTE NECESSITY in your work.

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Over a Million men and boys wear "steels" because they are "The World's Greatest Workshoe" for field, furrow, stubble, roads, forest, stable, barnyard or cement floors; rain, mud, slush, sand, gravel, rocks, snow or ice. "Steels" are the only Light, Comfortable, Economical, WATERPROOF, Cool in summer and Warm in winter workshoes ever made. They cost less and outwear 3 to 6 pairs of best all-leather shoes. Get full particulars and Free Ten-day Try-on Offer — today. Sure.

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Sizes for Boys, 1 to 4

Steels 6 in. high.....$2.50
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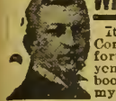
Each style of "Steels" is worth at least twice as much as the best all leather workshoe of the same height.

My "Steels" run in the same sizes as ordinary, all leather workshoes. In case of error in ordering, exchange will be made to larger or smaller size, without extra cost to you.



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W. M. RUTHSTEIN, The Steel Shoe Man, Dept. 62, TORONTO, CAN.

TRAPPERS

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Don't ship anyone furs till you get *Our Free Bulletin* quoting cash prices we actually pay for *Mink, Skunk, Fox, Wolf* and all other furs. We charge no commissions. Write today for Free Bulletin—it will pay you big.

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Send us 25c. for 25 Handsome Easter Cards, beautiful colors, gold and silver embossed designs, no two alike, and we will give you 100 free ALL POSTPAID Your money back if not delighted.
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If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

Chamberlain's Cough Remedy has won its great reputation and extensive sale by its remarkable cures of coughs, colds and croup. It can be depended upon. Try it. Sold by all dealers.

period of foaling approaches. Shaft work is generally associated with the possibilities of accident or over-exertion, and should be discarded. If a mare is a noted sweater, then over exertion should be avoided seeing that its continuance may interfere with milk secretion. The bowel discharges require to be watched, and constipation corrected by bran mashes and green foods. The main diet has to be arranged in order to meet the demands of mother and foal. Good chaff and a little grain, and other foods rich in those elements which form flesh and bone, may be required to supplement grazing. Clover is always a useful adjunct to any ration, not only because it affords protein for flesh formation, but also because it stimulates the flow of milk. Towards the latter portion of the period of pregnancy the muscles of the hind-quarters fall away from the buttock, and a shrinkage of the hindquarters and flanks becomes evident. Care should be taken to avoid any class of work entailing excessive fatigue or sudden movements, also jerky exertion. It may safely be laid down as a rule to work draught mares to within a fortnight of their expected time of foaling.

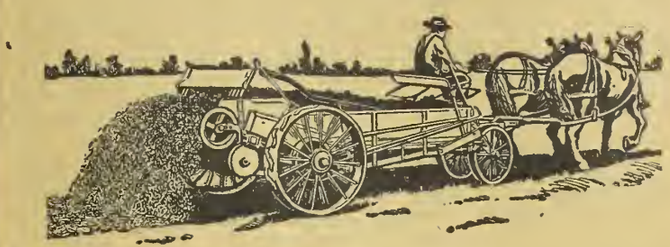
SYMPTOMS.

The ordinary symptoms of approaching parturition are familiar to most breeders. The abdomen becomes more pendulous, the udder enlarged, the teats thickened and extended, and the muscles of the croup less prominent, while the lips of the vagina enlarge and appear slightly parted. Often there is a viscid discharge. The waxy substance found on the opening to each teat drops off about twenty-four hours before foaling, and milk may flow from each teat on the application of pressure. At times the teats do not fill until after foaling. Sometimes the wax on the teats is absent; and yet again in other cases the usual symptoms of milk formation in the udder are delayed until after foaling. When the time approaches for foaling the mare becomes excited and uneasy. Lying down, elevating the tail, and straining, are all marked symptoms of pains. These become more frequent until the climax is reached. Natural parturition is rapidly and easily accomplished. A mare may be seen grazing comfortably, and on revisiting her half an hour later she may again be found complacently grazing, but this time with her foal at foot. It is well to give the mare at least one bran mash daily for two or three days, the aim being to avoid giving her any class of food likely to cause constipation. The after-birth, which, as a rule, is naturally ejected in from three to eight hours after giving birth to the foal, should be buried or burnt.

Fish Oil For Flies.

Fish oil may usually be bought by the barrel at about 45 xrents per gallon, or in 10-gallon lots at 60 cents per gallon. It is a good repellent for flies and similar insects, and may be used in the following mixtures:— (1) Fish oil, 3 parts; herosene, 1 part. (2) Fish oil, 100 parts; oil of tar, 50 parts; crude carbolic acidl 1 part. (3) Fish oil, 1⅓ pints; kerosene, 1½ pints; resin, 1½ lb.; laundry soap, 2 cakes. Mix thoroughly, and add enough water to make 3 gallons. (4) Fish oil, linseed oil or kerosene, 1 pint; coal tar dip, 1 pint, laundry soap, ¼ bar; hot water, 15 pints. Mix thoroughly so as to form an emulsion or 15 cents, or they may be sprayed Any of these mixtures may be ap- on with a small hand sprayer such plied thinly to the animals with such as can be purchased for 40 or 50 a brush as can be purchased for 10 cents.

International Harvester Manure Spreaders



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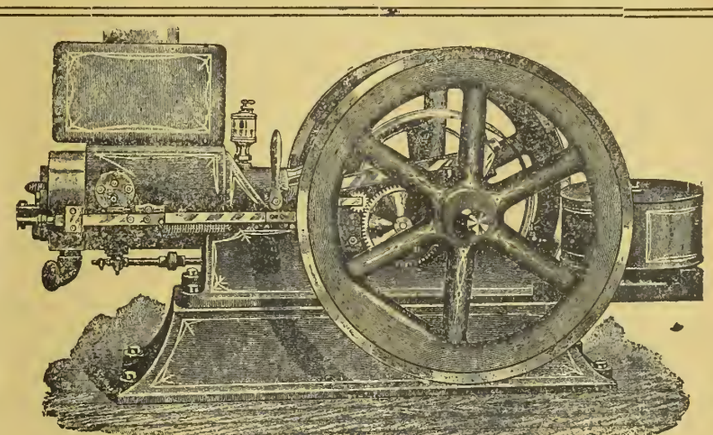
STEEL frame on steel wheels—that is the lasting basis on which International manure spreaders are built. All parts, including box, beater, spreading mechanism, apron, are built by experts, using best materials, from careful designs based on field tests.

Every detail is strong and durable, built for long life and ease of draft. Among the features that will interest you are these: Simple protected beater driving mechanism, all of steel; load carried on rear axle, insuring traction; reversible gear and worm; low, easily loaded box, with ample clearance underneath; end gate, preventing clogging of beater while driving to the field; etc.

All styles are in the I H C spreader line, high and low, endless and reverse apron, and various sizes for small and large farms. Our catalogues will tell you more. Write for them and let us tell you also where you may see I H C manure spreaders.

International Harvester Company of Canada, Ltd
At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.



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The Sussex Motor Co.'s engine is the BEST, SIMPLEST and most satisfactory gasoline engine made. It will develop more power at less expense than any other.

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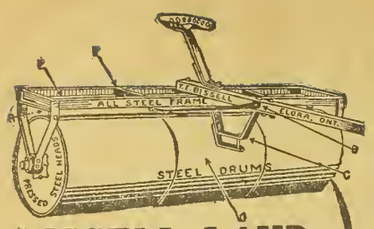

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are all steel except the Pole. They are braced and stayed to stand all kinds of hard work and wear well. The entire frame, bottom and all, is built of steel. The (18) anti-friction Roller Bearings make light draught.

The Draw Bracket and low hitch do away with neck weight.

The Axle revolves with the drums and there is no squeaking or grinding.

The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL. These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is "built for business," that stands up against lots of hard work. Ask Dept M for free catalogue. 75

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No. 1 Pen, 2nd prize pen at Kentville Poultry show.

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No. 3 Pen, first Cockerel special prize, best Cockerel of any breed in show. 3rd Pullet, Cockerel mating.

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Advertise in the Maritime Farmer.

Halifax Market Prices.

The market prices in Halifax have had a tendency towards lower prices since our last quotations. The most noticeable feature has been the reduction in eggs from 30c. to 25c. per dozen. Eggs are very plentiful now, owing to heavy receipts during the period of mild weather which we have had. Butter has also weakened in price and is now quoted at 30c. for creamery prints, and 26c. for dairy prints. Cheese is just the opposite, and the price has advanced to 16½c. for twins, and 16c. for wholes.

Potatoes are also firmer and are quoted at $1.10 per bag. Other vegetables remain steady.

The price of apples is steadily soaring. In our last writing we predicted $6.00 a barrel before the end of March, and today offerings of No. 1 Spys are bringing $6.00 the barrel and No. 1 Golden Russets $5.50, and Nonpareils, $5.00.

GRAIN.—Oats, bagged, 52c. to 54c. bulk, 29c. to 51c.; Peas, whole, $2.00.

FEEDSTUFFS.—Bran, ton, $27.00 to $28.00; Shorts, ton, $28.00 to $29.00; Middlings, ton, $29.00 to $30.00; Linseed Meal, ton, $40.00 to $42.00 Cottonseed Meal, ton, $36.00 to $38.00; Gluten Meal, $32.00 to $34.00 Corn Meal, $1.65 to $1.70.

GRASS SEEDS.—Timothy, 100 lbs. 8c .to 12c. lb.; less quantities, 10c. to 14c. lb.; Com. Red Clover, 100 lb. lots, 20c. to 25c. lb.; Mam. Red. Clover, 100 lb. lots, 20c. to 25c. lb., less quantities, 25c. to 26c. lb.; Alsike, 100 lb. lots, 20c. to 25c. lb., less quantities, 24c. to 26c.

LIVE STOCK.—Milch Cows, $45.00.

DRESSED MEATS.—Beef (carcass) 7c. to 12½c. lb.; Mutton, 8c. to 9½ c. lb.; Veal, 8c. to 10c. lb.; Pork, 9c. to 12½c. lb.

HORSES.—Drafters, $250.00 to $300.00; Roadsters, $200.00 to $250.00 Carriage, $175.00 to $200.00.

DAIRY PRODUCTS.—Creamery Butter, 30c. lb.; Dairy Butter, 26c. Cheese, 16½ c. lb.

POULTRY AND POULTRY PRODUCTS.—Eggs, 25c. doz.; Fowl, fresh killed, 15c. to 18c. lb.; Ducks, 18c. to 20c. lb.; Geese, Nova Scotia, 17c. to 20c. lb.; Turkeys, Nova Scotia, 22c. to 24c. lb.

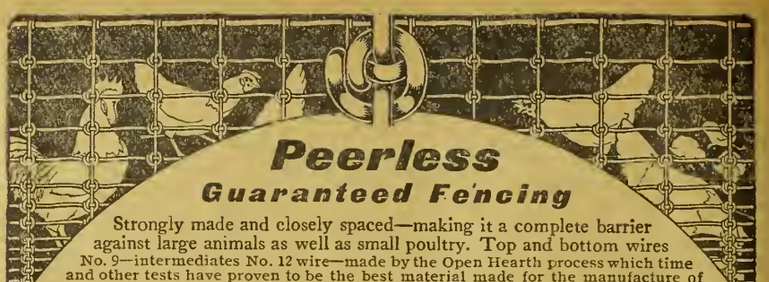
FRUIT.—Apples, No. 1 Baldwin, $5.00, No. 2 Baldwin, $4.00, No. 3 Baldwin, $3.00; No. 1 Spy, $6.00, No. 2 Spy ,$5.00, No. 3 Spy, $4.00; No. 1 Golden Russet, $5.50; No. 1 Nonpareil $5.00, No. 2 Nonpareil, $4.00, No. 3 Nonpareil, $3.00.

MISCELLANEOUS.—Hay, $16.00 to $17.00 ton; Wool, 23c. to 25c. lb.; Beef Hides, 12c. to 13c. lb.;Calf Skins 17c. to 18c. lb.; Sheep Skins, 75c. to $1.50.

VEGETABLES.—Carrots, $3.00 bbl.; Potatoes, $1.10 bag; Turnips, $1.25 bag; Parsnips, $2.00 bbl.; Cabbage, 2½c. lb.;Cucumbers, 13c.

Lice on Horse.

It will be best to have the horse clipped, which I know is unusual to do to a cart horse, but by doing so you will find that it will be easier to dress the animal for the lice, and also you will remove with the hair thousands of nits, or eggs, which are attached to the air and are very difficult to destroy by means of dressings. The safest dressing will be made by boiling 1 lb. of bruised stavesacre seeds in 3 gallons of water for two hours, and well brushing in coat with a dandy-brush; this should be done every week, as, though the living insects are destroyed, the nits keep hatching out, and should be destroyed before they become capable of laying more eggs The mane and tail should be washed with carbolic soft soap the day before applying the



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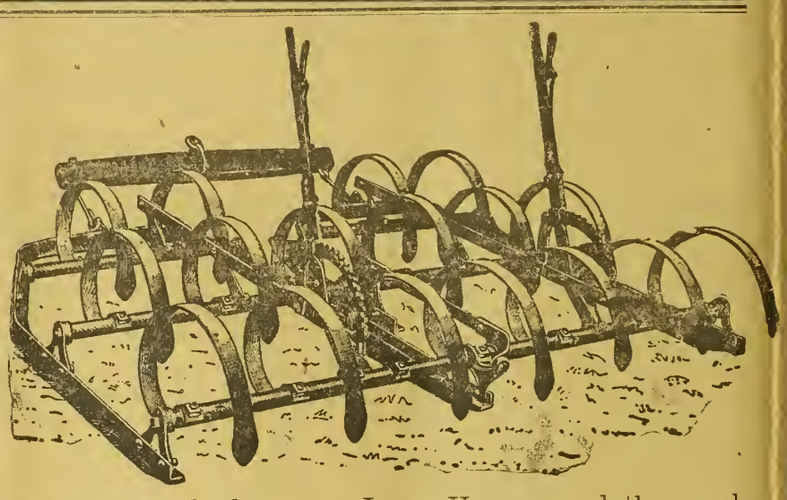

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With the levers the teeth can be regulated to depth in an instant. It will do more effective work than any other harrow and save half your time. Made in sizes:

9 and 11 Tooth, Single Section.
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READ HOW TO GET THEM. Just send us your name and address and we will promptly send you by mail, postage paid, only 25 of Yvonne a Hearts of Flowers, our delightful new perfume in eight lovely odors such as Beauty Rose, White Lilac, Wood Violet, Lily of the Valley, etc. You sell them easily at 10c. each and send us the $2.50 proceeds, upon receipt of which we promptly forward you the twin dollies, exactly as illustrated and described, or the expansion cameo bracelet in a neat satin-lined case. Do not let this chance slip by. Write to-day. 71

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ssing. Unless you will disinfect ble, and have washed over with limewash and carbolic, the dres- of the animals is useless, as y are soon reinfected from the vices into which the lice have ot. The harness also should be shed with hot soda-water and car- ic, and the saddle or other cloth ngs done over with a solution of bolic acid, and thoroughly dried ore using away. Do not use bar- straw for bedding; use wheat aw, or, better still, fine chips, as y do not harbour the insect. Feed l groom well, washing the brashes kly in hot water and soda. If like, a small quantity of paraf- may be used to damp the brush ore using, but only a very little ht to be used.

ount of Butter Made From Cream.

low much butter should be made a gallon of 25 per cent cream, 30 cent cream and 35 per cent cream l does it increase in the same ra- ? What should be the difference in ght between a 5-gallon can of 25 cent cream and the same testing per cent?—J. N. W., Upper Marl- o, Md.

gallon of 25 per cent cream ghs 8.36 pounds, a gallon of 30 cent cream 8.3 pounds, a gallon 40 per cent cream 8.22 pounds. It readily seen that there is only a ght difference between a gallon of am testing 25 per cent and one ting 35 per cent. A gallon of am testing from 25 to 35 per cent l make approximately from 2½ to pounds of butter. It is easily es- ated, from the weights given of different tests, how many pounds cream, testing different per cents fat, there are in a five-gallon can. Boards.

Herbageum by Parcel Post.

During nearly thirty years Herba- m has been tested without failure l it is known to be the best thing the market for horses, cows, ep, pigs, poultry and especially calves. If it is not for sale ere you deal write to The Beaver g. Co., Ltd., Galt, Ont., Canada, e manufacturers of Herbageum. ey will send you by parcel post y quantity to any address in On- io, Quebec, or Manitoba, at 60c. 4-lb. package. In the Maritime ovinces, Saskatchewan or Alberta, 70c per 4-lb. package, and in Brit- Columbia at 80c per 4-lb. package d they will deliver at any railway tion in Canada freight prepaid, lbs. for $14.00. In all cases the h with your order.—F.18-w2mos.

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We make a specialty of growing rdy fruit trees, in all the leading rieties, suitable for the Maritime ovinces, at lowest possible prices, sistent with quality.

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Fast trotter, no record, very speedy d has a good way of going.

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"The wisest investment I ever made"

Yes! We have thousands of satisfied customers all over the Dominion who are buying and recommending this high grade fencing.

Everyone who has given it a thorough trial will frankly admit that fence troubles and expenses vanish the instant you erect

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Manufactured exclusively from Open Hearth Steel—the hardest, stiffest and most weather proof fence steel on the market. And it is the ***only*** wire fencing made entirely in Canada.

The Government recommends it and ***we guarantee it.***

Every strand is heavily galvanized with pure virgin zinc. Absolutely impervious to weather conditions. Can't rust or corrode.

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Lasts a lifetime. No repairing. No expense of any kind. Whereas ordinary wire fencing, being poorly galvanized, corrodes in a few years and has to be repaired or entirely replaced.

Invincible fencing has all the ***strong qualities*** of every high class fencing on the market—but none of the weaknesses. It is the ***only*** fencing for permanence and economy.

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Let us tell you about imported Bessemer fence wire, with skimped galvanizing. Learn more about "Invincible" Fencing. Our new catalogue is ready and will be sent on request.

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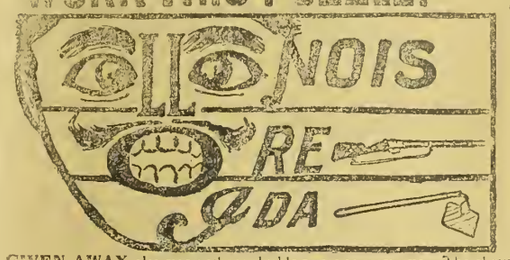
WORK THIS PUZZLE! WIN A PRIZE!!



$50. CASH PRIZE

GIVEN AWAY also many other valuable prizes as premiums. The above three sketches represent THREE STATES IN THE UNITED STATES. Can you tell what they are? Surely you can solve this PUZZLE, SO DO SO. If you can make out the names of the Three States we will send you a BEAUTIFUL PICTURE POST-CARD FREE—also a certificate of entry in our PRIZE CONTEST closing December 31st, 1914. Somebody who sends for the particulars of this PRIZE CONTEST telling us WHAT THREE STATES ARE REPRESENTED by the above Three Sketches, will receive a $50 GOLD WATCH or $50 IN GOLD MONEY PRIZE offered as a premium for highest efficiency in the introduction of our goods during the ensuing calendar year as stated in the entry certificate. In the event of a tie between two or more persons for the prize, a prize identical in character and value with that tied for will be given to each person tied. We will also send you a chain and watch offer besides any PRIZE YOU WIN. Try at once, it may be you. Send your answer on a Postcard or a letter, write your name and address plainly.

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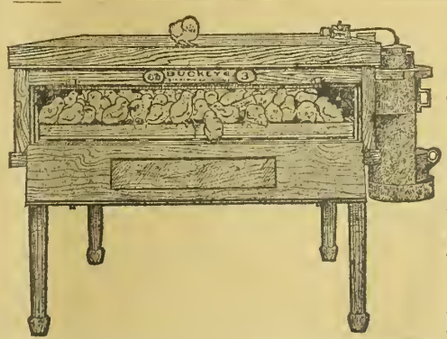
During the P. E. I. Short Course in Agriculture breeding herds of Ayrshire cattle were supplied by Simpson Bros., who had been breeding Ayrshires according to their utility value for a number of years, and who strongly exemplified this policy in the animals they had on exhibition. Andrew McRae & Sons also had a number of valuable Ayrshires on hand, among them being the notable Milkmaid 7th, that completed an official record of 16,679 pounds milk and 729 pounds fat a few months ago. Their herd includes many other valuable females of high producing quality, among them is Spicy Lucy that produced 12,640 lbs. milk in twelve months, or 505 lbs. estimated fat; Dairymaid produced 11,100 lbs. milk and 576 lbs. estimated fat; Bellevedore Princess produced 7,785 lbs. milk in ten months and 290 lbs. estimated fat; Fairview Queen, a daughter of Milkmaid 7th, two years of age, produced 6,500 lbs. milk and 285 lbs. estimated fat in six months Gurta has produced 5,440 lbs. milk and 206 lbs. estimated fat in four months; Annie Laurie 3rd has produced 5,060 lbs. milk and 200 lbs. estimated fat in five months; Milkmaid 4th has produced 7,450 lbs. milk and 327 lbs. estimated fat in eight months. This last record is exceptional when we consider that Milkmaid 4th is in her fourteenth year. Many of these cows are still in their lactation periods and several have already produced official records. Before the close of the year we expect to have the full records to offer as an indication of the producing qualities of this herd.



Now is the time to place an order for an Incubator or Brooder.

There is none better than the BUCKEYE. We have them from 60 to 350 eggs size and from $12 00 to $45.00 each.

Can be run with either gas or oil. Let us sell you one and remember ANYONE CAN HATCH CHICKENS WITH A BUCKEYE MACHINE.

MARITIME POULTRY SUPPLY CO.
Moncton, New Brunswick

It Pays to Advertise in the Maritime Farmer.

PIMPLES Are an "EYE SORE."

Pimples are caused by the blood being out of order. Those little festering sores appear on the forehead, on the nose, on the chin and other parts of the body, and although they are not a dangerous trouble they are very unsightly to both you and your friends.

There is only one way to get rid of them, and that is to purify the blood.

Burdock Blood Bitters is without a doubt the best remedy on the market for this purpose.

Wm. F. Donohue, Jr., Hamilton, Ont., writes:—"About six months ago my little son's face was literally covered with pimples. I tried every preparation I was told of by my friends, but to no avail. Soon I thought I could not have them fixed up, and would have to wait, and let him grow out of them, but thanks to Burdock Blood Bitters they are all gone, and I gladly recommend it to anyone."

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Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits—Simple home treatment 25 years success. Testimonials from all parts of the world; over 1,900 in one year.

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Children are much more likely to contract the contagious diseases when they have colds. Whooping cough, diptheria, scarlet fever and consumption are diseases that are often contracted when the child has a cold. That is why all medical authorities say beware of colds. For the quick cure of colds you will find nothing better than Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Does Winter Kill Potato Blight in Soil?

Following is a brief review of Bulletin No. 367 of the Geneva, N. Y., Experiment Station on the Persistence of the Potato Late-Blight Fungus, in the Soil by F. C. Stewart.

Rotation of crops is necessary to prevent transmission of several plant diseases. Cabbage should not be planted the second year where the first season's crop has shown much clubroot, and potatoes should not follow potatoes where scab has prevailed, nor where Fusarium wilt and its accompanying tuber rot have been destructive.

The most destructive potato disease in New York State, however, is late blight, with the common rot that follows it; and questions relating to transmission and control of these troubles are exceedingly important. Does this fungus survive the winter in the soil and make a blighted field of one year unsafe to use the next?

Most authorities hold that the fungus causing these two troubles, Phytophthora infestans, does not overwinter in the soil; and that there is no more liability to blighting and rotting on a field thus affected the year before than on one free from the disease. Recently two authorities, one in England and one in America, have advanced the opposite views and advise against planting potatoes on soil where blight has been prevalent.

To test the liability to such transmission, the Station Botanist has carried on careful tests in two seasons; and finds no evidence that the fungus can survive the winter in the field, in central New York, at least. In each of the tests, soil from a field of diseased potato plants was thoroughly mixed, in boxes, with broken, rotten tubers and pieces of blighted stems; and the boxes were exposed to the weather during early winter. Later the boxes were brought into the forcing house, a sound potato tuber was planted in each and conditions made as favorable as possible for growth of plants and development of the disease. In spite of warmth, abundant moisture, both in the soil and in the air, and luxuriant, succulent growth of the plants, not a sign of blighting appeared, even when the plants were grown in a special glass chamber and thoroughly wet daily with water drained from some of the soil mixed with diseased material, or were painted with a thin mud made from such soil.

The results, being negative, do not prove that the late-blight fungus cannot remain alive over winter in the soil, but they make such persistence appear highly improbable.

It would seem unnecessary, then, to change the location of the potato crop to avoid this disease; especially as we know that thorough spraying will control both blight and rot and will increase the crop enough, taking one year with another, to make this a highly profitable regular practice in potato growing.

The spraying of the late potatoes should never be neglected.

Pony's Wounded Hock.

Wounds in the hock are always a great bother to heal, as there is no muscle underneath, and the constant movement of the limb breaks down the new growth of the skin, making a nasty raw crack, which is called a sallender. The thickening at the edges of the wound will always remain, but ought to cause no trouble. Keep a cradle on the pony to prevent it getting at the wound, as there is often a good deal of itching when the parts are nearly healed, and do not allow the pony to lie down for a while, but put on the pillar reins at night. Dress once a week with mercurial ointment and try dusting the part with one part of powdered burnt alum and one part of fuller's earth, or a lotion of sulphate of copper, three drachms; sulphate of zinc, three drachms, and sugar of lead, three drachms; water to one pint. This should be well shaken up before using, as a good deal of precipitation takes place. Do not, if you can manage to do without a pony, work till the place is properly healed, as each time it breaks out it is more intractable and difficult to heal. Give once daily sprinkled over its food three drachms of Fowler's Solution, being careful to keep the bottle in a cupboard away from children, as it is poisonous if taken in any quantity.

Handy Help for Farm Homes

Old Dutch Cleanser lessens work in scores of ways.

TAKES THE DRUDGERY FROM SCRUBBING AND CLEANING

In the dairy, milk cans, pans and pails clean much easier and quicker.

SAVES WORK AND TIME in cleaning harness, feed boxes, carriage tops, etc.

SEED OATS

Some Brokers selling Western Oats are sending out circulars intended to fool the farmers and claiming their seed oats as good as ours. Last year we had *no* successful competitors and nearly every one of our patrons are ordering again this year.

We just shipped out 6,000 Bushels to a Quebec city firm. The Dominion Government Inspector who examined those oats writes us that they are *even better than last years supply.*

In 1913 we shipped an agricultural Society in Rimouiski 12,000 Bushels which yielded by the Sec'y's Report *"The Best Crop we have ever seen."*

If your Dealers have not secured Read's Island Graded Seed order early from ourselves. Ordinary, true to name, Banner Club or Registered *Seed.* The extra yield twice over pays for this article.

JOSEPH READ & CO., LTD.
Summerside, - - P. E. I.

Molasuit Meal

This Cattle Food is a pure product of the Sugar Cane, which, as is well known, is the richest grass in the world. All Cattle and other stock owners will be aware of the value of Sugar as feed stuff for their animals, and "MOLASCUIT" contains more than 50% of pure Sugar. Give it a trial, and the improved condition of your stock will surprise you. Your horses after a hard day's work deserve a treat—give them a handful or so of "Molascuit" with their other food—price is reasonable.

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FLORICULTURE.

From this time throughout the winter, greater care and attention must be given to watering house plants than was necessary in summer. In the dry and heated rooms plants dry out more rapidly and especially root-bound plants, which should occasionally be given a thorough soaking by plunging the pot in water for a few minutes, to make sure that all the ball is kept moist. On the other hand, freshly potted plants or those that are not strongly root-bound, should not be over-watered as the soil easily becomes sour in winter, causing decay of roots and crown. Have no set time to water your plants, but look them over often and only water them when they need it, which is whenever the top soil commences to show slightly dry. Remember to keep the drainage holes in the pots open and free, so that all surplus water can readily pass off and always empty out surplus water from saucers, after watering. Also, do not forget to give all the pure air you can by any means possible even in cold weather. This can be done by opening outerdoors a few moments at a time. Plants in houses suffer severely for want of pure air. A few degrees of moisture in the air is also essential for best results. Spraying or washing all smooth-leaved plants is necessary in sunny weather. Strict attention to the above points will give you healthy, strong plants.

H. A., Moncton, writes: What is the matter with my Hyacinth bulbs that I am trying to grow in glasses. I keep them in the kitchen where it is hot most of the time, and how can I change the water? I tried the Chinese Lily in the same way for Christmas, and they did not do well at all. Only a lot of weak foliage.

Do not grow them in a hot, warm place. Place the dish in the sunlight and give it plenty of air. Do not keep it in a hot place, as it is sure to cause a very tall rapid growth; buds forming, only to dry up when half developed. This would have been avoided by keeping the bulbs in a bettee ventilated room as directed above.

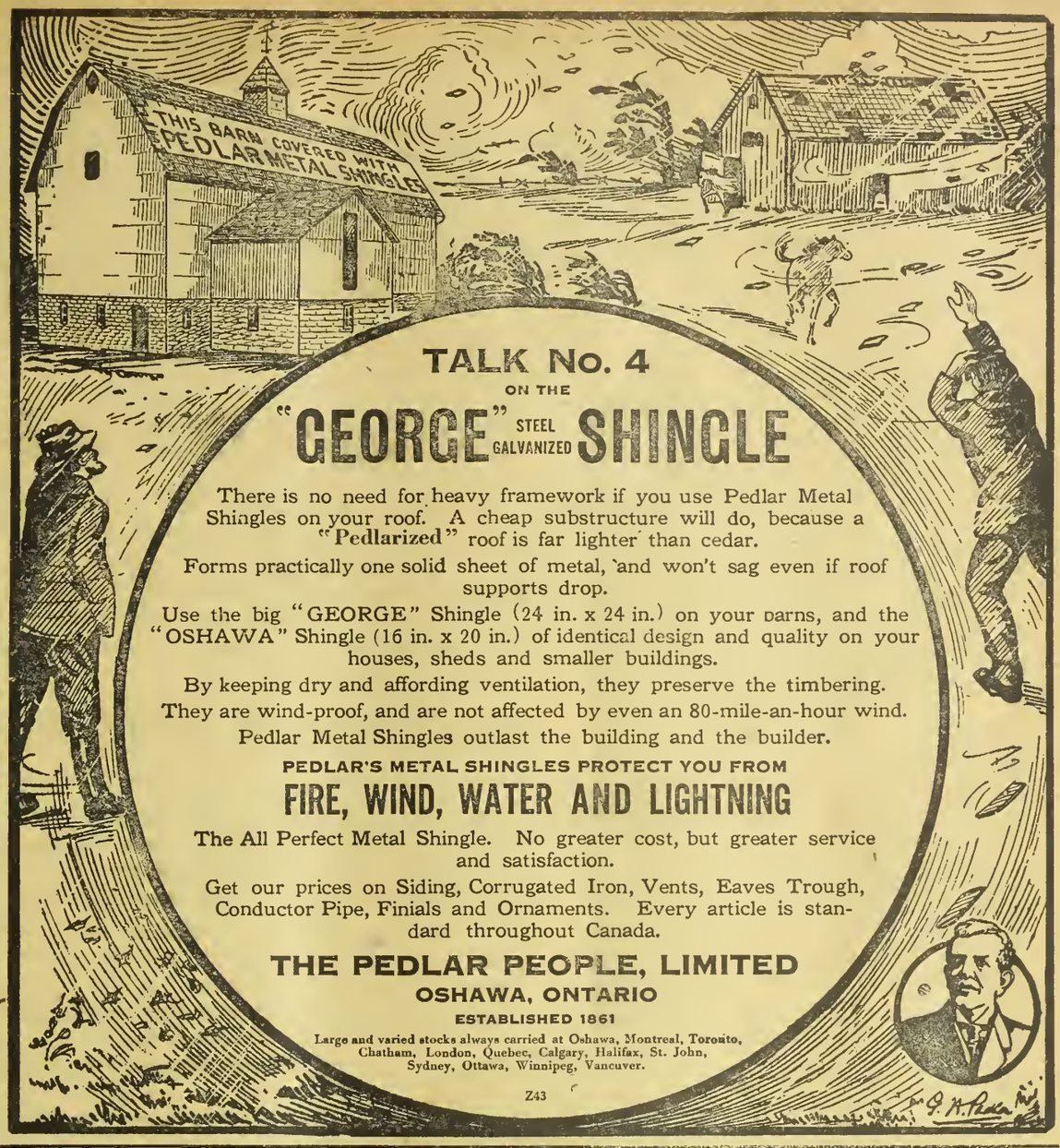
As regards changing the water. This should only be done to prevent it becoming offensive. The dish should be set flat in the sink and fresh water poured slowly into it, thus flushing the old water out of it as it were. Do not attempt to pour the water out, as that disturbs the roots and this should be avoided as much as possible.

Successful Short Courses in Nova Scotia

A most successful series of Short Courses has just been completed in Nova Scotia. The management of these courses was in the hands of the Nova Scotia Department of Agriculture and the instructors were members of the Agricultural College Staff, assisted by S. J. Moore, Dominion Seed Inspector. The funds for the purpose were supplied from the appropriation made by the Dominion Government for the aid of Agriculture in the Province.

The distinctive feature of the Short Courses, which have just been completed in this winter of 1914, has been their establishment of a somewhat permanent basis in important centres in the several counties of the province.

At each of four places in the Province, Yarmouth, in Yarmouth Co.; Bridgewater, in Lunenbury County; Musquodoboit, in Halifax County,



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ON THE
"GEORGE" STEEL GALVANIZED SHINGLE

There is no need for heavy framework if you use Pedlar Metal Shingles on your roof. A cheap substructure will do, because a "Pedlarized" roof is far lighter than cedar.

Forms practically one solid sheet of metal, and won't sag even if roof supports drop.

Use the big "GEORGE" Shingle (24 in. x 24 in.) on your barns, and the "OSHAWA" Shingle (16 in. x 20 in.) of identical design and quality on your houses, sheds and smaller buildings.

By keeping dry and affording ventilation, they preserve the timbering.

They are wind-proof, and are not affected by even an 80-mile-an-hour wind.

Pedlar Metal Shingles outlast the building and the builder.

PEDLAR'S METAL SHINGLES PROTECT YOU FROM
FIRE, WIND, WATER AND LIGHTNING

The All Perfect Metal Shingle. No greater cost, but greater service and satisfaction.

Get our prices on Siding, Corrugated Iron, Vents, Eaves Trough, Conductor Pipe, Finials and Ornaments. Every article is standard throughout Canada.

THE PEDLAR PEOPLE, LIMITED
OSHAWA, ONTARIO
ESTABLISHED 1861

Large and varied stocks always carried at Oshawa, Montreal, Toronto, Chatham, London, Quebec, Calgary, Halifax, St. John, Sydney, Ottawa, Winnipeg, Vancuver.

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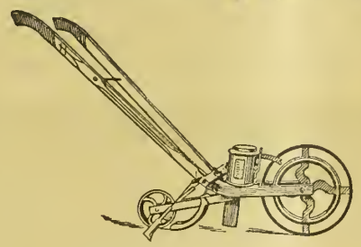
Garden Seeders and Wood Cutters



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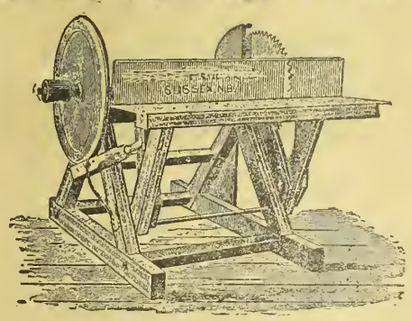
GARDEN SEEDER

Does the work of two men in half the time. Makes the drill, sows, covers and rolls the seed while you walk.

No better seeder can be built for the fast and accurate sowing of turnips, cabbage, carrots, beets, corn and all other garden seeds.

Price $7.50 Delivered at Your Station.
ORDER NOW



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"The best made" is the users verdict.

Made in four different sizes: Long Swing, Long Swing Improved (with extra long table androller) the Flat Roller Table and Short Swing.

The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1⅝" diam.

Both bearings supplied with compression grease cups and for convenience in handling we are putting skids under our machines this season.

Send for our Wood Cutter catalogue.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

Order Your Horse Posters From the Maritime Farmer

and Shubenacadie, in Hants County, a grant was given to the agricultural society conducting the annual exhibition, to assist in erecting a building suitable for the permanent housing of Short Courses, similar to those given at the college at Truro. In every case the society supplemented this grant sufficiently to supply a commodious building suitable for exhibition of live stock and for the giving of demonstrations along the various lines of agriculture. The number of centres selected was limited by the fact that instruction was largely given by the regular staff of the Nova Scotia Agricultural College, whose services could only be spared for a limited time. This arrangement provided for the very best instruction, which could be given in the Province of Nova Scotia.

The length of the course in each place was three days, the classes for the most part being conducted from 9.30 to 12, from 1.30 to 5, and from 7.30 to 9.30. Instruction was given in Live Stock Judging, Care and Management, in the Judging of Sced, and in the cultivation of the soil, in Horticulture, Veterinary Science and Poultry. Never before had such practical instruction been given at the centres where the courses were held, and that this was appreciated was evidenced by the fact of the steady growth in attendance from session to session. It was very noticeable at every course that any person who attended one session, no matter from what motive, became interested and attended the remaining sessions of the course. This resulted invariably in a steady growth in attendance and interest from the first day to the last of the course. The Yarmouth Course, for example, opened with 122 students, which number increased until it reached 170. The Bridgewater Course opened with an attendance of 67 students, which grew to 85 despite the thermometer ranging from 15 to 20 degrees below zero. Musquodoboit opened with 60 and closed with 160, notwithstanding that a heavy storm on the day preceding the opening session blocked the roads and made it extremely difficult for people to get there at all. In Shubenacadie the course opened with 37 and closed with 92, despite the fact that the course was held at a period when the first good sleighing of the season gave the farmers a chance to haul in their lumber and wood supply.

The above mentioned figures indicate the actual attendance at one session. The total number of names enrolled was somewhat over 200 at Yarmouth, 120 at Bridgewater, 175 at Musquodoboit and something over 100 at Shubenacadie.

At the conclusion of all these courses, those in attendance passed a hearty vote of thanks and stated that the courses had been of such a character as to prove very helpful to every one engaged in farming and it was their opinion that if the course was repeated, provided the weather conditions were favorable, the number in attendance would be very much larger.

As to number the members of the Agricultural College Staff were extremely well pleased for not only was the attendance from every standpoint very satisfactory but the significant feature was the earnestness with which the students applied themselves to the various studies. No attempt was made to arrange a single popular occasion; it was nothing but class work from beginning to end, but instead of the people becoming satisfied with this class work, the invariable request was for extra classes, which, however, could not, under the circumstances, be arranged for.

At Musquodoboit the Inspector of Schools for Halifax County, Mr. Creighton, made use of the opportunity to call together a convention of the school teachers in the Musquodoboit Valley. These school teachers, in addition to considering matters pertaining directly to school teaching, attenhed nearly half of the classes of the Short Course and so had an opportunity of appreciating the value of agricultural instruction, when properly given, in their own school, and at the conclusion, these teachers expressed themselves as ready to co-operate with the Department of Agriculture in developing an interest in the study of agriculture in the schools for which they were responsible. Mr. DeWolfe, Director of Rural Education, was present and made arrangement for the distribution of high class cereal and other field crops seed and also for the distribution of eggs from poultry of special merit to scho.ars in the school. Tentative plans were also drawn up for a school exhibition, which in addition to the usual prizes, would offer special prizes for those scholars who had made the best use of their seed and had gotten the best

The Biggest Thing on the Farm

A CAN of good paint is the biggest thing on the farm—the best investment you can make.

Prosperity begets prosperity, and well-painted buildings lend an air of prosperity to the whole farm. The modern farmer—the man who is most successful—is the man who realizes the true value of keeping his farm buildings looking "Spic and Span".

Martin-Senour "100% Pure" Paint

"The Paint for Wear and Weather"

is the cheapest paint you can use — not the lowest in price per gallon, but the cheapest by the job, because it thoroughly covers more surface and wears longer than any other Prepared Paint, or hand-mixed-lead-and-oil.

Every drop of Martin-Senour Paint is "100% Pure"—Pure White Lead, Pure Oxide of Zinc, Pure Linseed Oil, Pure Turpentine Dryer, and Pure Colors — the combination of which, when ground and mixed by scientific methods, through powerful machinery, produces a paint that is most economical and most satisfactory to use.

Write for our Booklet "Town and Country Homes" — it gives you many helpful suggestions on good painting, and is free for the asking. 33

MARTIN-SENOUR 100% PURE PAINT & VARNISHES

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To Be Able To Deduct One Grain Of Useful Suggestion Amongst A Heap Of Worthless Advice Is A Great Power, Truly

We pick out the Grain and hold it up for observation, when we tell you that

EDDY'S WARES

are the most reliable and the best, representing as they do. over 60 year's experience.

It is for you to benefit by this advice and insist every time upon having NONE BUT EDDY'S.

THE E. B. EDDY COMPANY

Makers of Matches, Fibreware Articles, Paper and Paper Bags.

It Pays to Advertise in the Maritime Farmer.

results from the eggs supplied.

In addition to these four Short Courses, an Apple Packing School was held at Kentville during the last week of February. The head instructor was P. J. Carey, of the Fruit Division of the Dominion Department of Agriculture, and the other instructors were W. S. Blair, Superintendeot of the Experimental Farm, Kentville; J. M. Robinson, B. S.A., Assistant, at the Experimental Farm, Kentville, and Prof. W. H. Brittain, B. S. A., Entomologist for the Province of Nova Scotia.

This Apple Packing School was a most successful one although the attendance, which in one day reached the 100 mark, was almost too large for the most satisfactory kind of work. It is proposed next year to carry on a series of these Apple Packing Schools throughout the whole Province, and, if the success which attended the inaugural one at Kentville, is a criterion, there is no doubt that the ones to be held next year will not only be successful, but will prove very beneficial to the fruit growers of Nova Scotia.

Just how much was accomplished by these courses must be left for the future to determine but it is certain that every farmer who attended went away with a better idea of, and more sympathy for, the work attempted at our Agricultural College, and by our governments, Federal and Provincial, than he had before and there is no doubt that the movement will tend to make the farmers in Nova Scotia appreciate the value of agricultiral education as they never did before. It is significant that already unanimous requests has been made to the members of the Agricultural College staff for longer courses at those places where the courses were held during the present winter and for the establishment of other courses in other centres of the Province.

The movement is fraught with great possibilities and is bound to lead to development along agricultural lines which is sure to follow the teaching of the underlying principles of practical agriculture.

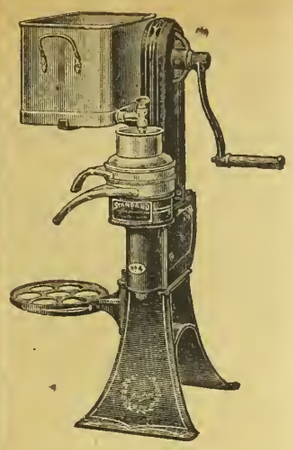
Food for Sows Not Coming in Season.

It is often quite impossible to tell the reason why the ordinary course of nature should not be followed. You do not say what you are feeding them on, only they are in good condition and most likely this is the cause. Feed on sharps, swill, and plenty of green food, giving them no barley meal. Turn out into pasture as often they seem to find plants or herbs which flushes them like rape does in the case of the sheep. A good uterine stimulant is a mixture of quinine, iron and nux vomica. Have the following prescription made up at the chemist's, and give one every morning mixed up with the food:—Sulphate of quinine, four grains; carbonate of iron, thirty grains; powdered nux vomica bean, four grains; powdered liquorice root, half an ounce. If unable to turn out in field give plenty of rape, kale, kohl-rabi or cabbage.

The Hair.

The hair is provided with oil by the sebaceous glands that lie at its roots. Regular and vigorous brushing of the hair increases the flow of oil and keeps the hair glossy. The hair is fed by blood vessels that enter the inner layer of skin, in which the hair root is imbedded. A good nervous system, which promotes good circulation, is one af the etsentials in producing a healthy growth of hair.

It is as necessary for the scalp to be kept clean as for the surface of any other portion of the skin to be kept clean. The hair should be thoroughly brushed to remove dust. It should be left loose and free at night to allow the moisture to evaporate and to permit air to pass through it freely. The scalp should be thoroughly rubbed at least once a week. This promotes a good circulation and thus gives the hair a vigorous growth. The hair should be washed at least once a month. Soft water, mild soap and thorough rinsing in clean water are essential to a successful washing.



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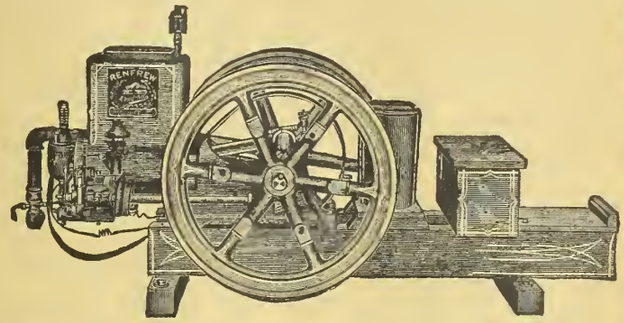
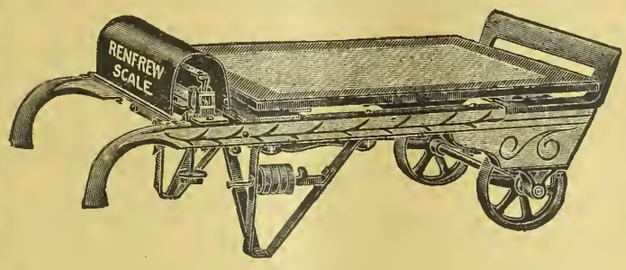


A greater necessity than almost anything else on the farn is a good scale. How can a farmer make sure of getting all that his cattle, hogs, sheep are worth unless he weighs them? The **Renfrew Handy Two-Wheel Truck Scale** has paid for itself on many farms in less than three months. A truck and a scale combined. Designed especially for farm use. Strong, compact, durable, yet light-weight. Tested by government for accuracy. Write for scale booklet. It will open your eyes.



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FOR SALE—Five yearling Guernsey Bulls. Three sired by Imp Canada's Jethro Bass. Best milking stock. T. D. BLAIKIE, Great Village, N. S

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FOR SALE—Two Registered Jersey heifers, years old safe in calf to best bull in New Brunswick, also 3 months old Bull Calf grand breeding. Send for photos. B. V. MILLIDGE, Willow Bank Jersey Farm, St. John, N. B.

FOR SALE—Columbian Wyandotte Cock, a few hens and pullets. White Wyandotte pullets. Single Comb Brown Leghorn Cockerels, hens and pullets including first pen at Amherst. Black Cochin Bantam Cock. WOLFVILLE POULTRY YARDS, Wolfville, N. S.

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SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to
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ORCHARD HILL FARM,
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The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

I have two beautifully mated pens, the progeny of last season's Boston, New York and Ontario Prize Winners.

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Pen A. $2.00 per sitting, 3 sittings for $5.00.
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One 240 Egg Cyphers Incubator, price $15.00. One trio Buff Orpingtons, 2 yearling Hens and one Cockerel. Price $8.00. Also a few S. C. R. I. Red Cockerels, prices from $2.00 to $5.00. Write your wants.

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W. A. CLEMONS, St. George, Ont.

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Volume 19. SUSSEX, NEW BRUNSWICK, APRIL 7, 1914. Number 12.

Guernseys in Prosperous Pictou County

On Spruce Grove Farm, Scotsburn N.S.

The Steading of Messrs McKay & Son

D. G. McKay and Family

Reading from left to right:
D. G. McKay, Mrs. McKay, Kenneth G., Allie, Norman G., Miss McKay, the little child in the foreground is a grand daughter.

The editor of the Maritime Farmer had occasion to visit the historic town of Pictou, N. S., a few weeks ago and while there was pleased to renew acquaintances with several of his classmates in good old Pictou Academy, eighteen or twenty years ago.

Pictou Academy is not the only famous institution in the county of Pictou. The county is a veritable hive of industry with its wealth of agricultural, mineral, fisheries and forest resources.

The coal mining areas of Pictou county, so systematically developed and the adjoining manufacturing centres so rapidly increasing their plants and the consequent increase in the employment of skilled labor has created a demand for the products of farm, forest and seas and thus established for these products, within the county a home market that is difficult to equal or excel.

Pictou county therefore, possesses several characteristics that make it a most desirable county in which to live—vast agricultural resources, good home markets and last but by no means least a rural population noted for their industry, integrity and intell gence. Pictou county farmers are a prosperous people and the practice of the three traits of character already referred to has made them so.

A Few of the Spruce Grove Guernseys

The industry, intelligence and integrity that characterized that noble band the Ship Hector brought to the Pictou shores many years ago have stood them in good stead all down the years. Education was not neglected. It stood second only to their religion and as a consequence men of ability and force of character constitute the greatest asset that Pictou county has given to the world. Go where you will; look over the glossary of names of those in positions of trust who are fast carving their way to fame and fortune—a credit to the land of their birth—and there you will find enscrolled the names of many men and women too, who first saw the light of day in Pictou county and received their early training in Pictou Academy.

We are justly proud of these men, but what is the gain of some other places in the respect of having such men as citizens in Pictou's loss. What might Pictou county not become if these men were still within her borders using their brain and brawn in the development of her resources?

While we are justly proud of these men and glory in their achievements we must admit that a few of her sons who are actively engaged in the development of the county's resources are worth more to the county than the whole galaxy above referred to. We take off our hats and heartily grasp the hand of the man who has remained on the farm and who by the application of the three great traits of character referred to is "doing things."

On the occasion of our visit to the academy town, we pondered over this matter while enjoying the comforts so lavishly dispensed by mine host Wallace of the Wallace hotel. The names of persons and places we knew in the county flashed through our minds. Scotsburn with its creamery was one of the first to present itself and then came a thought of the men who have helped to make the Scotsburn creamery what it is today. (The reader will find a short article on the recent annual meeting of this progressive creamery on another page of this issue). Among others the names of D. G. McKay & Son was one of the first to engage our attention, perhaps because we were personally acquainted with the Messrs McKay having met both father and son on many occasions at various agr cultural conventions and not infrequently at the fall and winter fairs with their splendid herd of Guernsey cattle. (The reader will find the report of the last annual meeting of the Canadian Guernsey Cattle Club on other pages of this issue). Mr. D. G. McKay has been president of the Canadaian Guernsey Cattle Club since 1907. The Club was organized in 1905.

Having a few hours to spare we decided to avail ourselves of the opportunity to fulfil our promise to Messrs McKay to sometime pay them a visit and see their Guernseys in their home quarters. A pleasant drive of seven miles brought us to Spruce Grove Farm, their comfortable steading just as the shades of a pleasant winter's night were falling.

Spruce Grove Farm is situated at Heathbell, about two miles feom Scotsburn Station, where is located the Scotsburn creamery, the largest creamery in the Province of Nova Scotia.

The farm consists of 112 acres, 80 of which are cleared, the remainder being a wood lot. It is well watered by a neverfailing brook that traverses the pasture fields. The soil is a clay loam and the topography of the surface is such as to give very good natural drainage. The rotation hay, roots, grain hay is followed on as much of the farm as possible. About 500 bushels of grain, mostly a mixture of oats and barley, upwards of 2000 bushels of turnips and all the hay required to feed their large herd of Guernseys and four or five horses are grown on the farm. The policy of the Spruce Grove Farm is to feed everything grown on the farm and dispose of it in the finished product.

What Messrs. McKay have been able to accomplish with Guernseys is within the reach of each and every farmer in the Maritime Provinces if they apply the same amount of intelfigence to their work as have the proprietors of Spruce Grove Farm. Messrs McKay purchased their first purebred Guernsey no longer than ten years ago from Glen View Farm, Sussex, N. B. At the time of our visit every animal in the herd with the exception of three were purebreds.

Lord Trim II. (Imp.) As a Yearling

Now Head of the Spruce Grove Guernsey Herd
A bull with a producing ancestry.

In this connection we would like to call the attention of our readers to the policy outlined for the Nova Scotia Agricultural Societies by Supt. F. L. Fuller. Each society binds itself to purchase and keep only one breed of cattle for a period of ten years and as a consequence, like the experience of Messrs. D. G. McKay & Son the farmers of Nova Scotia are beginning to realize that it does not pay to change from one breed to another, as used to be the case before Mr. Fuller inaugurated the present policy. By sticking to one breed Messrs. McKay have in ten years acqu red a herd of which any farmer might feel justly proud. Their example is one that you may safely follow and feel confident that in the course of ten years you too may be the proud possessor of as good a herd of your chosen breed.

Continued on page 455.

Beauty of Spruce Grove

One of the Heiress' Calves, owned by D. G. McKay & Son.

The Fifth Annual Maritime Horse Show

The fifth annual Maritime Horse Show held in the Fair Building, Amherst, N. S., on the 1st, 2nd and 3rd inst, marked another milestone in the annals of Maritime horse breeeding.

That the citizens of the Maritime Provinces are a horse-loving people, was clearly evidenced by the throngs of visitors who came early and stayed late to witness the various events in which the pick and pride of Nova Scotia, New Brunswick and Prince Edward Island equines were exhibited.

Mr. Fred Richardson, Columbus, Ont., and Dr. J. A. Sinclair, Cannington, Ont., placed the awards in the Draft and Light Horse classes, respectively.

Despite the fact that one of the most blustery days that the weather man sent along this winter marked the middle day of the fair, the total attendance was not very many behind that of last year.

A very marked improvement in the quality of horses was noticeable in nearly every section.

THOROUGHBREDS.

The Thoroughbred class was not overburdened with entries. The only representatives of the breed being the aged stallions Bendemeer, owned by George M. Holmes, Amherst, and Melsino by Meltonian, owned by Geo. Carvil, St. John, the two-year-old stallion Busy Amherst, by Previous, the yearling filly, Anna Bendemeer by Bendemeer, and her dam Anna Smith all placed in the order named in their respectve classes.

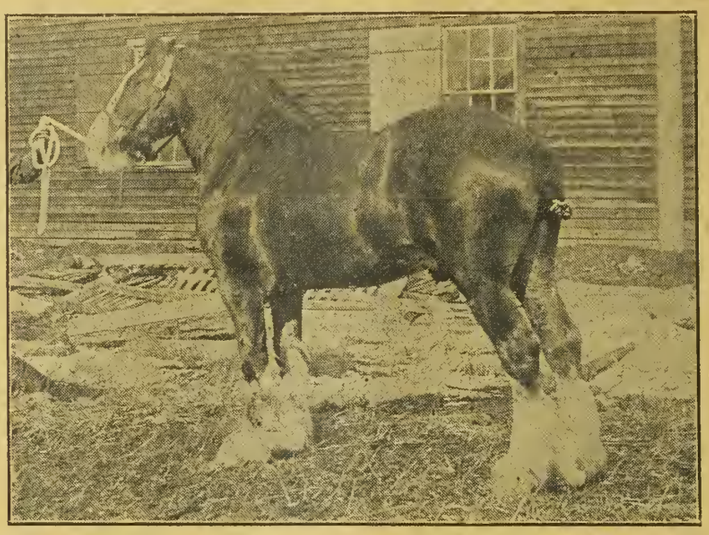
STANDARD BREDS

were out in full force. Seven aged stallions, the same number as last year, but not the same horses in all cases, were brought before the judge. It was found inadvisabnle to give them the usual tryout on the streets so that all the bursts of speed that could be indulged in was given under difficulties in the indoor ring. Major Todd by Todd, the champion of last year's show and a winner at the fall shows, again headed the list. This broadened that smile that won't com off on the countenance of his owner, our friend, Hammond Kelly, Charlottetown, as ge again carried off the coveted diploma. Lord Hastings by Hardwick, owned by H. W. Ryan, of Petitcodiac, came in for second money closely followed in third and fourth place by Frank C. Reddin's Leeland F., by Beaubell, and Dr. M. F. Ronan's, Maid's King by May King. Further down the line and beyond the range of prizes were Ariel Wood by R. M. T.; Major Stratton by Winfield Stratton and Right Wilkes by Abbot Wilks, all out in the pink of condition.

In the three-year-old stallion class there were two entries. Silk Bow by Silk Cord the leader of the two year old class last year, again added a red ribbon to his laurels. Lake-Be-Sure by Will-Be-Sure followed in second.

Two entries appeared in the two-year-old stallion section. Belmono by Moko, owned by Chas. Thompson, of North Sydney, and Kealy B., by Achille. They won the red and blue ribbons respectively.

In the aged mare class there were ten entries. Mamie Jay, by Jay McGregor, driven by her owner, Chas. Thompson, headed the list and carried off the female championship, while in second place was found E. I. Peel's Dolly, followed in third and fourth places by Kitty McNeil by Achille and Annie Mayflower by Tom Medium and owned respectively by Robert P. P. Fraser & Son, New Glasgow and W. W. Purdy, Wentworth Station. Ohutta by Ozone, Owned by J. A. Reid, Fredericton, had no competition in the three-year-old filly class.



Baron Squire

Champion Clydesdale Stallion at 1913 and 1914 Maritime Horse Shows, Amherst, N. S. Owned by McFarlane Bros, Fox Harbor, N. S.

Shoogyshoo, by Commodore Lydiard, was the only filly in the two-year-old section. Geo. Holmes' Wireless had no company in the yearling class.

HACKNEYS

were shown by McFarlane Bros. and R. A. Snowball. Snowball's Model Performer in the aged stallion class, carried off the red and later the purple for the best Hackney stallion. Sedgeford Enterprise followed in second place.

The Hackney mare classes were the weakest that have ever been at Amherst. The only representative being Eva by Fashioner in the three-year-old class and Queenie Baker, by Model Performer in the yearling class The diploma for best mare any age, went to Queenie Baker. R. A. Snowball thus captured the Hackney Association Medals.

CLYDESDALES

were as usual the big feature of the show.

Seven aged stallions, one less than last year, appeared before Judge Richardson. McFarlane Bros.' Baron Squire, the champion of the 1913 show, by Baron Pride; Snowball's Baron Balgreddin by Baron Primrose McMonagle's Fash Favorite by Royal Favorite, O'Brien's Bob McGregor by Norseman, McFarlane's Baron Mac by Vanderbilt, Chapman & Fields' McQueen Yet by McQueen and Donkin's Stanley by Burnbrae were awarded positions in the order oamed. Baron Squire later captured the coveted championship diploma. His closest competitor for the honor being Snowball's imported three-year-old, Baron's Own by Baron's Pride out of Minne Ha Ha.

Jimmie Reid, an Ontario bred horse shown by Frank Archibald, Truro, had no competition in the two-year-old class. Logan Bros.' Homestead Marmion by Handy Andy would have stood some competition in the yearling class.

Out of an entry of eight aged Clydesdale mares five appeared. Logan Bros. Baron's Fancy by Baron Pansy McFarlane Bros.' Bess Spencer by Sir Spencer, Logan Bros.' Pink Rose by Up-to-Time, Snowball's Moss Rose by Baron Balgreddin and McFarlane Bros.' Nell Bowie by Golden Chief, graced the arena and won the most coveted honors in the order named. Baron's Fancy captured the Silver cup donated by Douglas & Co. Amherst, for the best Clydesdale mare any age.

The three year old filly class had six entries. Snowball's Miss May by Baron Balgreddin, Embree's Augusta by Johnstone Victor, Logan Bros.' Susie of Homestead by Handy Andy, H. S. Pipes & Son's Princess Nora, by Norseman were the prize winners in their respective order. H. S. Pipes captured the red ribbon in the two-year-old class with their Fleur-de-lis by Handy Andy and the blue went to R. A. Snowball's Kate of Meadow Brook by Baron Balgreddin.

Logan Bros.' Homestead Pansy by Handy Andy, met no competition in the yearling class.

PERCHERONS

were few in numbers and did not make as good a showing as was made at Halifax last fall. The aged stallions, Lord Roberts, Roderique and Pegel were the only entries in their class and were awarded the red, blue and white ribbons in the order named LorMd Roberts was latcr awarded the male championship.

Chas Symes showed Black Prince by Embargo, a two-year-old, the only other Percheron stallion in the ring.

Symes' Distinguee and R. B. Latta's Mandoline competed for honors in the aged mare class. The red ribbon went to the former and later she was also awarded the purple. R. B. Latta also showed a yearling filly by Lord Roberts.

ROADSTERS

were out in large numbers and some nice useful horses were included in the various sections. The stallion section comprised the aged Standard Bred Stallions referred to in the Standard Bred class and were placed in the respective positions awarded to them in their breed class.

Out of an entry of twenty-one horses in the section for aged Mares or Geldings, 15-2 hands or over, seventeen stepped into the ring. Chas. Thompson's Mamie Jay, champion mare in the Standard Bred class, was placed at the top of the list, followed in second place by J. C. Purdy's Susie Wilkes by Abott Wilkes. An Ontario bred mare, shown by W. A. Humphrey, Moncton, captured the white ribbon and the fourth and fifth prizes were awarded to G. A. Doncaster's Dolly Brazilian by Brazilian and J. J. Shipley's Bonnie by Kalol.

Twenty horses out of an entry of twenty-five in the section for mares or geldings foaled previous to Jan. 1, 1911, under 15-2 hands, kept the judge busy for some time. The survival of the fittest prevailed and very soon five choice ones were brought before the audience to receive their awards. Spurgeon Gammon's R. M. T., by Israel, Lowther's Rosie by Dalhousiel J. C. Purdy's Billy by Will-Be-Sure, and his Nellie Oakes by Fair Oakes and B. L. Black's Molly by Ajalon were awarded prizes in order named.

Eleven three-year-old horses made an excellent showing in their class. Ohutta by Ozone, Happy Jack, by Pandeck Jr., Rex by Achille and Stratton Girl by Winfield Stratton were the money winners in respective order of merit.

In the two-year-old class, Goldie Kip by Rudy Kip, Daisy Bell by Victor Brazilaian, Forest Boy by Royal Autograph and Teddy by the Hackney horse, Ben Smith were the money winners in their respective order in a class of eight entries.

The yearling roadster class had nine entries. J. A. Purdy's Lady Kip by Rudy Kip out of Nellie Oakes captured the red ribbon. A Brazilian colt captuted the blue and A. E. Trites' Abbot Kip by Ruddy Kip out of Grace Abbot, ran away with the white, while outside the prize winners were several other good Rudy Kips, Blomidons, Sedgeford Enterprises and Royal Autographs.

There were five pairs of Matched Roadsters. Spurgeon Gammon showed R. M. T. and Mamie Jay and was placed at the top of the list. J. C. Purdy's Billy and Molly by Abbot Wilkes were the next best pair. Lowther's Rose and Rosie by Dalhousie and Gertie K. and Nellie-Be-Sure by Harry K and Will-be-Sure shown by Blake Fisher captured the third and fourth prizes.

The Silver Cup donated by the Hotel St. Regis for the best Roadster horse in harness was awarded to Thompson's Mamie Jay.

CARRIAGE HORSES

made a flashy showing. Snowball's Model Performer and McFarlane Bros' Sedgeford Enterprise were the only stallions in their class. Model Performer won first money.

Five horses appeared in the section for mares or geldings over 15-2 hands foaled previous to 1911. They were all of unknown breeding, having been purchased in the open market by their respective owners.

In a similiar section for horses under 15-2 hands, Chas. Thompson's Brilliant by Brazilian, Geo. M. Holmes' Timbrook and A. P. Elderkin's Gypsy put up a three-cornered contest. Brilliant captured the choicest plum.

Mrs. J. R. Kennedy's Eva by Fashioner and Holmes' Bess, strove for the honors in the three-year-old class and Eva was decided the victor.

W. A. Humphrey, A. P. Elderkin, and G. M. Holmes' were the only matched teams exhibited in this class. The Humphrey team headed the list.

THE SADDLE HORSES

made a good showing. H. W. D. Armstrong, Fredericton, showed his splendid mare, Duchess by Sensation and was awarded the first prize. W. A. Humphrey, Moncton, showed Flirt and captured the second prize, while the third and fourth prizes went to

A. P. Elderkin's Pilot and Nick.

The saddle horse, ridden by lady, class had four entries. George McAvity's Senoretta, ridden by Miss May Holmes; J. C. Purdy's Gypsy, ridden by Miss Blanchard; and A. P. Elderkin's Gypsy, ridden by Mrs. Norman Christie came in for the monies. Another horse ridden by a gentleman masquerading in feminine attire, created a lot of amusement for the audience. J. C. Purdy's Gypsy, ridden by Miss Blanchard, succeeded in mounting a trifle higher than her contestant in the leaper class.

CARRIAGE HORSES IN HARNESS

Four entries in the section for Carriage Mares or Geldings 15-2 hands or over were placed as in the prize list found elsewhere in this issue. Mr. Armstrong's Duchess, the first prize winner in the Saddle Class, carried off the Silver cup donated by Col. H. Montgomery Campbell for the best combination saddle and carriage horse.

Mares or Geldings, 15-2 hands or under, made an entry of an even half dozen. McAvity's Senora and Senorita captured the first and second prizes. Elderkin's Queen and Purdy's Gypsy were the third and fourth prize winners. Senora captured the Terrace Hotel Silver Cup for champion horse in harness.

Four matched pairs, Senora and Senorita, Nick and Tuck, Flirt and Star and Dolly and Jessie won for their respective owners, Geo. McAvity, W. A. Humphrey, A. P. Elderkin and E. I. Peel, the coveted prizes.

McAvity's Senora and Senorita led the way in rhe Carriage Tandem section, followed in second and third places by A. P. Elderkin's Nick and Tuck and Gypsy and Pilot and in the fourth place by Mr. Purdy's Gypsy and Susie Wilkes.

Carriage four-in-hands were three in number. A. P. Elderkin had two sets of four and J. C. Purdy, the third. Prizes awarded in order named.

PURE BRED HEAVY DRAUGHTERS

In the section of the pure bred heavy draughters' class for mares or geldings foaled previous to 1911, McFarlane Bros.' Bess Spencer by Sir Spencer was sandwiched in between Logan Bros.' Baron's Fancy by Baron's Pansy and Pink Rose by Up-to-Time, Snowball's Moss Rose by Baron Balgreddin captured the green ribbon.

In the three-year-old section of this class Snowball's Miss May by Baron Balgreddin, C. B. Embree's Augusta, Logan Bros.' Susie of Homestead by Handy Andy and H. S. Pipes & Son' Princess Nora by Norseman made a good showing and Judge Richardson placed them in the order named.

Logan Bros.' Pink Rose and Baron's Fancy, McFarlane Bros.' Bess Spencer and Nell Bowie and Logan Bros.' Princess May and Soubrette made an excellent trio of matched teams. Honors were given in their respective order. Pink Rose, Baron's Fancy, Soubrette and Sue won the pair of Scotch Collars donated by the Amherst Hotel for the best four-in-hand.

C. B. Embree showed the only pair of three-year-olds in this class.

GRADE HEAVY DRAUGHTERS

were well represented. Fowler Bros.' Major and Minnie by Prince of Annick sandwiched Frank, an Ontario bred horse shown by R. P. P. Fraser in the over four-year-old class. W. P. Keilor's King and Queen by Harkness and Honesty were next in order of merit. The special prizes offered by the Canadian Clydesdale Association in this section were awarded in like order.

The three-year-old section had three entries. The Bishop, Vanderbilt and Coco colts won prizes in their respective order.

In the two-year-old class, a filly sired by The Bishop, was sandwiched in between a filly and colt sired by Prince Albert.

Royal Flash and Handy Andy were the respective sires of the first and second prize winners in the yearling class. The Clydesdale Association special prize in this class went to Judy by the Bishop.

Fowler Bros.' Minnie and Major, Robert P. P. Fraser's Frank and Joe, and W. P. Keilor's King and Queen won honors in the matched team class.

Robert P. P. Fraser captured the Silver Cup donated by Arthur Wallace, Pictou, for the best grade four-in-hand. Fowler Bros. were close contestants for this trophy.

The Clydesdale Association prizes for teams over four-years old were won by Fowler Bros.' Minnie and Major, R. P. P. Fraser's Frank and Joe and Frank Archibald's Jeff and Mutt. W. P. Keilor also showed his King and Queen.

Baron's Fancy

Champion Clydesdale Mare at the 1914 Maritime Horse Show. Owned by Logan Bros, Amherst Point, N. S.

Geo. M. Holmes had the only team, Rose and Judy, by The Bishop, younger than four years.

GENERAL PURPOSE HORSES

were shown by Fowler Bros., Courtney Lusby, Peel Bros, B. W. Rolston and R. P. P. Fraser. Peel Bros won the red ribbon, Fowler Bros. came in for the blue and white ribbons with their Clayson colt.

In the matched team section of this class Fowler Bros., Courtney Lusby and S. M. Stiles were the only exhibitors. Fowler Bros' Clayson colts led the way.

AGRICULTURAL HORSES.

This class brought out some very useful looking horses. In the over four-year-old section R. P. P. Fraser captured first and second monies with a pair of Ontario bred horses. A Vanderbilt mare shown by T. W. Keilor was awarded third prize and Frank Archibald's Jeff came in for fourth money in a section of nine entries.

Four year-olds were shown by Avery Smith and A. S. Etter.

In the three-year-old section, The Bishop, Vanderbilt and Coco were the sires of the three prize winners in the order named.

Seven entries were made in the two year-old section. Prince Albert, Vanderbilt and Albatross were the sires of the winners. The Bishop and Coco were the sires of other colts shown in this section.

The yearling section had six entries Baron Squire was the sire of the first and third prize winners in this section.

R. P. P. Fraser, Frank Archibald and Geo. M. Holmes were the exhibitors of the best pairs in the matched team section. T. W. Keilor also showed a very classy team.

PONIES

There was a good showing of ponies. G. W. Casson, Truro; Thomas Hooper, Truro; Marjorie Lusby and Richard McCully, Amherst were the exhibitors.

THE HAULING COMPETITION

created a lot of interest. There were a large number of contestants in the single and double events and each and every horse and team got down to do the very best pulling stunt in their power without any undue coaxing or coercion.

Prize Winners at the Maritime Horse Show

Thoroughbred Stallion, foaled previous to Jan. 1, 1911—1, George M. Holmes, Amherst; 2, Geo. Carvil, St. John.

Thoroughbred Stallion foaled on or after January 1, 1912—1, Geo. M. Holmes.

Thoroughbred Mare foaled previous to Jan. 1, 1911—1, Geo. M. Holmes

Thoroughbred Mare foaled on or after January 1, 1913—Geo. M. Holmes.

Diploma Best Thoroughbred Stallion any age—Geo. M. Holmes.

Diploma Best Thoroughbred Mare any age—Geo. M. Holmes.

Standard Bred Stallion foaled previous to January 1, 1911—1, Hammond Kelly, Charlottetown; 2, H. W. Ryan, Petitcodiac; 3, Frank C. Redding, North Sydney; 4, Dr. M. F. Ronan, Antigonish; 5, A. S. Etter, Amherst, 6, W. M. Chesley, Amherst.

Standard Bred Stallion, foaled during the year 1911—S. E. McGregor, New Glasgow; 2, Geo. M. Phinney, Sackville, N. B.

Standard Bred Stallion, foaled on or after Jan. 1, 1912—1, A. Charles Thompson; 2, Blanchard Brenton, Brentwood.

Standard Bred Mare foaled previous to Jan. 1, 1911—1, A. Charles Thompson; 2, E. I. Peel; 3, Robt. P. P. Fraser & Son; 4, W. W. Purdy.

Standard Bred Mare foaled during the year 1411—1, J. A. Reid.

Standard Bred Mare, foaled on or before Jan. 1, 1913.—2, George M. Holmes, Amherst.

Standard Bred Mare, foaled during the year 1912—4, W.A. Simpson, Amherst.

Diploma Best Standardbred Stallion any age—H. Kelly.

Diploma Best Standardbred Mare, any age—A. C. Thompson.

Hackney Stallion, foaled previous to Jan. 1, 1911—1 R. A. Snowball; 2, McFarlane Bros.

Hackney Mare, foaled during the year 1911—1, Mrs. J. R. Kennedy, Amherst.

Hackney Mare foaled on or after January 1, 1913—1, R. A. Snowball.

Diploma Best Hackney Stallion, any age—R. A. Snowball.

Diploma Best Hackney Mare, any age—R. A. Snowball.

Clysdale Stallion, foaled previous to Jan. 1, 1911—1 and 5, McFarlane Bros., Fox Har.; 2, R. A. Snowball, Chatham; 3, Hugh R. McMonagle, Sussex; 4, Wm. O'Brien & Son, Windsor Forks.

Clydesdale Stallion, foaled during the year, 1911—1, R. A. Snowball; 3, C. A. Archibald.

Clydesdale Stallion foaled during the year 1912—1, Frank Archibald.

Clydesdale Stallion, foaled on or after Jan. 1912—1, Logan Bros.

Clydsdale Mare, foaled previous to Jan. 1, 1911—1 and 3, Logan Bros., Amherst Point; 2 and 5, McFarlane Bros.; 4, R. A. Snowball.

Clydesdale Mare, foaled during the year 1911—1, R. A. Snowball; 2, C. B. Embree, Amherst; 3, Logan Bros.; 4, H. S. Pipes & Son.

Clydesdale Mare foaled during the year 1912—1, H. S. Pipes & Son, Amherst; 2, R. A. Snowball.

Clydesdale Mare foaled on or after Jan. 1, 1913—1, Logan Bros.

Diploma, best Clydesdale Stallion, any age—McFarlane Bros.

Silver Cup donated by Douglas & Co., Amherst, N. S., for the best Clydesdale mare, any age— Logan Bros.

Clydesdale Mare or Gelding, shown in single harness, foaled previous to Jan. 1st, 1910—1 and 3, Fowler Bros. Amherst Pt.; 2 R. P. P. Fraser & Son New Glasgow; 4, Frank Archibald, Truro.

Clydesdale Mare or Gelding shown in single harness, foaled on or after Jan. 1, 1911—1, Geo. M. Holmes, Amherst.

Clydesdale Mare or Gelding shown in single harness, foaled on or after Jan. 1, 1916—1, Geo. M. Holmes; 2, Chas. M. Shipley.

Clydesdale Team in harness, mares or geldings foaled previous to January 1, 1910—1, Fowler Bros.; 2, P. P. Fraser & Son, New Glasgow; 3, Frank Archibald, Truro; 4, W. P. Keillor.

Clydesdale Team in harnes, mares or geldings, foaled on or after Jan. 1, 1910—1, Geo. M. Holmes.

Percheron Stallion, foaled previous to Jan. 1, 1911—1, Charles Symes, Minudie, N. S.; 2, Roderique Horse Co., Petitcodiac; 2, D. S. Mann, Petitcodiac.

Percheron Stallion foaled on or after Jan. 1, 1912—Chas. Symes.

Percheron Mare, foaled previous to

(Continued on page 472.)

THE MARITIME FARMER.

And Co-operative Dairyman

Registered Trade Maak

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

APRIL 7, 1914.

DATES OF ISSUE.

April 7-21

May 5-26

SOME HINTS FOR THE HOME GARDEN.

Garden seed orders should be sent to the seedsmen as soon as possible. It is poor policy to delay the purchase of seeds until planting time. First, because later in the season work is too pressing to take time to decide what is best to get, and it is also essential that some of our seeds be sown within the next month or so.

With all the reliable seed catalogs coming to hand at this time of year, we can usually pick out a good selection of garden seed which will go a long way toward making our garden activities a genuine success.

We should be careful not to let the overdrawn pictures and descriptions in the catalogs lead us to select a lot of untried novelties in the place of tried out, standard varieties that are known to be satisfactory. It may be that the writer is somewhat prejudiced, but we have come to make a practice of throwing in the waste basket all those catalogs that widely overdraw the descriptions of plants beyond what we know to be possibilities. Another class of seedsmen that we always strike off our list are those who offer something for nothing. We know that it is much cheaper in the end to pay a fair price for seeds and get what we want than to either buy seed at bargain lots or accept free seeds that are distributed by the government. In either case we are tempted to plant something that we do not want, and that is in the long run expensive and, to say the least, unsatisfactory.

The best plan is to study our catalogs and decide between those reliable firms which have the varieties of the different species of vegetables and fruits which we think are pest adapted to our conditions. More gardens come to grief through the discouragement of the gardner having been led to try some startling new discovery in varieties that are being sold at high prices than in any other way. The scheme of the unscrupulous and even the honest seedsman, to make his best money, easy, is each year to introduce some novelty which may be sold at two or three times the price of the standard varieties. For instance, you will find in a nursery catalog Concord grape vines sold at from 4 to 10 cents a piece depending upon circumstances. In the same catalog you will usually find a lithograph picture and flowery description of some new grape that is very, very much superior to the old standard variety. This is probably sold at from 50 cents to $1 per plant. If we try these grapes out, side by side, in nine cases out of ten we will find that the oid standard variety is hardy, prolific, of good quality and desirable in every way, and that the new high-priced plant is either tender, unproductive or of poor quality. This is the history that repeats itself every year. For if we care to investigate the matter we will find that there are many varieties of every species of fruit and vegetable being sold constantly at a high price that are in a few years discarded and forgotten.

Another trick of the trade is to bring out some old standard variety under a new discription and a new name, and sell at a high price-

We do not wish to discourage the trail of these novelties and new introductions, as we find some of them desirable, and we believe that every one who gardens for the love of the work or cares to improve on present condition should try out in a small way those new varieties that seem promising, if it be done in an experimental way rather than to depend on them for a standard crop.

One important fact in selecting the seed for the garden should always be borne in mind. The market gardner selects those varieties which because of high yielding qualities or extreme earliness are desirable for the market, but there are nearly always better varieties which, though less productive, are more desirable for the kitchen garden because of better quality. For instance, some of our finest strawberries are well adapted to grow to be used immediately, but are absolutely worthless as commercial varieties because they are too soft to hold up on the market or to stand shipment. The same may be illustrated in cabbages. A certain variety of cabbage is of much more delicate texture and much more desirable for home use, but this cabbage will not sell for any more upon the market nor will it keep or ship so well as our common varieties; hence it is good for the home garden but not desirable for general market conditions.

GIVE THE COW A CHANCE

The Maritime Farmer has always recommended the testing of dairy cows but it has further modified this recommendation by the repeated advice that the dairy cow be given a chance before she is discarded. There is no question that many a cow has been sent to the shambles long before she was given an opportunity to prove her worth.

Many farmers, as well as their cows, should be submitted to a rigid test. There should be a test association for the dairy farmer as well as for the dairy cow.

Many a man is putting timothy hay and dry grain in front of his cows and expecting them do make him a profit, and complaining because they do not. If he would give them a fair chance, if he would give them feed from which to make milk and butter-fat, he would be treating them more nearly right and there would be less complaint of poor and inferior cows throughout the length and breadth of this land.

An illustration of this was given recently in the columns of Kimball's Dairy Farmer in an account of an experiment that has recently been worked out in connection with the New York Strte College of Agriculture at Ithaca. A herd that was picked up from an outside farmer made an average of 161 pounds of butter-fat in one year. The college kept a line on the production just how long enough to find out what the cattle were doing under the management of the farmer who was giving them what he supposed to be fair care.

The same herd was taken to the agricultural college and there put under scientific management, that is, the cows were given the kind of feed from which milk and butter-fat could be economically manufactured and the production was raised to 338 pounds of butter-fat per year per cow. Here is an increase of 167 pounds per cow. It shows what can be accomplished by giving the cows the right kind of feed and care. Of course every cow that is not a profitable producer will not respond in the same measure that these cows have responded, but there is no reason wby the dairy cows that are kept on the farms throughout the country should not do better than they have done and unquestionable they will do better if they are given an opportunity to prove their worth.

Test your own methods of handling the cows before you discard them. Give them a chance, give them an opportunity to prove their worth and then if they do not work out and show that they can produce profitable and economically, there will be time enough to dispose of them and fill their places with cows that are better and more profitable producers.

FARM WOOD LOT

People of today are more intent on clearing land, getting more acres into cultivation than they are in conserving the farm wood lot. Prof. Moody, of Cornell advocates the maintenance of a wood lot for three reasons. In the first place he claims that fuel is going to be a question of no little significance in the near future and the farm that can produce at least part of the fuel each year will have the question partially solved. Coal is going to rise in price, therefore we will naturally turn toward the use of wood.

In the second place the agerage wood lot can produce a share of the lumber that is necessary for the repairs and modifications on the farm year after year. With a portable saw mill it is an easy matter to handle the well grown trees so as to get a certain amount of lumber at least. Fence material is bound to become a subject of some concern. Naturally the cement fence post is durable and popular, but it is doubtful if it will ever entirely supplant the wooden post. It is doubtful if even the most enthusiastic advocate would advance such a theory. Certainly the farm wood lot makes the landscape more beautiful. it has a certain aesthetic value which cannot be overlooked entirely, it makes the farmstead more comfortaple for it furnishes a windbreak that turns the severe blasts of winter and if extensively enough cultivated it will have its influence on the rainfall of this country.

Guernseys in Prosperous Pictou County

(Continued from page 451.)

Two of the bulls that have been in use on Spruce Grove Farm were purchased from the Central Experimental Farm, Ottawa. The bull now in ute on the farm, Lord Trim II, (Imp), is two years old and was imported direct from the Island of Gvernsey, when he was three months old. Lord Trim II's dam has a record of 14,525 pounds milk testing 5.6 percent butterfat in one year and several of his grand dams are high record cows, so it may be reasonably expected that Lord Trim II's heifers will give a good account of their stewardship in the dairy.

Now litten! When we arrived at Spruce Grove Farm we saw a glimmer of light in the barn and there we went. On entering we caught Allie McKay in the very act of weighing the milk of one of the cows and his father was coming along the isle with another pail full of milk to take his turn at the scales. This fact coupled with the clean, sleek-looking appearance of the cattle and the tidiness of the stable impressed us with the belief that here was a firm who conducted their business on business principles.

A glance at the records revealed the following facts:—

Four of the Spruce Grove Guernseys have qualified in the Record of Performance and several others are now under test.

Daisy, as a two-year-old gave 6318 pounds milk yielding 282 pounds fat. This year as a three-year-old she stood first in her class in the Maritime Winter Fair dairy test at Amherst.

Rosy, a two-year-old, freshened last September is now running in the Record of Performance test and gives promise of making a good record. At the Pictou County Exhibition last fall she won first prize in her class and female championship of her breed. At the Maritime Winter Fair she too, headed her class in the test.

Dairymaid is also a Record of Performance cow. She gave 5316 pounds milk yielding 272 pounds butterfat as a two-year-old.

Lady Pauline II of Spruce Grove, a very neat, trim and good cow as a two-year-old, gave 6121 pounds milk yielding 359 pounds butterfat. At Amherst she stood second in the aged cows' class.

Another cow in the Record of Performance is Heiress. Her record is 8107 pounds milk and 418 pounds butterfat. After milking three months she stood fifth in the test at Amherst. Heiress was purchased when a calf from Glen View Farm, Sussex, and since she was two years old she has given a good calf every year, three of which were heifers.

Ruby is a fine large cow that stood third in the dairy test at Amherst. She was first in the aged cow class at Pictou County Exhibition last fall. In 1911 she was first prize three-year-old, champion Guernsey female and sweepstakes female over all breeds. She was also awarded a special prize for being the best dairy cow on the grounds. She is now doing good work in the Record of Performance test.

Messrs McKay have some very fine purebred heifers and a number of young bulls. Quite recently they sold four very nice bulls to head herds in various parts of the Maritime Provinces.

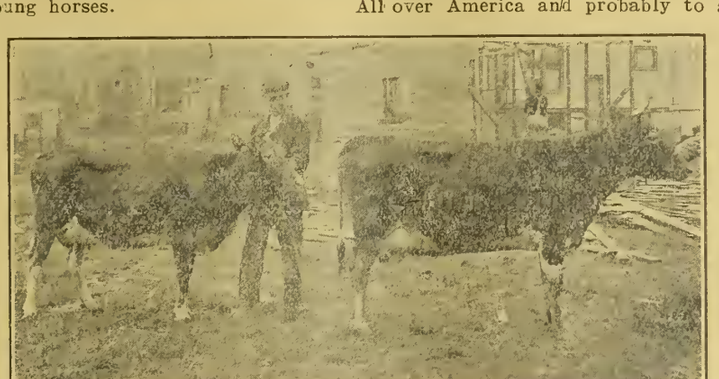
When Messrs. McKay have any stock to sell they advertise in the Maritime Farmer and they find it moves the surplus stock every time. This is another hint for you Mr. Stockman.

The cows are watered and fed twice a day. There is water in the barn, pumped in by windmill power but on fine days the cows are turned out into the yard, to water at the trough.

The milch cows are fed meal the year round. In summer they are pastured and when the pasture commences to fail a crop of green oats and vetches is ready for soiling purposes. The reader can take a leaf out of Messrs. McKays' note book in in this respect and plan now to sow early some mixed grains for soiling purposes for use when the pastures become parched and bare next summer and thus help to keep up the milk flow of the herd.

All the milk is separated on the farm. The skim milk goes to feed the calves and hogs and the cream is sent to the creamery twice a week in winter and three times a week in summer. For several years Messrs McKay lead the patrons of Scotsburn creamery in amount of receipts from cream delivered. Last season several other farmers put up a stiff competition for largest production and Messrs McKay came in in third place. This friendly rivalry is not a bad feature of the district. It just means that all concerned with try harder to be the top-notcher next season.

In the horse barns we saw a nice pair of Clydesdale mares which are used to do the heavy farm work, a nice driving horse and a couple of young horses.



Lady Pauline and Daisy
A pair of D. G. McKay & Sons' Guernseys

A nice flock of White Wyandottes add to the revenues of the farm. The eggs are disposed of through the egg circle in connection with the Scotsburn Creamery.

Mr. D. G. McKay did not neglect the education of his family. He followed the traditioos of the good old Pictou county fathers and gave his sons the advantages of an agricultural education.

Kenneth G., who is now Assistant Dairy Commissioner for the Province of Saskatchewan took a full course at the Ontario Agricultural College and took his M. S. degree from Ames, Iowa, after which he spent several years doing agricultural extension work in India.

Norman C., who is now district representative for Bruce county, Ontario, after completing a two years' course at the Nova Scotia Agricultural College took the remaining two years at the Ontario Agricultural College where he received his B. S. A. degree.

We are proud of the achievements of these two young men but we must admit we are doubly proud of the achievements of the other son, Allie, who has remained on the farm and is so heartily co-operating with his father in the development of one of the best Guernsey breeds in the Maritime Provinces, a good citizen and a live wire at all provincial agricultural meetings.

The Spruce Grove home under the careful management of mother and daughter is one of the most hospitable homes that one could wish to enter.

Mr. and Mrs. McKay have both passed the midday of their lives but their minds are clear and theirs is a contented lot. On the McKay paternal homestead they have lived for many years, striking examples of the traits of character industry, integrity and intelligence. What they have accomplished may be accomplished by others. The younger Mr. McKay's example may well be followed by young men who may perchance be contemplating the abandoning of the farm home life for that of the proverbial hewer of wood and drawer of water in a distant land. Like him the advantages of making good at home are within your reach if you grasp them.

Wanton Slaughter of Dairy Heifers Detrimental to Dairy Interests.

Since the last meeting of this association a condition has been developed that is working a serious injury to the dairy industry, viz.; the rapid rise in price of all classes of meats, particularly of beef, which is always a strong competition of dairying, has turned the attention of many patrons of cheese or butter plants to turning many head of cattle inth the present high-priced beef. All over America and probably to a greater or less extent in most cattle raising countries in the world is this ill-considered slaughter going on. Ontario was drained last autumn of all kinds of horned cattle including carloads of high grade dairy heifers. The same was true of Quebec and the Maritime Provinces, including our own.

In view of the steadily growing scarcity of dairy cows, previous to the above mentioned stampede, the ever-increasing consumption of milk and cream in our towns and cities and the call for milk to supply the different condensing plants along with the growing demand in our home market for creamery butter, where will the dairy cows be found to replace the natural shortage in the next few years to come? We must admit that in this country dairying needs to be pushed. Man's natural desire in farming, as in all else is to follow the line of least resistance. Dairying requires a little more thorough attention and skill than does the raising of beef and for this reason, farmers are only kept on the job when there is clearly more money to be made at it than any other line of live stock raising. How prone we as farmers are to follow the crowd, to drop a sure and certain line on the first intimation we have of something the other fellow raises taking an abnormal rise in price with the chances that by the time we have anything of consequence to offer on the market the product dropped will be more valuable than that we ran after.

I will give as my opinion that never in the history of co-operative dairying have the prospects for the industry been so bright; never has the out-look for coining high prices for dairy products been so promising. We all marvelled as the prices of meats and eggs rose in value to the present figure that buyers are to be found. Yet even at such fancy prices the available supply does not seem able to meet the demand for these life. So we can look to see milk and its products, which come more nearly under the line of necessities of life, so we can look to see milk and butter bring record prices in the near future. I cannot see how it can be otherwise. The loss of dairy heifers that are now being turned into beef will be felt more seriously in a year or two when they should be replacing aged cows. I do not take such an optimistic view of this matter as sounded by several prominent dairymen at the late annual meetings of dairymen in Ontario who thought that the poor ones were young and the same feed given to those left would make more net profit for their owners. If this were the case it would be a blessing indeed but I am afraid it is far from the facts of the case. Carloads of yearlings and two-year-old dairy bred heifers were sent out of many parts of Ontario and many more are being fed for the block this winter, even in our own province that is and should continue to be largely following dairying.

This regretable business is going on even in our own immediate vicinity, the banner dairy section of the Province. As many as six high grade dairy heifers are being beefed in one stable and the country is scoured as in time of famine for anything that is on the mend. Any animal able to walk to the slaughter house goes there—many of them just beginning to lay on flesh.

I am not faulting any farmer who feels inclined to raise beef. There is room on the Island for both dairying and beef raising, but the latter should be raised by the men now selling raw feed. I think it is a great mistake for any farmer having a good foundation of dairy bred grades to sell the young heifers and mate the herd with a bull of the beef type. What everybody is doing is often a good thing to leave alone. The consumption of any article generally decreases as the price goes to an abnormal figure, and supply is pretty sure to catch up by the time at least, that a present beginner breeds up anything to salable age for beef, with the probability that butter and milk will be then having their innings. A pound of beef by the carcass is a long way below a pound of butter yet with a real good dairy cow you can make one jutt about as cheaply as the other. And you can always be sure of as good a market for any surplus dairy cows you wish to raise as if they were fed for beef. Few men do justice in their criticism of their dairy cows. Aside from their work at the factory or creamery a small herd supplying a large family with milk, cream and butter usually earns more value than we thoughtlessly give them credit for. If many of us had to purchase what we take in the house we would look at the dairy industry in a different light.

Just what is best to suggest to stem this current of opposition, is hard to decide. If a man will not milk cows, we can't make him. The growing scarcity of labour is also a great hindrance to dairy development. However, where a man feels he needs to make all possible out of his farm, dairying must always ap-

(Continued on page 482.)

THE APPLE SCAB

An Address by Prof. L. Caesar, Before N. S. F. G. Assn., Kentville, January, 21, 1914

Apple Scab or Black Spot, as it is commonly called in some places, is one of the oldest diseases that attacks the apple. It is found in almost all temperate climates where moisture conditions enable it to grow. From the fact that it did much damage to the fruit last year and still more this year many persons may be inclined to fear that the disease is gradually growing worse and will year by year, be harder to combat. There is no evidence, however, that such fears are well founded and the mere fact that there is so little Scab in the year 1911 is in itself sufficient evidence to show that the real reason for such an outbreak of the disease in 1912 and 1913 was caused solely by the weather in each of these years being specially favorable for its development. How the weather determines the amount of Scab will be shown more clearly below. In the meantime let us consider for a moment what parts of the apples are attacked by the disease and the nature of the injury done to each.

PARTS ATTACKED AND NATURE OF THE INJURY.

The Scab attacks the leaves and leaf stems, the blossoms and blossom stems, and as these begin to form into fruit it attacks the fruit and of course the fruit stems. Occasionally the tender twigs are also attacked.

The injury done by attacking the blossoms and fruit and the stems that bear these is as follows:—

(1) By getting on the stems early it weakens these so much that it causes the young forming fruits to drop and thereby in very bad years like the last often brings about a very small crop.

(2) Fruit attacked is unsightly in appearance, will not keep well in storage, is liable if packed in moist hot weather to become attacked by a whitish or pinkish-white mound known as Pink Rot and of course is hard to market, having to be sold at a low price.

(3) If a large percentage of the apples in any district are scabby this tends to create an unfavorable impression among would-be buyers unless, of course, other producing countries have the same trouble, as is very often the case.

The injury caused by attacking the leaves and leaf stems is also sometimes very great. Sometimes these are so badly attacked that a large part of the foliage falls early in the season. I have seen Crab apple trees lose most of their leaves in June from a severe attack of Scab. New leaves, of course, soon take their place but even so the tree was, as one would expect, weakened in consequence of such a strain on its resources. Usually affected leaves do not fall to any large extent but instead the diseased areas in them gradually die,so that we will often find a badly affected tree with several dead brown or blackish areas on nearly every leaf. These areas vary in size considerably but are usually about one-quarter of an inch in diameter and roughly circular in outline. Even before the disease causes these areas to die it usually makes the surface of the leaf crumpled and line. Even before the disease causes uneven. Now, if we call back to mind that the food of a tree is manufactured in the green parts and only in these and therefore almost entirely in the leaves, we can readily understand that in proportion as the Scab attacks the leaves and causes dead areas in them it lessens the power of the tree to manufacture the sap taken up from the ground and the gases absorbed from the air into sugars, starch and other substances. This food once made is gradually supplied to the fruit, stem-roots, fruit buds forming for next year and to the other parts requiring it; what is not used in this way is stored up in various parts of the tree for next spring's use. Hence by lessening the power of the tree to feed itself the Apple Scab tends to weaken the tree and to prevent the formation of sufficient fruit buds to produce an average crop the next year. There are, of course, other causes besides this, such as lack of food in the soil, and overbearing which help to account for the scarcity of fruit buds.

On the twigs the Scab is not often seen. I have examined a few of your orchards and did not see any clear proof that the twigs had been affected. Whenever a twig is attacked the surface becomes ruptured and a black powdery or sooty substance shows up within the small areas thus formed.

LIFE HISTORY OF THE DISEASE

We have, I hope, now a good idea of the injury done by the Apple Scab disease but it is almost impossibly to understand the underlying principles on which the method of treatment is based without first studying the life history, just as no one could in our Province understand the necessity for spraying directly after the blossoms fall for Codling Moth unless he first knew some very important things about the life history of that very destructive insect. Apple Scab is caused by a fungus. A fungus is a very small microscopic plant which unlike other plants does not manufacture its own food, but gets it entirely from other plants; so that it is a parasite on other plants. The Scab fungus spends all its life in the outer tissues of the fruit, leaves and stems or twigs of the apple and gets its food entirely from these, thereby causing the injuries referred to above. It passes the winter in the dead rotting leaves on the ground, and possibly to a small extent on some of the twigs. It is evident, however, that nearly all the wintering over is done on the leaves alone. In the spring little black dots can be seen with a hand lens on these leaves and in these the spores which correspond to seeds are ready to send out their spores and if rain comes they are shot up into the air by a peculiar device which acts like a tiny pop-gun. Being very light and of course very small, some of them aided more or less by the breeze reach the opening leaves. Here they will do no harm unless the weather is damp, because they cannot germinate in dry weather. If, however, we have from 24 to 48 hours of constant wet or moist weather so that the spores are kept constantly wet they will each send out a tiny germ tube, which little by little works itself through the skin of the leaf or fruit and then soon after begins to branch and rebranch and absorb food just beneath the surface. In a few days it has got so far advanced that it begins to send up numerous little upright stalks which gradually burst open the skin and bear on their top a new kind of spore which we may call summer spores in constrast to the early spores formed in the rotting leaves. The black spots we see on the fruit are in reality nothing else than millions of these dark little microscopic spores. These are so light that the wind can carry them all over the orchard and therefore many of them will light on the leaves or fruit though most of them will light elsewhere and perish. Crop after crop of these summer spores can be produced from each spon on the leaves, stem or fruit. The disease gets started on the young opening leaves in the spring through the spores from the overwintering leaves on the ground, but these early spores shot up from the ground seem to reach in most cases only the lower leaves and it is not until the new kind of summer spores formed on the leaves in the diseased areas are produced and carried everywhere by the wind that the greatest amount of infection takes place and that the fruit is attacked.

CONDITIONS FAVORING SCAB DEVELOPMENT.

(1) From what has been said it will be clear that no matter how many spores of the disease there may be, the leaves and fruit will not be attacked without a good deal of moisture because spores will not germinate under ordinary conditions, unless they are kept constantly wet from about 24 to 48 hours Hence a dry spring and fall usually meaos no Scab.

(2) If trees are planted closely together or are not pruned fairly well to allow of good circulation of air and sunlight reaching them it is clear that any little shower under such conditions will take a long time to dry off and therefore the chances for an attark of Scab are greatly increased. Unnecessary windbreaks sometimes have the same effect.

(3) It stands to reason that the larger the number of leaves attacked the previous year the greater will be the number of spores in spring. Hence in a year following a bad attack of Scab there will be a greater opportunity for a bad outbreak if the spring weather favors it than in a year following a season when there is almost no Scab. There are always, however, a few leaves in the autumn attacked. One may not easily see them but they can be found in October if carefully sought.

(4) The observations of all students of this disease show that it is not merely moisture that favors it but cold. Hence what we have to fear is the times in the year when we have cold wet weather. It need not be raining but the leaves and fruit must be moist, hence fog or mist is as bad or often worse than heavy rains.

WHEN THE SCAB DEVELOPS MOST.

From what we have said about the ideal conditions and development being cold wet weather it is clear that we must expect the worst attacks during the period from the time the leaf buds are bursting up to the time when the fruit is from one-half to three-quarters of an inch in diameter or roughly speaking to the end of June. An orchard kept free from the disease that long will usually remain all the rest of the season unless there is an exceptionally cool wet autumn and then, as occurred in 1912, there may be another attack.

Some springs the disease will get a start soon after the leaf buds burst because there happens to be plenty of moisture at that time of the year for the germination of the spores; other springs the disease will make no headway until the blossoms are all out because the earlier weather was dry; and again in other springs the worst time for attack will be just after the blossoms have fallen because moisture conditions then have happened to be favorable. We see therefore that it is not possible to say that either the spray as the buds are bursting or the one just before blossoming or just after the blossom is the most important. We never know before hand which it will be, or whether all three will be equally important. We must use all as an insurance.

HOW SPRAYING CONTROLS APPLE SCAB.

Once a spore has germinated and worked its way beneath the skin, no spray mixture can reach it and it will continue to develop there. The way the spray wards off the disease is that if it s put on before the spores germinate it will prevent germination. So spraying prevents the Scab from starting but does not kill it once it has started. Last summer many of you doubtless found spot after spot on the apple where the Scab had died out in the warm weather and left merely a brown callous or russeted surface. Many thought this was a case of the spray having killed the disease but such was not the case. It was the warm, sunny, dry weather that killed the Scab in each instance. We cannot therefore emphasize too strongly the fact that spraying controls the Scab only by preventing it from getting a foothold and not by curing it.

Many will wonder how it is possible for any fungicidal spray mix-

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ture put on the leaves when they are the size of a ten-cent piece to continue to protect that same leaf until it is, say one and one-half inches in size. Let me try to explain this. Suppose we cover a round leaf all over with Bordeaux or lime-sulphur, the question will arise whether as that leaf grows the spray mixture will merely remain on this little area leaving all the rest uncovered. This is easily answered. The leaf grows all over, every part of the surface expanding throughout. This being so it is clear that the spray will not be in the same small area any longer but with the expansion of the leaf will be distributed here and there over the surface. This is a most fortunate state of affairs because otherwise one cannot imagine it possible for the fungicide to be of any value to the new growth if this took place merely at the tip instead of throughout the whole leaf and we should have to spray every few days. Again a fungicide does not kill by remaining in a dry state but by coming little by little into solution in the presence of the same moisture that would cause the spore to germinate. It is probably true that the spore itself in this moisture gives off a substance which helps bring the fungicide into solution. This solution of the fungicide brought about by the rain or moisture and the wet spores covers once more the leaf and prevents the germination of the spores. So that we can now understand that if a leaf is sprayed when it is quite small the spray mixture by being distributed widely over the surface of the leaf as it grows and coming to a slight extent into solution with each rain will continue to protect that leaf for a good many days but will of course become gradually too weak to do so after a time partly because of the rains and partly because of the great enlargement of the leaf itself. A knowledge of this fact helps us all to understand the remarkable value sometimes of an early spray.

Perhaps I should mention here that a good fungicide must possess these qualities:

(1) It must stick well to the foliage and not be easily washed off.

(2) It must come into solution with each rain to a sufficient extent to destroy the spores before they can germinate and yet not so quickly or completely as to lose its strength rapidly.

(3) It must not injure the foliage or the fruit to any appreciable extent.

(4) It must be moderately cheap and easily applied. Both Lime Sulphur and Bordeaux mixture answer these requirements to a very large extent but I shall not discuss their relative merits yet for a few minutes.

WHEN TO SPRAY FOR SCAB IN NOVA SCOTIA

I hope that those of you who consult my Spray Calendar will not forget that it was meant for Ontario conditions and not for Nova Scotia. In making the following suggestions for spraying in your province I wish you would think them over carefully and not adopt them unless you are thoroughly satisfied that they are suited to your weather conditions. I have based them largely on a study of the weather records for this year obtained from Truro, Wolfville and Kentville through the courtesy of Professors Brittain, Blair and the gentleman in charge of the Wolfville Station, whose name I have forgotten. I should have liked very much to have had the records of previous years to study and make sure that my conclusions were sound. I should also add that through the kindness of Mr. George Sanders, I had an opportunity to visit a number of your best growers and learn from them a good deal about the dates of the opening of leaf-buds and blossoms, and the falling of the latter.

A careful study of this year's weather record and of the dates of the bursting of leaf buds and blossoms would to my mind show clearly that Apple Scab got a foothold first throughout your whole valley between the 9th and 12th or possibly 14th of May. There was sufficient continuous moisture during this period to allow the spores from the ground to shoot up to the lower leaves as these were opening and to germinate before the dry weather came. From May 22nd to May 31st there was another very favorable period, for Scab development, as there were several continuous days of wet weather and no sunshine. Now to make things far worse the early crop of spores that had got started on the opening leaves between May 9th and 12th or 14th had by this time produced an abundant crop of summer spores that would be carried everywhere throughout your orchards and would therefore light on the opening blossoms, blossom stems and now get an ideal chance to germinate. Consequently many of the stems of the young fruit were so badly attacked that a great amount of it fell leaving a very poor crop. Of course, the frost that occurred around Kentville and some other districts on the nights of May 15th, 16th, 17th and 18th would destroy many blossoms that were out and had not yet been fertilized and it would therefore in these districts lessen the crop. However, most of the blossoms, I think, opened after these dates. There was doubtless some more new infection of the fruit and leaves after the blossoms fell but the weather record shows that conditions were not very favorable this year for further attacks in June. But someone will feel like asking "If the damage was done before the blossoms fell how did the Scab spots come to be in the fruit and get so large?" The answer to this is that several days, probably a week elapses from the time a spore germinates on a leaf or fruit before there is any sign on the surface that the disease is present, and even after the spots do begin to show they grow larger for sometime. Therefore, the injury is always done a good while before anybody sees it. If the part of the flower just below the blossom were attacked early the fruit formed from that would also of necessity be attacked.

From what I have said you will easily see that it is impossible this year to get perfectly clean fruit unless an application was put on before May 9th or 10th to protect the opening leaves from the Scab during the first wet period, and another application before May 22nd, that is just before the blossoms were bursting, to save the various parts from attack during the long wet period from May 22nd to 31st. But this year's conditions are different from those to be found some other years, and it would often happen that the weather conditions would favor a very bad attack of the disease just after the blossoms had fallen.

My suggestions then would be to make sure of clean fruit during the dangerous period of May and June by spraying as follows: 1st application just as the leaf buds are bursting or have burst, 2nd application just as the blossom buds are ready to burst, 3rd application just as soon as 80 or 90 per cent of the blossoms have fallen, and 4th application about ten days after the 3rd. If at any time, cold, wet, backward weather causes a long period between any two of these applications it will be well to get in an intermediate spray. If these suggestions are carried out I feel confident that you will be very pleased with the results, but of course the spraying in each case must be thorough. Good results should not be expected from poor work.

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MIXTURES TO USE.

For the 1st application, I should advise the use of lime-sulphur at about the strength of 1.020 specific gravity which is about equivalent to the commercial lime-sulphur diluted 1 gallon to 15 with water. To each 40 gallons of this diluted mixture add 2 or 3 lbs. of arsenate of lead to kill biting insects. Bordeaux mixture (4.4.40) may be used instead of the lime-sulphur and with it, of course, the poison.

For the 2nd application, the one just before the blossoms burst, use either lime-sulphur 1.110 specific gravity (1 gallon of commercial diluted to 30 gallons) or Bordeaux mixture 4.4.40, gnd to every two gallons of either add 2 or 3 lbs. of arsenate of lead.

For the 3rd application, the one just after the blossoms fall, do not use Bordeaux mixture because of the danger of russeting the fruit badly; but lime-sulphur of the strength of 1.009 or 1.008 (1 gallon of the commercial diluted to 35 to 40 gallons) and add 2 lbs. of arsenate of lead.)

For the 4th application about ten days later use the same mixtures as for the 3rd keeping of lime-sulphur down to the lower strength of 1.008 specific gravity.

If the month of August is cold and wet there is likely to be some development of Scab or of Fly Speck or Sooty Fungus and to prevent this it will be wise to use the same mixtures as for the 4th spray when the condition of the weather seems to call for it. It is however, very hard to spray some heavily laden orchard at this time of the year because of the way the fruit bears down the branches and leave no room to go through with the machine.

It would perhaps be well to remind the growers that if the apples after they have got the size of marbles are sprayed on a very hot calm day they may become badly sunscalded.

IMPORTANCE OF SUNSHINE AND GOOD AIR CIRCULATION.

Seeing that continuous moisture for twenty-four hours or more is often sufficient to cause spores to germinate it stands to reason in the control of Apple Scab that good pruning and the removal of unnecessary windbreaks and avoiding planting trees too closely together, will be of considerable advantage. From what I have seen of your orchards I notice that some of them have been very closely planted and some are very poorly pruned though this is not true by any means of all. You can readily understand that an orchard where the trees are all close together or where the branches are very thick does not permit of sunlight to reach all parts or the air to circulate freely through. Such orchards are also very difficult to spray and to cultivate the work. In them also you are much more likely to get a bad attack of the so-calfed Fly Speck or Sooty Fungus. It will stand to reason therefore, that good pruning and anything that lets in a free circulation of air and plenty of light will help you in the control of Scab and will give more beautiful fruit.

VALUE OF METEOROLOGICAL STATIONS.

Since Apple Scab is so closely related to weather conditions as described above, I believe that the time is coming when our provincial and dominion weather men will be of inestimable value to us by predicting

(Continued on page 476)

DAIRYING.

Minutes of the Canadian Guernsey Breeders Association Held at Amherst.

PRESIDENT'S ADDRESS.

Gentlemen:—

I am glad indeed to meet you all again as breeders at this our Annual Meeting and to be able to state that we as an organization are making a healthy and satisfactory growth.

In some respects the past year has not come up to my expectations for we have not made a growth corresponding to that of previous years. I take this not to indicate that the Guesrnseys are losing any in popularity but rather that some of us have not attended to the registration of our animals for the total number recorded has not been equal to that of the past year. I firmly believe, however, that before the end of December comes around, there will be more animals recorded than ever before. This can be brought about by all the members giving it the attention it deserves.

We now have 723 animals recorded on our books which is an increase of 90 over last year. In the advanced registry we have 13 cows recorded as against 10 at this date a year ago. There are a great many more entered and a number will qualify before the end of this year.

One of the very brightest features of the year is the strong showing we have made at the shows and here, this need not be enlarged upon for you all have seen it for yourselves.

There is one point which I would suggest that you carefully consider and that is that we as an Association have to fight stubbornly for a place in the ranks among the other breeds. Compared with the Ayrshires, Holsteins and the others we have cattle that will hold their own with any breed in America but our Association is younger and smaller than most and the fight is to be a stubborn one.

In connection with that feature there is a point which we have neglected and that is obtaining members for our Association. There are Guernsey breeders, and more than many of you are aware, who are not members, who are doing very excellent work in the other province. In B. C. there are four large breeders who recork their animals in the American Guernsey Cattle Club Books, while in Ontario and Quebec there are several more. In addition to these, there are small ones in all these provinces. During the past year these men recorded about 20 animals, and we should have all these. If we want our organization to become what it should, we must make an earnest effort to unite all our Dominion breeders into one organization and ours is one whose early history will bear the closest inspection. In British Columbia, the Guernsey is rapidly gaining popular as they are here and if we can unite the East and West into one, we will be much strengthened and in time penetrate the central part of Canada where we are practically unknown at present.

We have not possessed all the ground that is ours by rights for we are chiefly a Maritime organization while we should be a Dominion wide one. This we will in time become.

In the nation to the south of us, the Guernsey has made most rapid strides and it is interesting to note that at the National Show in Chicago which closed last month that out of a total of 800 Dairy animals gathered from all parts of the great nation, no less than 213 of tbese were Guernseys, or more than ¼ of them. Does this look as if our "Fawn and Whites" were occupying any secondary place in America even today.

More than that, the fact may not be known to all of you, but the 4 year record for all breeds is held by the Guernsey cow who in that period gave no less than 26 tons milk and almost one and one half tons butterfat. Besides that, at the only contest ever held in America, where all dairy breeds were represented the Guernseys headed the list in the three following points:—

1st. Most net profit per lb. of food fed.

2nd. The highest average score for quality in butter.

3rd. The highest score for quality and color in butter.

As a breed to use in improving the average herd, we have one second to none and this is where a large part of our trade is to come in future, for at the present as never beforeis there a demand for high class cream for a city and creamery trade and the Guernsey will produce this more cheaply than any other breed in the world today.

Too much importance cannot be placed upon advanced registry work and I regret that our Maritime breeders are not running more cows this year. Our Parent Society on the American side was the first breed organization, to adopt a systematic testing of their cows. The growth in popularity there is largely due to this fact and now they have no fewer than 2313 animals which have qualified and many of them with remarkable records.

To me it seems that the points for us to consider, this coming year are, more attention of our cows; an attempt to get all breeders united to advance our breed and lastly a vigorous effort to do something in the way of advertising. We now have something which we can justly be proud of, and unless the fact is pushed home to the public, we will not receive the benefit of our work, and rereive the prices which we otherwise would.

As I stated before, this year showed a little dropping off in registration but I firmly believe that there is an influence at work which is soon to be of more importance in permanent growth than if we had made a very strong showing. I am also convinced that the day is not far hence, when we will have more members and more animals in the Maritime provinces than any other breed association and in time, I hope this will be the case all over the Dominion.

In conclusion, I wish to thank all those who have assisted me in any way during the past year and I sincerely hope that the one before us that of any other.

will show even greater progress than

I thank you all for your kind attention.—D. G. MacKay, Heath Bell Pictou Co., N. S.

THE VICE PRESIDENT.

Mr. Hugh A. Dickson, of Central Onslow, made a very interesting speech. He used figures to prove that the Guernseys are the most economical producers of milk and butter, mentioned the ever increasing demand for animals of the breed for foundation of herds and for bulls for grading up grade herds.

He also reported that two of his own cows had about finished a test with records of about eight hundred pounds of butter each in the year.

The Report of the Secretary and the Financial Report of the Treasurer were read and by motion adopted.

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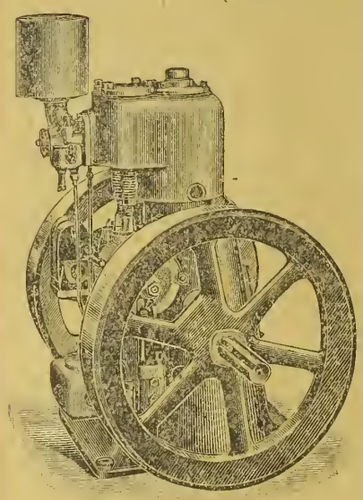

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We have sold over 50,000 Melotte Cream Separators in Canada during 15 years. Ask any Canadian user how he likes the Melotte.

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R. A. LISTER & CO., LTD.

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MR. R. ROBERTSON

made some very encouraging remarks He noted the increase in the number of Guernseys in Canada as shown in the address of the President. He also suggested that the Members of the Association should give their special attention to the Dominion Exhibition to be held this year in B. C. and urged that a good exhibit be sent out from the Maritime Provinces to that exhibition.

MR. JOHNSTON

reported progress for the Guernseys in the Island of Cape Breton and showed his usual zeal in the welfare of the Association.

MR. T. D. BATES

congratulated the President on his excellent address. He stated that he had not been able to supply all of the orders he had received for Guernseys during the past year.

He complained that the Guernseys were not represented among the breeds kept at the Nova Scotia Government Farm at Truro and said that he felt it was unfair for any Government Farm or College to push any particular breed. He cited instances where he knew of farmers who had been induced to breed Holstzins by influence from the Truro College and Farm and who were now disappointed with results obtained from such crossing of the breeds and were again going back to Guernseys.

MR. JAMES McKENZIE

stated that as a breeder of grade cows who had had a wide experience, he wished to confirm what had been said of the good qualities of the Guernsey breed.

The Committee on Pamphlet work reported progress.

A Draft of a Resolution re "Bulls running at large" received from the Secretary of the Holstein-Freisian Association was read and after some interesting discussion was passed with a few minor amendments, as follows:—

DRAFT OF RESOLUTION RE BULLS RUNNING AT LARGE.

WHEREAS it is frequently reported to this Association that valuable pure bred cows hade been served by grade or scrub bulls not kept under proper restraint;

AND WHEREAS it is almost impossible under existing laws for the breeder of pure bred cattle to obtain adequate damages in case an action is brought in the courts against the owner of the underbred male;

AND WHEREAS it is difficult to maintain the purity of any breed of stock unless the females can be protected from the ravages of wandering males;

BE IT THEREFORE RESOLVED that this Guernsey Breeders' Association of Canada respectfully request the Minister of Agriculture in each Province to introduce legislation providing that any animal trespassing upon land fenced as provided by law may be detained by the owner of such land and held for all damage done thereon. That the owner of a pure bred cow which is gotten with calf by an ill-bred and unpedigreed bull unlawfully running at large or trespassing upon the premises of another may recover damages from the owner lessee or person in charge o

Use Salt that does make good butter - - Windsor Dairy Salt

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such bull which damages shall be measured by the difference in the value of the cow for the purpose of breeding fine stock before meeting with such bull and afterwards.

AND BE IT FURTHER RESOLVED that the other Canadian Associations of Breeders of pure bred cattle be cordially invited to co-operate with this Association in the endeavor to secure satisfactory legislation in each province along the above lines, and that each individual member of the Associations be urged to bring as much pressure as possible to bear upon the member of the legislature for his constituency to the end that the request of the pure bred cattle breeders may receive due consideration.

BY MOTION H. W. CORNING AND R. M. JACKSON were appointed a committee to forward this resolution to the different Provincial Governments of Canada.

BY MOTION the Secretary was instructed to correspond with the Secretary of the Canadian National Dairy Show with a view to having a class of Guernseys for 1914.

President—D. G. McKay, Heath Bell, N.S.

Vice-President—Hugh A. Dickson, Central Onslow, N. S.

Directors—E. J. Johnston, Georges River, C. B.; T. D. Bates, Brookfield, N. S.; James F. Roper, Charlottetown, P. E. I.; J. Frank Roach, Sussex, N. B.; R. M. Jackson, Jacksonville, C. B.

Auditor—R. Robertson, Amherst, N. S.

Committee—D. G. McKay, H. W. Corning.

Director to act with President, Vice President and Secretary of Executive Board—E. J. Johnston.

Secretary-Treasurer—Howard W. Corning, Chegoggin.

Stable Sanitation.

Stable sanitation is just as important as factory sanitation. My idea is that the two should go together very largely, because I do not think any factoryman has any right to demand that his patrons should deliver to him clean, pure milk unless he has a clean and proper place in which to take care of it. At the same time the man who delivers impure or imperfect milk to a cheese factory or a creamery is robbing his neighbors — robbing them to a much greater extent than many people seem to believe. I believe the question of the improvement of the quality of our dairy products would be settled in a short time if the patrons of factories only realized how much they are losing by the carelessness of many of their neighbors in this connection, who deliver milk which is not in proper condition. While I was employed as superintendent over numerous factories, it was part of my duty to inspect the milk for adulteration. It was necessary to give a great deal of attention to this matter. If there was even a suspicion that some patron was watering or skimming his milk, the others were up in arms at once, and would raise no end of a row. I tell you, gentlemen, that for every dollar that patrons have been robbed of in such a manner they have lost hundreds of dollars on account of the milk not being properly cared for, and through the factories not being in the sanitary condition necessary to make the best of it.

Now I would like to go back just a moment to that question about feeding hay during milking time. It is not a good idea, from my standpoint, to feed hay just before or during the milking of the cows. It might be all right from the feeder's standpoint, but all hay contains a great deal of

(Continued on page 474)

THROW OFF THE WASH-BOARD YOKE

The washboard has been a hard taskmaster for generations, but now the washing machine has taken its place.

The New Century Hand Washer eliminates the back-breaking rubbing, thus making washing a pleasure instead of a hardship. It runs easily and does better and quicker work than the old method.

No other machine can be built on the New Century principle, because its features are patented. The rust-proof steel ring, that prevents warping, adds years of wear to its life.

See it at your dealer's or send to us for information.

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Hamilton, Ont.

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RAW FURS

Our specialty is **CANADIAN RAW FURS.** Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

HALLMAN FUR CO., Toronto Ontario

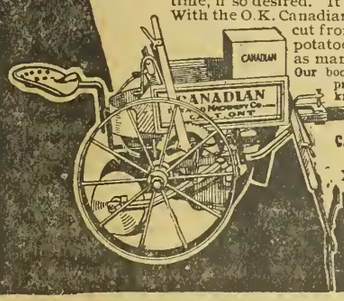
N. Hallman, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

MONEY IN POTATOES

Properly grown, potatoes are one of the most profitable crops that the farmer can raise, yielding a revenue of anywhere from $125 per acre up. The way to make these profits is to grow potatoes *right*, and to use labor-saving machines at every stage of the work. The wise farmer will choose his machines very carefully, regarding their cost as an investment that will yield him dividends for many years to come. He will choose a machine that is well constructed, of the very best material, and that is guaranteed to give him years of satisfactory service.

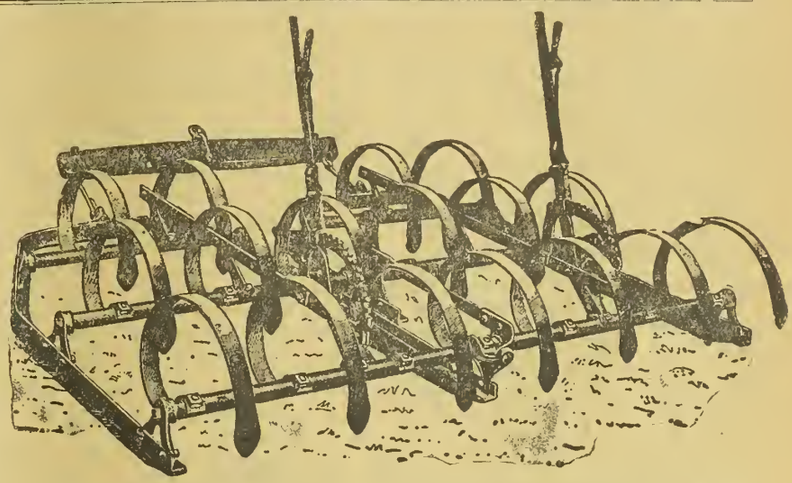
O.K. CANADIAN POTATO PLANTERS

meet these requirements and more. The O.K.Canadian Planter is extremely simple in its operation, its cup-feed device handles the potatoes carefully, without danger of damaging them, it is adjustable to space the hills anywhere from twelve to eighteen inches apart and to any depth, and covers the seed thoroughly. It is equipped with an attachment to distribute fertilizer at the same time, if so desired. It is guaranteed in every respect. With the O.K. Canadian Seed Potato Cutter, you can cut from five to seven bushels of seed potatoes per hour, four or five times as many as can be done by hand.



Our booklet, "Money in Potatoes" contains pretty nearly everything there is to know about Potato Growing. We will be glad to send it to you if you will write for it. 29

CANADIAN POTATO MACHINERY CO. LIMITED
Dept. L Galt, Ontario



Farmers who know our Lever Harrow and the work it does are buying it and every farmer who uses it talks enthusiastically of its merits.

With the levers the teeth can be regulated to depth in an instant. It will do more effective work than any other harrow and save half your time. Made in sizes:

9 and 11 Tooth, Single Section.
15 and 17 " Double "

The Eastern Steel Co., Ltd.
Successors to The Bailey-Underwood Co., Ltd. & The Brown Machine Co., Ltd.
New Glasgow, - - Nova Scotia

GIRLS—You can have free this HANDSOME ENGRAVED, GOLD-PLATED, EXPANDING BRACELET, made to fit any wrist and set with a perfect imitation of the popular carved cameo, or a DANDY PAIR OF TWIN DOLLS EACH THIRTEEN INCHES TALL, and dressed alike, complete from hat to shoes in the latest fashion. They are perfect darlings with beautiful eyes that open and shut, and long curly hair.

READ HOW TO GET THEM. Just send us your name and address and we will promptly send you by mail, postage paid, only 25 of Yvonne's Hearts of Flowers, our delightful new perfume in eight lovely odors such as Beauty Rose, White Lilac, Wood Violet, Lily of the Valley, etc. You sell them easily at 10c. each and send us the $2.50 proceeds upon receipt of which we promptly forward you the twin dollies, exactly as illustrated and described, or the expansion cameo bracelet in a neat satin-lined case. Do not let this chance slip by. Write to-day. 71

Address:— REGAL MANUFACTURING CO. TORONTO, ONT.
DEPT. E. 16

LIVE STOCK.

Fits in Pigs—How to Detect and Treat Them.

Fits in pigs are usually only of two kinds, apoplectic or epileptic.

APOPLECTIC FITS.

These are comparatively rare, but apoplexy is due to many causes, the principal of which are: Exposure to the sdn's rays, over feeding,rupture of an artery, causing compression of the brain, blows on the head, growth of a tumor, fright, clots in the cerebral arteries, an accident placing the animal for a time in a position mechanically preventing the return of blood from the brain, venous congestion and in fact, any cause onstructing the functional activity of the brain.

SYMPTOMS.

The attack is sudden, the animal is unconscious, breathing loud, labored, and slow, the tongue protruding and blackish and there is partial paralysis with occasional twitches, from time to time, generally on one side of the body, the eyelids are closed, and the pupils frequently dilated and insensitive to light.

TREATMENT.

This combines removal to a dark, quiet and cool place, cold application and douches to the head, mustard or white oils rubbed in the back of the neck, spine and extremities, and, if consciousness returns, administer four grains of calomel and twenty grains of jalap, or any domestic pill of an aperient character, doubling the human dose. The powder, or the crushed pill can be made into an electuary or paste with a little jam, and smeared on the tongue with the handle of a spoon, or mixed with two tablespoonfuls of milk, or, as the animal is not likely to struggle *being somewhat dazed), one or two ounces of castor oil may be given warmed. To administer these, elevate the head, make a pouch by ,pulling the cheek from the teeth, and slowly pour in without troubling to separate the teeth. The dose will then be slowly and easily swallowed. Or one may administer two ounces of Epsom salts, dissolved in five ounces of ale.

THE AFTER TREATMENT DEMANDS 3

Isolation, quietude, darkness, laxative food, and once daily in water or food the following: Iodide of potassium, five grains; nitrate of potash, thirty grains for about a week. This line of treatment in many cases will prevent recurring attacks, and will remove many of the possible after effects.

WILL THE ANIMAL PAY FOR TREATMENT ?

That depends on the value of the pig, the condition of the animal, fat or otherwise, the possibility of paralysis ensuing, whether the animal is barren or pregnant, and whether she was for a short os long time unconscious. All these factors must be considered and perhaps the owner may determine to have the creature slaughtered at the earliest opportunity before any treatment is adopted. The flesh may usually be sold for human consumption, as strictly speaking, it is not a disease, but in cases due to an internal mechanical cause.

EPILEPTIC FITS

These may occur amongst all animals, but man, dog and pig are more frequently victims than equines or bovines or ovine, probably because of their larger and more complex brains and higher mental developments.

GENERAL REMARKS.

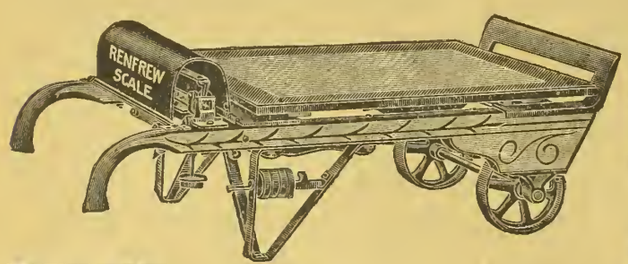
This disease has peculiarly attracted the attention of mankind from the earliest periods; our most ancient literature containing scattered allusions to it. The suddenness of the attack, the unconsciousness, the struggling, the equally rapid return to normal condition have invested this disease with a mystery and a halo of superstition, so that the early Greeks spoke of ;t as the "sacred disease," and the treatment of it was considered to belong more to the priest than the physician. This continued even to the middle ages and from the similarity of symptoms in man and swine during the attack, it was believed to be transmissible from one to the other. The miracle of the man, possessed by devils (epilepsy) being freed therefrom and sent to occupy the bodies of swine, reflects the general idea of that time. At the present time we must confess, in spite of all the researches that have been made, we are still in ignorance of the essential cause of epilepsy. Consequently, no really rational treatment had been introduced. Hereditary tendencies are assumed, and that is true, but the answer still hides out ignorance. At any rate, do not knowingly breed from any animal known to have fits. Other assumed causes are (1) an undiscovered auto-toxin, specially acting on the nerves, issuing from the base of the brain or front of spinal cord. (2) A tuberculous deposit in or on the brain, or some of the intermediate forms of trematode worms taking up their position there, and by their growth setting up pressure or irritation. (3) A reflex irritation produced by intestinal parasites, especially the small round worms. (4). Dentition: Previour to the eruption of first or second teeth, the pressure on the jaw and gums sets up inflammation, and this communicated to the dental branches of the great nerve of the face, sympathetically excites a nerve storm. The fit itself is not the disease; only a culmination of unknown previous causes. (5) Indigestion: This is also a probable cause, and perhaps more frequently than others. Fits may occur in suckling piglings, when the sow has been improperly fed.

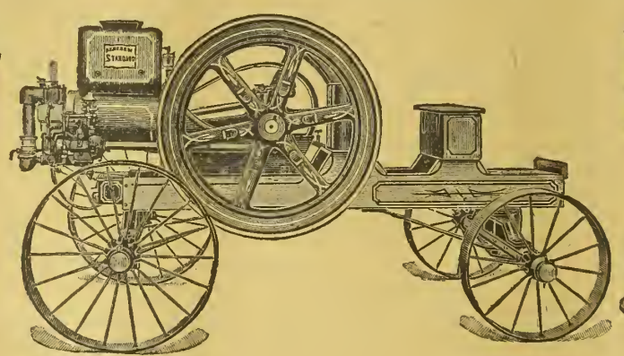
SYMPTOMS.

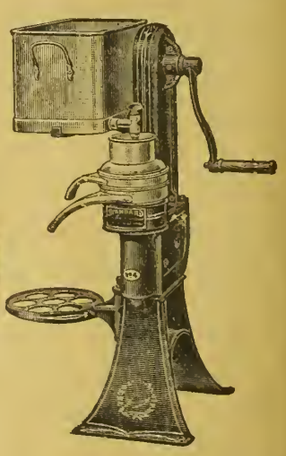
The most constant feature is the sudden onset of absolute unconsciousness, the victim neither hears, feels nor sees, nor can be roused by any means at our command. The head is drawn on one side, and generally the patient falls on its side, and the frame is agitated with violent convulsions. The teeth are clenched, the tongue is often bitten, and the urine or faeces are passed involuntarily. There are remissions, but often after a few moments the symptoms are renewed with violence. After a varying period of time they lessen in violence consciousness returns, and the animal will resume the occupation it was engaged in previous to the fit, but usually it seeks quietude and darkness, and sleep to restore the energy expended. There is for at least twenty-four hours a tendency to a recurrence of the fit. Many cases are far milder and of shorter duration. In feeding or playing, a young pig may suddenly stand still, or turn round in half circles, look dazed, stagger, and then quickly recover, the whole process not occupying more than five minutes.

TREATMENT.

During the attack nothing can be done, except possibly, removal from the vicinity of any hard body against which the animal might be bruised during the convulsive movements of the body. After recovery, a saline purgative should be given, in which thirty or forty grains of bromide of potassium have been added. The rest is a laxative diet, isolation and quiet If there is dentition trouble, search and extract supernumerary or crowded teeth. If the animal is effected with worms, give a vermifuge; if in poor condition, better feeding and tonics. If piglings are attacked during lactation with sow, feed her carefully, giv? castor oil and let her have a run twice daily for a short time, weather permitting, with her pigs. Of the medicines known, tending to prevent a recurrence of epileptic fits, nothing has yielded so good a result as the administration twice daily, of from ten to fifteen grains (depending on size) of bromide of potassium, continued for at least a fortnight or







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For weighing cattle, horses, hogs, sheep, feed, milk, butter, grain, groceries, etc. you need the Renfrew Handy Two-Wheel Stock Scale. Weighs from 1 lb. to 2,000 lbs. Weighs accurately on even or uneven ground. Government Inspector's Certificate attached. Strong, durable yet not heavy. Built especially for use on the farm. Write for our Scale Booklet and learn how this scale has paid for itself on the farm in less than three months. Sold on a Special Easy Payment Plan.

The Renfrew Standard Gasoline Engine is known as "the engine that starts without cranking." Runs so smoothly and so perfectly balanced it needs no wooden blocks under the wheels to prevent truck from crawling. Remarkable simplicity of construction makes it easy for a boy or girl to understand and run one. Has Governor of Fly-Ball Steam Engine Type. Very economical on gasoline. All styles and sizes from 2½ to 60 h. p. Write for our Engine Booklet.

Every modern farmer has heard about the Standard Cream Separator—the Separator that holds those remarkable close-skimming records at Government Dairy Schools. But everyone doesn't know why it skims so close—loses but one-tenth of a pound of butter fat in every 1000 lbs. of milk skimmed. The reasons are given in our new separator booklet which also explains the self-oiling system, the low supply can, high crank shaft, sanitary bowl, helicle gears, remarkable new-idea neck bearing, etc. Write for a copy.

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We want a man in every locality in Eastern Canada to sell our big line of Household Necessities, Medicines, Extracts, Spices, Stock Remedies, Poultry Supplies, etc., — direct to farmers. Every one a household necessity, sold on Rawleighs' Pay-After-You-Are-Satisfied Plan.

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over and above all expenses. If you can furnish team, write at once for our matchless offer.

NO DUTY TO PAY. Good freight service. Practically no competition. We are the only Company who owns and operates its own factory in Canada. Hundreds of our salesmen are making big money here in the West. Now is the time to secure good Eastern territory.

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three weeks. As it is rare to find any pathological changes in the brain or other organs, the animal may be slaughtered, and its flesh consumed safely.

Intensive Pig Keeping.

Pork in various forms, is regaining hold on the appetites of the working classes. It, therefore, behooves pig feeders to have their fat pigs ready for tne butcher for a young age—and this for two simple reasons: The fat pigs will sell more readily at higher prices and they will cost less per pound to produce than will the older and heavier pigs. A young healthy pig will eat more in proportion to its weight than will a heavier and older one, so that on this there is a saving of food, or rather it will utilize a larger quantity of the nourishment.

All the foods which are used in the manufacture of pork, says Sanders Spencer, in the "Smallholder," contain those properties which a young pig needs to build up its frame, in addition to the fat which the pig stores in its body or in its frame, whereas the matured pig, having built up its frame, has no use for certain constituents in the food, and these are mainly avoided or wasted. There are other advantages in this concentrated feeding of young pigs. You are able to fatten within the same sty a larger number of medium-sized than large pigs, and the fatting stage continues for a much shorter time, so that a larger number of pigs are fattened, more food is consumed, and a larger turnover at the same cost for housing, etc. This system may truly be called intensive pig-keeping, and thus it is in accord with the present-day fashion of conducting most businesses and carrying on most manufactories.

One secret of success in the fatting of pigs is to give them a mixture of foods. So many persons appear to imagine that all that is required in the fatting of pigs is to put into their trough a continual supply of some kind of food which may happen at the time to be most readily obtained, and which may appear to be the cheapest and in most general use for pig fattening.

Unappreciated Bull Calves.

Many years ago I visited in a neighborhood where a large Jersey breeder lived, or had his breeding farm. I called at the farm, and after looking at the 75 milch cows and heifers, I asked to see the calves. The manager showed me some 20 or 25 calves, all heifers but two.

"What do you do with your bull calves?" I asked.

"We have a man take them as soon as dropped, and dispose of them. We sell them for 50 cents each, and he is under obligation to kill them at a few weeks old."

"Why not let farmers have them to improve their herds of cows?" I asked.

"There is one that we have saved for a farmer. He pays us forty dollars for him.

"How much better is he than those you have killed?"

"Not any better than many of them. When we sell an animal to a man, he must appreciate its breeding and pay accordingly."

He went on to tell that within a year they had sold 24 heifer calves for one hundred dollars each.

I took the other bull calf home no matter on what terms. I could pay for neither certificate or pedigree (made some pretty stiff promises which I fulfilled later.

My cows were grade Jerseys. From these grades and the pure-bred bull, I raised two heifers that made 15 and 16 pounds each of butter a week. My neighbors raised good cows from him. The cows grew old and useless and were killed. I have never had their like since, but have often thought of those little bull calves killed because not appreciated. And when I have attended farmers' institutes and dairy meetings, whose object is to increase the output of butter and cream at less cost, I think how much easier and cheaper its object could be accamplished is these bukk calves could be bought by the state at wholesale, without pedigree, and distributed among the grade herdsof the state where most needed.

Very few, in proportion of the farmers of the state attend these farmers' meetings, but they are taxed to support them. Give him who "can't afford to spend his time at farmers' institutes" the bull calf for his share and see if he doesn't come out ahead.

Hogs Need Salt and Ashes.

A good supply of salt and ashes for hogs should not be neglected. If wood ashes are available, the hogs should have all they will eat. When not convenient to feed ashes, charcoal is a good substitute, and even soft coal will be eaten for want of something better.

Hogs are never injured by eating all the ashes they want, but it is not safe to give large quantities of salt to animals not accustomed to it. The salt and ashes mixture should be kept in a low box under cover where it will be protected from rain, and it should consist of about two quarts salt for each bushel ashes.

Many feeders add a few ounces of copperas to this ixture, Free access to such a mixture will preserve the health of the hogs, and sows which have had an abundance of such food rarely eat their young.

WELL THAT'S A GOOD JOB!
and it will last, too
The way to estimate the cost of keeping your house properly painted is to divide the cost of paint and labor by the number of years the paint will last.
Brandram-Henderson's "English" Paint
is the paint of longest service - the 100 per cent pure paint - because it contains 70 per cent Brandram's B. B. Genuine White Lead and 30 per cent White Zinc, ground in pure linseed oil, turpentine and dryer for all paints that can be made on a white base.
Figure its cost, not merely by the space a gallon will cover but by what it will keep covered. To the painter the formula of B-H "English" gives a feeling of confidence from the start.
A beautiful booklet of color-schemes is ready for distribution. Send for a copy. It's free.
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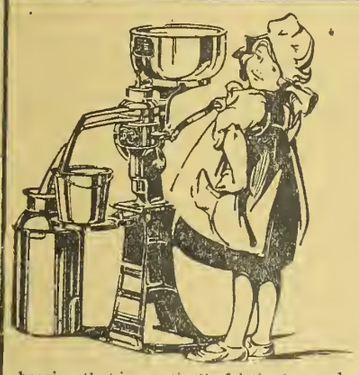
Ringing the Noses of Pigs.

Do they put rings in pigs' noses when turned to pasture? How are these made and put on?

Yes, this is a common practice to prevent pigs tearing the pasture pieces. Regulation pig rings can be secured at any agricultural supply or hardware store. They are put in with a special tool, known as a hog ringer. This can also be obtained at a hardware store. The cost of both to will be small.



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That together with close skimming, which is guaranteed in the *Empire*, is the point to look for in a separator, because light running means more than simply ease of turning the crank. The enemy of the separator is friction and light-running means absence of friction — and that means long life for the machine.

Among the reasons for the light-running of the

EMPIRE
DISC SEPARATOR

It has fewer moving parts and fewer bearings, its bowl is 20% lighter than others, it has a unique, exclusive, three-ball bearing supporting the bowl spindle. This three-ball bearing is found only on the *Empire*—it supports the bowl on a bearing that is practically frictionless and yet keeps it perfectly centered—something that is impossible with any other bearing in use.

Mail the coupon attached for our booklet on separators and learn more of these exclusive *Empire* features. A liberal allowance will be made for your old machine on the price of an *Empire*.

The *Baltic* separator, the smallest of which sells at $15, fills the needs of very small dairy herds.

Would you like information about the famous "*Sta-Rite* Gasoline Engine?"—"They start right and Sta-Rite."

There is still some unoccupied territory in which we would like to secure agents—write us.

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THE HORSE.

Grooming and Drugs.

If horses got more efficient grooming—"dressing", as the professional stableman prefers to call it— there would be fewer complaints about "surfeit," pimples, blotches, hidebound, roughness and other cutaneous disorders that affect the health and spoil the appearance of the horse, because the skin would be better enabled to perform its functions of removing effete material from the system. There would also be less demand for alterative and "condition" powders, which, in the majority of cases, are only rendered necessary through the skin becoming unhealthy, owing to its neglected condition. Bearing this in mind, no mercy should be extended to the attendant detected in using "coat-shiners" in place of honest strapping. Agents such as sulphuric acid, "sugar-cake," and arsenic should never be used for the purpose of saving labor. It is idle to pretend that they are of no use for this purpose—the lazy groom and the horse-proud carter knows better—and there is no doubt that they exercise a temporary effect in direction of producing a sleek coat with a small expenditure of labor but, if persisted in, the animal eventually goes all to pieces. The horse is slowly poisoned if the drugs are continued, and falls off in condition when they are stopped after he has become accustomed to receive them. Many of the complaints that are so common about horses, and especially farm horses, doing badly, and falling off in condition and appearance, when a new carter has taken over the charge of them, are due to the fact that the previous carter has drugged them and the new man has not learned the trick. We have had many applications for advice from men who have been threatened with the 'sack', and roundly accused of "giving the 'osses something." when it was their predecessor in office who had done the "giving" and the mischief. A great many cases of mysterious deaths, and more that are erroneously put down to colic or gripes, are the result of poisoning from the reckless or ignorant use of arsenic, oil of vitriol, and nitre. It is seen that there is an improvement on using these drugs, and then comes in that line of reasoning so common among those possessed of no medical training—if a little does good, more must do more good. Further, the carter does not understand the cumulative properties of arsenic, and that a fatal termination commanly results from even medicinal doses long continued. Every horse owner should personally and pointedly forbid the administration of any drug or medicine to his horses, unless by his express direction and consent, and he should, by taking a quiet look around the stables in the absence of attendants, see that there are no papers or bottles about that contain, or have contained, drugs. The corn-bin which the carter takes care to keep locked, under the pretense that his oats are stolen, is a favorite hiding place for such things, and it should be frequently inspected. Attendants will give these things, and not even the terrors of the law and the risk of punishment will always deter them.—English F. & H.

A GREAT SCANDAL

Big Efforts to Hush the Matter Up--- The Truth Out At Last . . .

Erom exhaustive enquiries made during the last few months we find there have been a number of patients kept under conditions which to say the least of it, is a great scandal.

We trust our readers will bear with us for a moment. The facts of the matter are these, there have been some thousands of cases where horses have been suffering from distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in some cases no attempt has been made to relieve their sufferings, their owners either being indifferent, or where they have thought at all about their animals have had recourse to cheap so-called remedies, of which there are unfortunately a few on the market, but which, while some may give a little relief temporarily, cannot from the nature of their ingredients give permanent relief or effect a cure.

It is high time in our opinion that something should be done to bring this state of things to an end, and with this in view we are about to take drastic action, to bring before every owner of horses that wonderful remedy known to all as "Dr. J. Woodbury's Horse Liniment,"

This remedy has been used for years throughout the Dominion during which time it has been used in hundreds of cases, comprising distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in no case to our knowledge, has "Dr. J. Wood' ury's Liniment" failed to first relieve and then to cure the above mentioned complaints.

Every owner of horses should, if they have not already got a bottle of this Liniment in their stable immediately procure one. It is the only guaranteed remedy we know of, and it is a cheap form of insurance, and it will be found, that, if used immediately any symptoms of any of the above diseases appear, to give immediate relief, and probably save tremendous expense, probably the life of the horse as well.

Dr. J. Woodbury's Horse Liniment is sold by Stores and Chemists throughout Canada, but should your Storekeeper be out of stock he will procure it for you, and if you should find any trouble in getting a bottle, don't delay for an instant in mailing 25 cents and a bottle will be immediately forwarded you.

Sole Owners and Manufacturers

Frasier, Thornton & Co., Limited, Cookshire, Quebec, Can.

Treatment for Bots in Horses.

The following treatment has been tested on a large number of animals and proved successful by the United States Department of Agriculture. It is said that it will remove bots with in twenty-four to forty-eight hours. The day preceding the treatment a small amount of hay and a moderate amount of oats are given in the morning; in the evening, food is with held and a purgative given—Barbadoes aloes, 1 oz., or raw linseed oil, one pint. The day of the treatment at 6 o'clock in the morning give 3 drachms of carbon bisulphide in gelatine capsule; at 7 o'clock repeat the dose in the same manner, and at 8 o'clock give the third and last dose, making in all 9 drachms of carbon bisulphide in three gelative capsules. The above treatment is for the adult horse. For a yearling colt half the quantity of carbon bisulphide used for a mature horse will give the desired results. If properly administered, the gelatine capsule reaches the stomach intact, but soon dissolves, and the carbon bisulphide rapidly evaporates, suffocating all bot larvae and other parasites with which it comes in contact, but not injuring the horse. Worms are quite often expelled as well.

Brushing or Over Reaching.

"Over-reach" is an injury resulting from the inner part of the hind foot striking the heel or outer side of the fore coronet. The subjects that over-reach are generally fast horses that are good steppers, and the accident happens when they are weak or leg weary. When tired, the feet are moved irregularly, and the foot that inflicts the injury is advanced to its place before the other has been lifted. Unless arising from faults in conformation, the animals that inflict any of the above-mentioned injuries on themselves are generally young, immature and out of condition. They may be sleek and fat, but their muscles lack tone, and being soft they are easily fatigued by rapid work or long journeys. The indications are to bring the aninal into a better state of strength, by good feeding, regular moderate work, or perhaps by the judicious use of tonic medicines. It is to alterations in shoeing that most people look for a cure, but the smith can do but little to remedy the evil except in conjunction with an improvement in condition. Little can be said about shoeing, since each case requires to be treated on its merits; but generally, the most that can be done is to keep the striking foot rather bare at the part, to use bevelled shoes, and to remove them frequently, say, every three weeks. Care must be taken about the wound or bruise, as quittor and false quarter commonly supervene on over-reach.

Working Young Horsea.

Some farmers are apt to be a little too anxious to get their young colts to work. Draft colts of good size should be broken to work when two years old. Light work will be more beneficial than harmful, providing they are carefully handled. During the spring and summer they can be used occasionally to rest the brood mares and in this way they will almost earn their keep.

There are several advantages in breaking young, when the colts are from one to two years old. The colt seems to learn and is more easily handled than when he is older. Once well broken he can be turned out again to pasture with no danger that he will forget what he has learned. Of course, when broken at this tender age the colt is not ready to commece steady work when his education is completed. He should be accustomed gradually to work and the tasks to which he is set should be chosen with regard to the good they will do the colt rather than his owner. The draft colt is not ready to take up general farm work until at least three years old, and it is better that his strength should not be taxed severely before he is five.

Hitch the colt at first with an old gentle horse. Two colts should not be hitched together, as they worry each

Heaves CURED

—by removing the cause—and cured to stay cured—If 3 boxes of

Fleming's Tonic Heave Remedy

fail to effect a cure of any case—old or new, we will refund the full amount paid.

Per Box 1.00, 3 for 2.50

Mailed on Receipt of price

Scratches Disappeared

Gentlemen,—I gave a course of your Tonic Powders, which has put a horse and his mate in fine shape, and a touch of scratches has quite disappeared

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FLEMING'S VEST POCKET VETERINARY ADVISER

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FLEMING BROS., Chemists

41 Church St., Toronto, Ont.

VIGORA

gives strength to horses run down by sickness or fatigue. Cures skin diseases, coughing and especially broken wind.

Mr. H. E. Cantin of St. Augustin, Que., writes: "I have used your VIGORA for two of my sick horses. One of these horses had broken wind. These ills have completely vanished since I gave the horses your VIGORA. It is an invaluable remedy."

Ask for circulars from

J. B. MORIN, Druggist and Chemist, 318 St. Joseph St., Quebec.

GOMBAULT'S
CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for **Rheumatism, Sprains, Sore Throat,** etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is Warranted to give satisfaction. Price **$1.50** per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

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for over half a century

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TORONTO, ONT.

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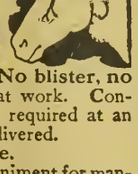
THICK, SWOLLEN GLANDS
that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with



ABSORBINE

also any Bunch or Swelling. **No blister, no hair gone,** and horse kept at work. Concentrated—only a few drops required at an application. $2 per bottle delivered.

Book 3 K free.

ABSORBINE, JR., antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Knotted Varicose Veins, Ulcers. $1 and $2 a bottle at dealers or delivered. Book "Evidence" free.
W. F. YOUNG, P.D.F. 124 Lymans Bldg., Montreal, Can.

WHY HE WAS LATE

"What made you so late?"

"I met Smithson."

"Well, that is no reason why you should be an hour late getting home to supper."

"I know, but I asked him how he was feeling and he insisted on telling me about his stomach trouble."

"Did you tell him to take Chamberlain's Tablets?"

"Sure, that is what he needs."

Sold by all dealers.

other and do not learn so readily. Place strong well-fitted harness on the colt and take care that he is not frightened the first few times. If allowed to run or to get the advantage while scared the colt will always have a fear of the object of its first scare. If the colt is hitched with a gentle horse that does not scare the driver will not have much trouble. —W. F. Purdue, in Breeders' Gazette.

The Bones of Light and Heavy Horses.

Definite information concerning differences between the bones of light and heavy horses has been obtained by B. Hardt, of Jena University, Germany.

Upon chemical analysis of many specimens of metacarpus or front cannon bones, he found that on the whole the bones of draught horses contain more organic matter and less mineral matter than those of light horses. There are also some minor differences in composition, but he concluded that there are greater differences in form and strength than in the chemical composition of the bones of the two types. This supports the common statement of the horsemen, that the bones of light horses are generally harder than those of draught horses, for the hardness of bone and its strength are known to increase with additional percentages of mineral matter.

Since there is a general co-ordination of structure throughout the body the texture of the skin and hair furnishes an index to the character of the bones. Smooth skin and fine hair are generally possessed by light horses, and particularly by those retaining sound legs to old age. When the same quality of hide and hair is found on the cannons of a draught horse, it is a fair assumption that there is a corresponding density of bone. The reputation of such horses for soundness of underpinning supports that conclusion.

Forging.

When the toe of the hind shoe strikes the under surface of the fore shoe, which it may do at any point between the toe and heel, the horse is said to "forge", and forging is due to defective gait or action, it may be from faulty conformation, lack of condition, or occasionally from defective or careless shoeing. The sound is very unpleasant, especially to the sensitive man who realizes that the horse he is driving is over-tired or lacking in condition. The majority of people attribute forging to bad shoeing, and look to shoeing for a remedy, but what happens is that while the horse is making the round of the different forges in the district he is getting into condition, growing older, and better fit for work. The "forging" then ceases, and the last man who did the shoeing gets the credit. Most horses that forge are young and recently broken, or old and out of condition, and forge only when tired or over-driven. This should always be kept in mind while trying the effects of altered shoeing. Many horses that forge wear away the toe of the hind foot, and occasionally the wall quite close to the coronet, exposing the sensitive structures and causing bleeding. There are horses that forge when they have no shoes on. There are contrivances for deadening the sound, which is, of course, not a cure, and there are several special shoes for horses that in forging wear away the wall. Charlier shoes in front are sometimes a cure, but always remember that corn and oats, steady driving and having the horse in hard condition are great aids to improved shoeing.

International Stock Food

You certainly do need it during Calving Time.

You need INTERNATIONAL STOCK FOOD for the cows and you need it for the calves.

It will keep both cows and calves in good flesh and keep their digestion sound. It tones up the system, invigorates and purifies the blood, etc., and removes all taint of disease from the milk. It will help very much in bringing cows safely through calving. INTERNATIONAL STOCK FOOD is good for all kinds of stock. We guarantee that it will make your colts, calves, pigs, shoats, and lambs grow rapidly and keep them healthy and thriving all the time.

Tell us how many head of stock you own and we will send you, free, a copy of our $3,000 Stock Book. You need it on the farm. International Stock Food and Veterinary Preparations, also Poultry Food and full line of Poultry Remedies are for sale by dealers everywhere. If your dealer cannot supply you, write us direct. Every preparation is sold on a spot cash guarantee basis to give satisfactory results or your money refunded.

International Stock Food Co., Limited, TORONTO 85

If Your Horse Gets Hurt?

If one of the horses should be kicked—cut a knee—strain a shoulder—go lame—have you the remedy at hand to CURE the injury?

Kendall's Spavin Cure

ought to be in every stable and barn in Canada. It prevents little horse troubles from becoming big ones—and takes away all signs of lameness. With a bottle of Kendall's Spavin Cure handy, you are prepared for accidents that may happen at any time.

CROSSFIELD, Alta.,
"I have used Kendall's Spavin Cure with great success in many things, such as Barb Wire Cuts and Raw Sores." M. J. MORRISON.

Don't be without it another day. Get a bottle at your dealers. $1. or 6 for $5. Our "Treatise On the Horse" tells just what you ought to know about horses, their diseases, and how to cure them. Write for free copy.

DR. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A. 97

BRUCE'S SEEDS

BRUCE'S GIANT FEEDING BEETS—The most valuable Field Roots on the market, combine the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the Mangel. We offer in two colors, White and Rose. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 10 lbs. $3.00.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The best of all field Carrots. ¼ lb. 40c, ½ lb. 70c, 1 lb. $1.20, 3 lbs. $3.00.

BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant White Feeding Beet, and equally easy to harvest. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 10 lbs. $3.00.

BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking: handsome shape, uniform growth, purple top. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 5 lbs. $1.50.

BRUCE'S GIANT KING SWEDE TURNIP—An improvement on Jumbo, or Elephant Swede, tankard shaped, large, good quality, heavy yielder, and good keeper. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 5 lbs. $1.50.

Prices are here—Add for Postage, if to be mailed, 5c for ¼ pound, 10c a pound.

Bruce's Giant White Beet, Bruce's Mammoth Intermediate Carrot and Bruce's Giant King Swede led all the others in the experimental tests, Ontario Agricultural College for 1913.

FREE—Our handsomely illustrated 112-page catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1914. Send for it.

John A. Bruce & Co., Limited., Hamilton, Ontario.
Established Sixty-four years.

FREE—FARM ACCOUNT BOOK

Bickmore's Farm Account Book will be sent free to any farmer who will tell us who and where he is. This book is arranged to keep all accounts in simple form—more simple and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborers' time record; and section for personal accounts. **64 pages, for ink or pencil.** Not a cheap affair. Its quality is in keeping with **BICKMORE'S** Gall Cure, a soothing, healing salve, the old-time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. **Bickmore's** Gall Cure heals and cures **Harness and Saddle Galls, Rope Burns, Cuts, Scratches, Grease Heel,** etc. You don't have to lay the horse off. **Bickmore's cures while the horse works.** Great thing for sore teats in cows. The work-horse trade mark on every box. None genuine without it. Be sure to ask for **Bickmore's** Gall Cure when you go to buy and do not take a substitute. Farm Account Book is ready. Send today.

WINGATE CHEMICAL CO., Canadian Distr's, 8100 Notre Dame St. W., Montreal, Can.

POULTRY.

A Three-Line Job—Poultry, Bees and Fruit Make a Pleasant and Profitable Combination.

Thos. F. Rigg writing in the Springfield, Mass., Farm and Home, says:—

"Poultry, fruit and bees in combination certainly give one the working material for the best and most workable three-line job. It is a combination with which the laws of nature harmonize completely and most genially. The man who properly handles poultry, fruit and bees is sure of a good income. If he does not properly handle them he is very apt to get stung.

"The products of the poultry yard the orchard and apiary are a daily necessiry in every one of the millions of homes in this country. I would like to know how any woman could keep house, and her husband, without her daily supply of eggs. Then, too, no home is complete without some of the products of the orchard and berry fields. And who does not want and demand the nectar of the flowers in the form of delicious honey? So you see, the man who is producing eggs and poultry and fruits, and honey has an established market awaiting his goods. No need of him to spend money in educatiog the people to use and buy his products.

"In common with all household commodities these products will probably never be cheaper than they are now, but rather that they will advance in price. This means that for the man who knows how, the poultry yard, the orchard and the apiary will yield a substantial profit. This being true, it does seem as though this three-line job ought to appeal strongly to a very large number of people in every section of the country. And it does. While it is true, that there are a few sections of the country especially adapted to the successful growing of fruit it does not follow that for the three-line job man these sections offer the greatest profit. The man who is going to establish a large commercial orchard and specialize on apples or peaches would be wise to chose one of these sections, but the man who hopes to establish such a businesss as we have under consideration will do well to seek other local ties. Why? Because his is an entirely different proposition.

"He will have something to sell every day. The housekeepers will look to him to supply the homes with poultry, eggs, fruit and honey regularly and in small lots. Then, too, in the fruit centers prices are lower. To illustrate:

"Last season I saw small fruits selling at unprofitable prices in a noted fruit centre not far from Portland, Me. A few days later I was in Portland and looked up the market. Small fruits were scarce and very high in price. The few growers there were reaping a rich return, while over in the celebrated fruit district the producers were selling at a loss. And the truth of it is that the hardy small fruits, strawberries, raspberries currants and gooseberries can be grown near Portland just as successfully as in the most noted fruit sections of America. I give this instance to show why I have made the above statement as to choice of locality. This same condition exists over the greater portion of this country—the markets are not well supplied. It seems but natural that men should consider far-off fields as the most profitable, but the man who is going into poultry, fruit and bees had better consider his own locality.

"Were I to choose a location for such a farm I would not have to go far, I am sure, no matter where I was located. I would prefer to be near a thriving manufacturing town. I would prefer such a town to a city. The city is the dumping place of a vast amount of fruit and prices frequently rule low. I would prefer the prosperous town to the city, not only because of this fact, but for the further reason that in the town I could more easily deal directly with my customers. I would, too, cut out all transportation charges and middlemen's profits.

"I would be very careful in the selection of the soil. A sandy loam with a clay sub-soil is ideal for the production of fruit. It is warm, friable, retains moisture, while at the same time the surface is not too wet. Such a soil is well adapted to the successful raising of poultry. Clovers naturally grow to perfection on such soil and the bees must have clover fields in which to gather the nectar which we take from the hives in the form of honey.

"I would, so far as the fruit is concerned, specialize on small fruits, such as strawberries, raspberries, currants and gooseberries. If in a specially favored apple country, I would have an orchard set to winter apples of not more than two varieties. The apple orchard would be the home of the poultry. It is an ideal place for fowls and growing chicks. Then, too the fowls greatly benefit the trees by constantly fertilizing the soil, provided there are not too many of them.

"I do not know of any section of the country where such a little farm, properly managed, would not pay big dividends, not only in dollars, but in health, comfort and contentment. It ought to appeal to so many men and women who are wearing out their lives in the tireless, carushing grind of the city life. It should, too, appeal to all land owners near thriving towns. Life's struggle for the vast majority of people is to be constantly harder as time goes on, and while this little farm of ours will not be without its care and perplexities and troubles, it will insure to the willing and faithful workers safety against the hardships of the world."

Hatching and Raising Chickens by an Artificial Method.

We have always kept a few hens to supply our own table with eggs and poultry, and have observed that the usual custom is to raise what chickens are necessary to get the pullets one needs for the coming year, killing off the cockerels as soon as large enough for broilers. This way of doing business is not very profitable, from our viewpoint, as the cost of the day-old chick, together with the loss and feed necessary to get them to the broiler stage, leaves little margin for labor expended.

We resolved to begin our operations with a different idea in view, namely, keeping hens as others have kept turkeys, wintering only what hens were necessary for breeding stock, raising the cockerels and pullets to maturity and marketing the former when roasters bring a high price, and selling the pullets for egg producers in the early fall. We have tried this method for several years, and proved to our satisfaction that for labor and capital expended it is extremely profitable.

We began the year with 23 fancy White Wyandotte hens and two large vigorous cockerels, choosing this breed because of their prolific laying qualities, as well as attractive appearance when dressed—yellow legs and skin and no dark pinfeathers. Our particular strain is also valuable on account of size, pullets weighing as high as nine pounds and cockerels 11 pounds.

The 244-egg incubator was started February 19 and kept in operation until May 15, giving us 600 strong healthy chicks, a little over 60 p. c. hatch. Of this number we sold 328 as day-old chicks at 15 cents each, and of the remaining 280 we raised to maturity 247, or 88 p. c. of the original number. The chicks were put into outdoor brooders.

FEEDING THE BABY CHICKS

The first food given when 24 or 34 hours old, was bread crumbs moistened with milk and was continued, one feed a day, during the first week. Fine grit and wheat bran were kept before them from the first, and they were given as much chick feed as they would eat up clean three times a day.

Once daily for three weeks we fed hard-boiled egg, shell and all, mixed with pinhead oatmea,. Caution should be used in feeding the egg. One egg for 25 chicks at first is all we have found safe to give them.

After three weeks old they were fed three times daily, gradually changing from chick feed to fine whole grains and a liberal proportion of cracked corn, with bran and growing feed constantly before them. This was their diet until maturity, the only change being that the grain was given in two feeds instead of three when about six weeks of age. At that time they were taken from the brooders, having been gradually accustomed to go without heat, and placed in a building 14 feet square, which was their shelter at night during the summer.

In this building we placed a large dry feed hopper which holds 200 pounds, and we have seen our 250 chicks empty it in one week. This box was not allowed to stay empty, as plenty of food is necessary for good growth.

The chickens were allowed the free range of an orchard of about five acres, which contained a stream of running water. We find it quite simple to feed poultry on free range, as they can pick up the necessary elements for a balanced ration.

THE COCKERELS SPECIALLY FATTENED.

Some time before marketing the cockerels were confined in movable runs and fed g specially fattening ration, together with milk, until they were large enough to dress 6½ pounds on the average. All the pullets we did not need for breeding stock the next year were ready to lay in October and sold for 30 cents a pound live weight.

Itemized account for the year is as follows:

Expenses—Grain, $168.55; eggs for hatching to introduce new blood, $20; kerosene, $5; total, $193.55.

Receipts — 119 dressed cockerels, $164.02; seven breeding cockerels, $28; 76 pullets, $109.22; 220 day-old chicks $48; dressed fowls, $21.69; eggs $72.78 increase in value of stock on hand, $70; total, $513.71; profit for year, $320.16, or $12.80 per head.

A FEW LESSONS FROM EXPERIENCE.

Eggs should not be kept over 10 days before incubating.

Brooders and henhouses should be sprayed and then fumigated with sulphur.

Chicks must be hatched early and rapid growth promoted, in order that cockerles may dress over five pounds in August and September, when the prices are highest.

Feed breeding stock plenty of green food of some kind so that we may have fertile eggs.—A. E. Sherburne in N. E., F & H.

Kow to Feed the Ducks.

As soon as possible after the young ducks are hatched and dry I take them away from the hen and place them in a box near a stove and cover them. They get their first feed when 36 hours old. This consists of bread with as much warm milk as it will soak up. Over this I sprinkle a very small amount of fine, clean sand

I keep water before them in small fountains all the time, but am always careful not to give them cold water, which will cause cramps. Fountains prevent them from getting wet and chilled. I feed bread and milk for the first 10 days every three or four hours and am careful about the feed not getting sour.

After they are 10 days old I feed

PEERLESS-PERFECTION
The Fence That's Locked Together
The attacks and onslaughts of animals can't faze it. It's strong, yet springy. Manufactured from Open Hearth steel galvanized wire. When made by this process, impurities are burned out of the metal, removing one of the chief causes of rapid corrosion or rusting.
Read What Others Say
Gentlemen:—There is no fault to find with your fence. The fencing I put up 4 years ago is just as good as the day I put it up, showing no sign of rust, and giving good satisfaction. The Peerless stands the test better than any other make that I have seen. Yours truly, Spring Brook. JOHN MASON.
Gentlemen:—I have been in the fence business for ten years, and I find no fence like the Peerless, both for galvanizing and workmanship. I consider it equal, if not superior to any other make of fence on the market today. I have always found the Banwell-Hoxie Fence Co. people of their word. Yours respectfully, Glenburnie, Ont. MACK, LILLIS.
Send for our latest catalog. Ask about our poultry fencing and ornamental gates.
Agencies nearly everywhere. Agents wanted in open territory.
Banwell-Hoxie Wire Fence Co., Ltd. Winnipeg, Man., Hamilton, Ont.

RED ROSE TEA "is good tea"

Progressive Farmers Make Handsome Profits from Poultry

THE stoutest advocates of Poultry-Raising on the farm are the progressive farmers who have investigated the Peerless Way. These men are alive to the fact that Canada does not produce one third of the poultry and eggs consumed in this country, and that handsome profits go across the border to the American farmer who is called upon to supply the shortage.

You, Mr. Farmer, can have this profit, plus the amount spent in Customs duties and long freight hauls importing eggs and poultry from the States, and you will always have an eager market waiting to buy up all the poultry and eggs you can raise.

Read what this British Columbia farmer says:

Greenwood, B.C., Dec. 1, 1913.

"I am pleased to report a good season for the past summer with the poultry . . pullets are just commencing to lay. Eggs hatched well and I raised practically all in the Brooder and only lost (1) chick out of 500 hatched. I sold 20 dozen baby chicks and am keeping over 150 pullets, as it is the egg trade that I am working up.

"Since last September, eggs have been selling here at 70c. per doz., and at present they are bringing 80c. and are very scarce too."

(Sgd.) A. R. Royce.

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The whole idea of the Peerless Way of Poultry Raising is to raise the greatest number of the strongest chickens at the least outlay of money and with the least expenditure of time. We know that a farmer's regular duties do not leave him much time to look after chickens, so we have bent all our energies to perfecting a system whereby a farmer can take care of 400 or 500 chickens the Peerless Way in less time than he can look after 30 or 40 the old way.

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bread and milk twice a day and a moist mixture of equal parts bran and middlings twice a day. I also put some dry beef scraps where they can have ready access to it. When they are from three weeks to a month old I feed only morning and night.

Laying ducks I feed one-half bran, one-fourth middlings and one-fourth peanut hearts with the same amount of dried beef scraps twice a day, and I have never found a time when I thought they were not laying as many eggs as they should.

Raising the Goslings.

Goslings, while young and before their backs are feathered, must be kept from running through wet grass or standing out in a rain storm. It pays to be particular in this respect, as they die off alarmingly if allowed to get wet and cold.

Overfeeding is a mistake that many make and one which nearly always proves fatal to the goslin. Dry bread soaked in water is best for the first few days while they are learning to jerk off grass blades. They should have a small amount of corn meal wet up stiff each morning, a large teaspoonful to a gosling is enough, and all the drinking water they want to run to, besides an abundance of short grass. Short pasture or door yard grass is their best feed. They cannot eat the tall wire grass.

Goslings should be allowed a free range from the first, and if there is no running water for them to go into while young it will be better for them, as the water chills them and stunts growth and the turtles draw the helpless young ones under.

Feeding heavily on soft corn when the goslings are well grown should be avoided, as it causes leg weakness an death in heavy birds. Full grown goslings will feed on corn fodder as well as cattle and thrive on it. During the heat of the day goslings do not eat much and should have plenty of drinking water placed in a shady corner where they are in the habit of resting.

Large hens make the best mothers, and four eggs are usually enough for one sitting. Geese are apt to step on the goslings and break their backs and for that reason the old ones should not run with the goslings.

Fuss and Feathers.

The Hamburgs were bred extensively years ago and were known as most excellent layers. They lay a small white egg, but produce them in great numbers.

Range-raised poultry, other things, being equal, are more vigorous and sturdy than stock raised in confinement. With a portable house the chicks may be given the run of the cornfield or the orchard and two crops raised on the same ground.

It is very desirable during the breeding period to allow chicks to get outdoors on the ground as often as possible, provided the ground is free from snow or water, as they will ho much better and will be much hardier and more vigorous than if confined. As soon as they can get along without artificial heat, without any crowding, it should be removed.

It is gratifying to learn, on such good authority as Judge J. H. Drevenstedt, that the Light Brahma is once more coming back into popular favor. It was once considered the best of all breeds for the production of eggs and roasters, but its utility qualities were sacrificed to fancy points and with them went loss of vigor, stamina, shape and size. Some breeders kept to the old type and their faith is likely to be well rewarded.

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Pratts Poultry Disinfectant, $1.50 gal.
Pratts Cholera Remedy, 25c-50c
Pratts Head Lice Ointment, 25c
Pratts Gape Remedy, 25c-50c
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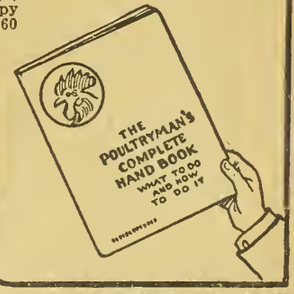

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David Copperfield.

By Charles Dickens.

(Continued from last issue.)

"Annie, my dear," returned her mother, "once for all, I must really beg that you will not interfere with me, unless it is to confirm what I say. You know as well as I do, that your cousin Maldon would be dragged at the heels of any number of wild horses—why should I confine myself to four! I won't confine myself to four—eight, sixteen, two-and-thirty, rather than to say anything calculated to overturn the Doctor's plans."

"Wickfield's plans," said the Doctor, stroking his face, and looking penitently at his adviser. "That is to say, our joint plans for him. I said myself, abroad or at home."

"And I said," added Mr. Wickfield gravely, "abroad, I was the means of sending him abroad. It's my responsibility."

"Oh! Responsibility!" said the Old Soldier. " Everything was done for the best, my dear Mr. Wickfield; everything was done for the kindest and best, we know. But if the dear fellow can't live there, he can't live there. And if he can't live there, he'll die there, sooner than he'll overturn the doctor's plans."

"Well, well, ma'am," said the Doctor cheerfully, "I am not bigoted to my plans, and I can overturn them myself. I can substitute some other plans. If Mr. Jack Maldon comes home on account of ill health, he must not be allowed to go back, and we must endeavour to make some more suitable and fortunate provision for him in this country."

Mrs. Markleham was so overcome by this generous speech (which, I need not say, she had not at all expected or led up to) that she could only tell the Doctor it was like himself, and go several times through that operation of kissing the sticks of her fan, and then tapping his hand with it. After which she gently chid her daughter Annie, for not being more demonstrative when such kindnesses were showered, for her sake, on her old playfellow; and entertained us with some particulars concerning other deserving members of her family, whom it was desirable to set on their deserving legs.

All this time her daughter Annie never once spoke, or lifted up her eyes. All this time Mr. Wickfield had his glance upon her as she sat by his own daughter's side. It appeared to me that he never thought of being observed by any one; but he was so intent upon her, and upon own thoughts in connection with her, as to be quite absorbed. He now asked what Mr. Jack Maldon had actually written in reference to himself, and to whom he had written it?

"Why here," said Mrs. Markleham, taking a letter from the chimney-piece above the Doctor's head, "the dear fellow says to the Doctor himself—where is it? Oh!—'I am sorry to inform you that my healtn is suffering severely, and that I fear I may be reduced to the necessity of returning home for a time, as the only hope of restoration. That's pretty plain, poor fellow! His only hope of restoration! But Annie's letter is plainer still. Annie, show me that letter again."

"Not now, mamma," she pleaded in a low tone.

My dear, you absolutely are, on some subjects, one of the most ridiculous persons in the world," returned her mother, "and perhaps the most unnatural to the claims of your own family. We never should have heard of the letter at all, I believe, unless I had asked for it myself. Do you call that confidence, my love, towards Doctor Strong? I am surprised. You ought to know better."

The letter was reluctantly produced; and as I handed it to the old lady, I saw how the unwilling hand from which I took it trembled.

"Now let us see," said Mrs. Markleham, putting her glass to her eye, "where the passage is. 'The remembrance of old times, my dearest Annie'—and so forth—it's not there. 'The amiable old Proctor'—who's he? Dear me, Annie, how illegibly your cousin Maldon writes, and how stupid I am? 'Doctor,' of course. Ah! amiable indeed!" Here she left off, to kiss her fan again, and shake it at the Doctor, who was looking at us in a state of placid satisfaction. "Now I have found it. 'You may be surprised to hear, Annie,'—no, to be sure, knowing that he never was really strong; what did I say just now?—'that I have undergone so much in this distant place, as to have decided to leave it at all hazards; on sick leave. if I can; on total resignation, if that is not to be obtained. What I have endured, and do endure here, is insupportable.' And but for the promptitude of the best of creatures," said Mrs. Markleham, telegraphing the Doctor as before, and refolding the letter, "it would be insupportable to me to think of."

Mr. Wickfield said not one word, though the old lady looked to him as if for his commentary on this intelligence; but sat severely silent, with his eyes fixed on the ground. Long after the subject was dismissed, and other topics occupied us, he remained so; seldom raising his eyes; unless to rest them for a moment, with a thoughtful frown, upon the Doctor, or his wife, or hoth.

The Doctor was very fond of music. Agnes sung with great sweetness and expression, and so did Mrs. Strong. They sang together, and played duets together, and we had quite a little concert. But I remarked two things; first, that though Annie soon recovered her composure, and was quite herself. there was a blank between her and Mr. Wickfield which separated them wholly from each other; secondly, that Mr. Wickfield seemed to dislike the intimacy of her and Agnes, and to watch it with uneasiness. And now, I must confess, the recollection of what I had seen on that night when Mr. Maldon went away, first began to return upon me with a meaning it had never had, and to trouble me. The innocent beauty of her face was not as innocent to me as it had been; I mistrusted the natural grace and charm of her manner; and when I looked at Agnes by her side, and thought how good and true Agnes was, suspicions arose within me that it was an ill-assorted friendship.

She was so happy in it herself, and the other was so happy too, that they made the evening fly away as if it were but an hour. It closed in an incident which I well remember. They were taking leave of each other, and Agnes wat going to embrace her and kiss her, wnen Mr. Wickfield stepped between them, as if by accident, and drew Agnes quickly away. Then I saw, as though all the intervening time had been cancelled, and I were still standing in the doorway on the night of the departure, the expression of that night in the face of Mrs. Strong, as it confronted his.

I cannot say what an impression this made upon me, or how impossible I found it, when I thought of her afterwards, to separate her from this look, and remember her face in its innocent lovliness again. It haunted me when I got home. I seem to have left the Doctor's roof with a dark cloud lowering on it. The reverence I had for his grey head was mingled with commiseration for his faith in those who were treacherous to him, and with resentment against those who injured him. The impending shadow of a great affliction, and a great disgrace that had no distinct form in it yet, fell like a stain upon the quiet place where I had worked and played as a boy, and did it a cruel wrong. I had no pleasure in thinking, any more, of the grave old broad-leaved aloe trees which remained shut up in themselves a hundred years together, and of the trim smooth grass-plot, and the stone urns, and the Doctor's walk and the congenial sound of the Cathedral bell hovering above them all. It was as if the tranquil sanctuary of my boyhood had been sacked before my face, and its peace and honour given to the winds.

But morning brought with it my parting from the old house, which Agnes had filled with her influence; and that occupied my mind sufficiently. I should be there again soon, no doubt; I might sleep again—perhaps often—in my old room; but the days of my inhabiting there were gone, and the old time was past. I was heavier at heart when I packed up such of my books and clothes as still remained there to be sent to Dover, then I cared to show Uriah Heep, who was so officious to help me, that I uncharitably thought him mighty glad that I was going.

I got away from Agnes and her father, somehow, with an indifferent show of being very manly and took my seat upon the box of the London coach. I was so softened and forgiving going through the town, that I had half a mind to nod to my old enemy the butcher, and throw him five shillings to drink. But he looked such a very obdurate butcher as he stood scraping the great block in the shop, and moreover, his appearance was so little improved by the loss of a front tooth which I had knocked out, that I thought it hest to make no advances.

The main object on my mind, I remember, when we got fairly on the road was to appear as old as possible to the coachman, and to speak extremely gruff. The latter point I achieved at great personal inconvenience: but I stuck to it, because I felt it was a grown-up sort of thing.

"You are going through, sir?" said the coachman.

"Yes, William," I said, condescendingly (I knew him); "I am going to London. I shall go down into Suffolk afterwards."

"Shooting sir?" said the coachman.

He knew as well as I did that it was just as likely, at that time of year, I was going down there whaling; but I felt complimented, too.

"I don't know," I said, pretending be be undecided, "whether I shall take shot or not."

"Birds is got very shy, I'm told," said William.

"So I understand," said I.

"Is Suffolk your county, sir?" asked William.

"Yes," I said, with some importance. "Suffolk's my county."

"I'm told the dumplings is uncommon fine down there," said William.

I was not aware of it myself, but I felt it necessary to uphold the institutions of my county, and to evince a familiarity with them; so I shook my head, as much as to say "I believe you!"

"And the Punches," said William. "There's cattle! A Suffolk Punch, when he's a good un, is worth his weight in gold. Did you ever breed any Suffolk Punches yourself, sir?"

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Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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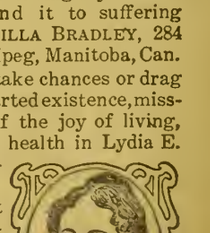

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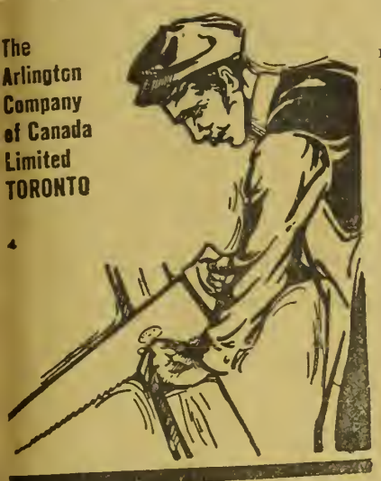

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"E—no," I said, "not exactly."

"Here's a gep'lm'n behind me, I'll pound it," said William, "as has bred 'em by wholesale."

The gentleman spoken of was a gentleman with a very unpromising squint, and a prominent chin, who had a tall white hat on with a narrow flat brim, and whose close-fitting drab trousers seemed to button all the way up outside his legs from his boots to his hips. His chin was cocked over the coachman's shoulder, so near to me, that his breath quite tickled the back of my head; and as I looked round at him, he leered at the leaders with the eye with which he didn't squint, in a very knowing manner.

"Ain't you?" asked William.

"Ain't I what?" said the gentleman behind.

"Bred them Suffolk Punches by the wholesale?"

"I should think so," said the gentleman. "There ain't no sort of orse that I ain't bred, and no sort of dorg. Orses and dorgs is some men's fancy. They're wittles and drink to me—lodging, wife, and children—reading, writing and 'rithmetic—snuff, tobacker and sleep."

"That ain't a sort of man to see sitting behind a coach-box, is it though?" said William in my ear, as he handled the reins.

I construed this remark into an indication of a wish that he should have my place, so I blushingly offered to resign it.

"Well, if you don't mind it, sir," said William, "I think it would be more correct."

I have always considered this as the first fall I had in life. When I booked my place at the coach-office, I had had "Box Seat" written against the entry, and had given the book-keeper half a crown. I was got up in a special great coat and shawl, especially to do honour to that distinguished eminence; had glorified myself upon it a good deal; and had felt that I was a credit to the coach. And here, in the very first stage I was supplanted by a shabby man with a squint, who had no other merit than smelling like a livery stable, and being able to walk across me, more like a fly than a human being, while the horses were at a canter!

A distrust of myself, which has often beset me in life on small occasions, when it would have been better away, was assuredly not stopped in its growth by this little incident outside the Canterbury coach. It was in vain to take refuge in gruffness of speech. I spoke from the pit of my stomach for the rest of the journey, but I felt completely extinguished, and dreadfully young.

It was curious and interesting, nevertheless, to be sitting up there, behind four horses: well educated, well dressed, and with plenty of money in my pocket; and to look out for the places where I had slept on my weary journey. I had abundant occupation for my thoughts, in every conspicious landmark on the road. When I looked down at the tramps whom we passed, and saw that well-remembered style of face turned up, I felt as if the tinker's blackened hand were in the bosom of my shirt again. When we clattered through the narrow street of Chatham, and I caught a glimpse, in passing, of the lane where the old monster lived who had bought my jacket, I stretched my neck eagerly to look for the place where I had sat, in the sun and in the shade, waiting for my money. When we came, at last, within a stage of London, and passed the veritable Salem House where Mr. Creakle had laid about him with a heavy hand, I would have given all I had, for lawful

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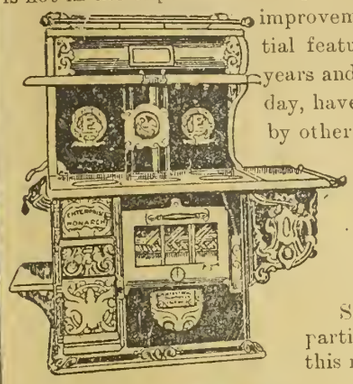

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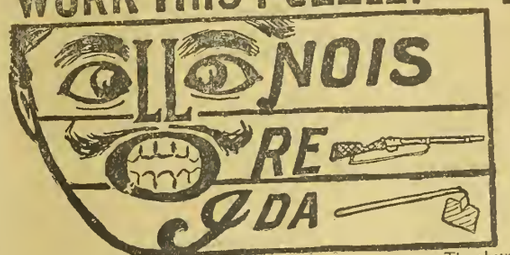

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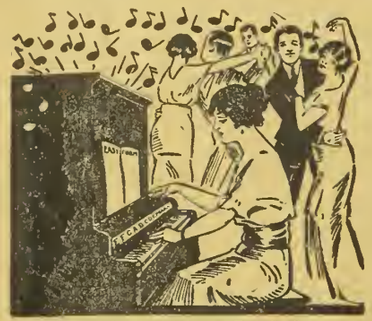
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permission to get down and thrash him, and let all the boys out like so many caged sparrows.

We went to the Golden Cross, at Charing Cross, then a mouldy sort of establishment in a close neighborhood. A waiter showed me into the coffee-room; and a chamber-maid introduced me to my bedchamber, which smelt like a hackney-coach, and was shut up like a family vault. I was still painfully conscious of my youth, foz nobody stood in any awe of me at all; the chambermaid being utterly indifferent to my opinions on any subject, and the waiter being familiar with me, and offering advice to my inexperience.

"Well now," said the waiter, in a tone of confidence, "what would you like for dinner? Young gentlemen like poultry in general; have a fowl!"

I told him, as majestically as I could, that I wasn't in the humor for a fowl.

"Ain't you?" said the waiter. Young gentlemen is generally tired of beef and mutton; have a weal cutlet"

I assented to this proposal, in default of being able to suggest anything else.

"Do you care for taters?" said the waiter, with an insinuating smile, and his head on one side. "Young gentlemen generally has been overdosed with taters."

I commanded him in my deepest voice, to order a veal cutlet and potatoes, and all things fitting; and to inquire at the bar if there were any letters for Trotwood Copperfield, Esquire—which I knew there were not, and couldn't be, but thought it manly to appear to expect.

He soon came back to say there were none at which I was much surprised), and began to lay the cloth for my dinner in a box by the fire. While he was so engaged, he asked me what I would take with it; and on my replying "Half a pint of sherry", thought it a favorable opportunity I am afraid, to extract that measure of wine from the stale leavings at the bottom of several small decanters. I am of this opinion, because, while I was reading the newspaper, I observed him behind a low wooden partition, which was his private apartment, very busy pouring out of a number of those vessels into one, like a chemist and druggist making up a prescription. When the wine came, too, I thought it flat; and it certainly had more English crumbs in it, than were to be expected in a foreign wine in anything like a pure state; but I was bashful enough to drink it and say nothing.

Being then, in a pleasant frame of mind (from which I infer that poisioning is not always disagreeable in some stage of the process), I resolved to go to the play. It was Covent Garden Theatre that I chose; and there, from the back of a centre box, I saw Julius Caesar and the New Pantomine. To have all those noble Romans alive before me, and walking in and out for my entertainment, instead of being the stern taskmasters they had been at school, was a most novel and delightful effect. But the mingled reality and mystery of the whole show, the influence upon me of the poetry, the lights, the music, the company, the smooth stupendous changes of glittering and brilliant scenery, were so dazzling, and opened up such illimitable regions of delight, that when I came out into the rainy street, at twelve o'clock at night, I felt as if I had come from the clouds where I had been leading a romantic life for ages, to a bawling, splashing link-lighted, umbrella struggling, hackney coach jostling, patten clicking, muddy, miserable world.

I had emerged by another door, and stood in the street for a little while, as if I really were a stranger upon earth; but the unceremonious pushing and hustling that I received, soon recalled me to myself, and put me in the road back to the hotel; whither I went, revolving the glorious vision all the way; and where after some porter and oysters, I sat revolving it still, at past one o'clock, with my eyes on the coffee-room fire.

(To be continued)

For Home and Country.

THE POSSIBILITIES OF A WOMAN'S CLUB.

In the love of home, the love of country has its rise. The socialization of the rural community is the dominant question in the minds of thinking men and women in Canada from coast to coast. In a recent study of "life in the country and small towns," one of the striking conditions brought out was the lack of organized social life. The complaint came, not from casual visitors to the country, but was the direct testimony of men and women living on the farm or in the town.

The value of co-operation has not yet been realized as thoroughly in our social life as in the business world. In the social field, particularly in the country and small communities, co-operation is indispensable. In the face of existing obstacles in rural districts, the individual can achieve but little. The need of mutual help is greatest, perhaps, among the women of the community. The temptation to form the "stay at home attitude" is great, especially to women who have the care of large families and live in isolated homes. They are apt to lose the desire to mingle with whatever life they may be in the community, and fall slaves to a deading routine from which it becomes more and more difficult to break away. Here lies the secret of so many cases of insanity on prairie farms. To create a bond of friendly intercourse between such women and a common meeting ground, where they may come together and spend an afternoon with pleasure and profit, is surely worth while. There they may read the same books and find expression to their tongues. This is the true mission of the properly organized Women's Club, and its effect has proven to be the rousing of latent ability, the reviving of a literary appetite and the broadening of the mind along various avenues.

FORMING A CLUB.

The best method of starting a club is to gather a few friends together, who may be interested, and talk the matter over informally. It is best to decide in a general way what the work of the club shall be who are to be invited to become charter members the frequency and hour of meetings, and any other business which may effect the particular environment. Try and confine the membership to a congenial group during the first season. The work of the season will naturally run along broad educational lines and it is necessary at the beginning to work as a unit in order that the women behind the movement may gain their bearings. Many clubs have been wrecked at the very start by including a variety of elements which would not mix in any other line of life and certainly could not be expected to do otherwise on a social basis such as is necessary in the matter at hand.

The next step is to send out a definite call for the first meeting. In a small informal club, officers may be elected at the first meeting and the constitution and by-laws, if any, be adopted. President, Secretary and Treasurer will be found sufficient. As the activities increase, other officers may be selected. It is a mistake to overload the club with officers. Another mistake often made is to overload the program with a multiplicity of subject to be studied. The more simple the list of officers and the possibility of overtaking the programme for the year, the more likely that the club will flourish and survive. A small programme committee is of the greatest assistance to any club. It is the duty of such a committee to discover the resources of the membership, to find out those who can sing, or write or read and make opportunities to meet these various talents.

In deciding what the club will study it is well to select a subject within the grasp of all. Select such a course that material for papers and discussion may be easily obtained and the preparation not beyond the time of the busy mother.

"NEEDLE AND BOOK" CLUB.

One very simple club was formed by a group of women who pacified their troubled conscience for giving themselves "an afternoon off" each week, by taking their sewing with them. Ideas for Christmas gifts were exchanged. They organized a "Needle and Book" Club in which the members took turns in reading aloud from a chosen book. Last winter they made themselves familiar with some of our own writers, such as Gilbert Parker, Norman Duncan, Marion Keith and Ralph Connor. At the conclusion of the season one of the members confessed that she had had no idea that there was such a wealth of Canadians of real merit and accomplishment.

CHILD STUDY.

A vital problem of today is Child Study. No more needful study for a Woman's Club. The relation of the home and the school and the community is a real problem in our modern life. Child study is one of the subjects on which it would be interesting to have the club invite an outside speaker. Where there is no outside speaker available the following subjects may be suggestive for papers to be written by various members: "The Care of Children in Health," "The Rights of Children"; "The Benefit of the Public Library to the Children"; "What Books do Our Children Read." Miss Lillian Smith chief of the story telling staff of the Toronto Public Library, was asked recently which books she thought of the most value for children. She named among others, Marshall's charming story of Canada and "Our Empire Story" by the same author; Guerbers stories of Greece and Rome, the "Red Story Book" and the 'Blue Story Book", both by Lang; "Old English Stories" by Eva Tappin; "Story Telling" by Edna Lyman, as well as the other book by the same author, "What to Tell and How to Tell it." This last book includes some beautiful Japanese and Spring stories.

Then there are the problems connected with Child Study. In a small community of about sixteen families, with an attendance at the school of about twenty-seven, the women organized and with some assistance from the men, improved the school surroundings. They had old stumps and scraggy trees removed and fresh young trees planted. They had new windows placed in the building, and new steps were built to replace the worn and unstable ones. A flag-pole was erected and a new flag purchased The desks were thoroughly cleaned and the floors stained. Provision was made for the wraps of the children of a better character than the old

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pegs. An organ was bought and the families contributed to a library. A few pictures were secured—pictures which bespoke of nation building and which would appeal to the heroic imagination of the child. During the winter entertainments were given in the school. In short the school became a social centre around and about which the parents and children rallied to their mutual benefit.

LIBRARIES ORGANIZED

In a number of instances Women's Clubs have been the means of organizing local libraries. The members of the club, by means of entertainments. Small reference libraries were first bought for the use of the members. Gradually other books were secured and great care taken to select books of known worth and broadening qualities, in the best sense of the term. The members of the club take turn in acting as librarian, and so become intimately acquainted with the books and their message.

TRAVEL TALKS.

In many newly settled sections of the great North West, a large percentage of the settlers are recent arrivals from various foreign countries. A series of Travel Talks is a most facinating method of education. It is probable that many sections of Canada will have representatives in the average Women's Club. If each member will tell the story of the country, district or country of her childhood there will be an immense amount of local history released and a fund of story and history which which will prove of a highly educational nature. Along the same line there are possibilities pf papers of a strictly historical value. It would be of great interest to study the countries which have representatives in the community. For instance there are no doubt many Italians. From Italy we have a host of the world's greatest artists such as Raphael, Michael Angelo, Gailileo, Dante, Garibaldi and the Cabots. These would furnish material for many months of study. England, Germany, France not to speak of Ireland and bonnie Scotland there is unlimited wealth of song and story.

VALUE OF PICTURES.

In studying any country or reading any book, pictures are of inestimable value. Literary clubs may find pictures illustrating the scenes in which the stories are laid, and patriotic clubs may secure copies of historic pictures and places. It is a good idea too in clubs of this nature to circulate the pictures among the members. If they are mounted on cardboard they are easily handled and the pictures become familiar and the incidents fastened on the mind.

Pictures may be procured from G. B. Brown and Co., 38 Lovett Street, Beverley, Mass., at one cent each or one hundred and twenty for one dollar. The Perry pictures are sold by the Perry Picture Company, Malden, Mass. Reproductions from famous pictures and Indian portraits are sold by A. W. Mumford and Co., 378 Michigan Avenue, Chicago, Ill. Some Travel Clubs use picture postal cards with splendid results. After a vacation almost any member will have a collection of cards from which a splendid talk may be given.

HISTORICAL CLUBS.

A woman's historical club, as organized in many communities, has proven of lasting value to the entire district. Here the field is varied. In older portions of the country around such districts as Quebec, Ottawa, Kingston, Fort Garry, the Niagara peninsula, there are stories stored away in old attics in papers and old prints, which would astonish the modern historian and throw light on many an incident in the early history of our country. Around Brantford there cluster stories of the Indians. Relics are even yet turned up by the plow. At Niagara, the women formed a historical club some years ago and today the exhibition is of national interest and importance. The battlefields have been studied and points of interest marked by lasting but inexpensive monuments. Miss Winterbottom, as the organizer of this club, has contributed a wealth of information to the early history of her birth place.

Public meetings are part of the programme of the progressive Historical Club. The historical periods are marked by the singing of the old songs and reading of poems written during the period or relating to it. Any Canadian who has had the pleasure of listening to Katherine Hale give her talk on "Music in Canadian Literature" will realize what a full storehouse from which we draw.

In almost every community there are a few men and women, who have shared in the history making period, and could tell of the clearing of the forest and the period of settlement. The event of the first train, is also a point of interest in the lives of these older people. If possible invite them to the meeting and make them the guest to be honored. First hand information will be of the greatest interest and helpfulness as well as entertaining to a degree.

Special open meetings should be held on the National holidays, to which the whole community should be invited. The younger people will readily enter the spirit of the day by giving historical tableaux. An illustrated talk on the flag is alway popular and nothing tends to make the interest real than the reverting to the blending af the three mighty crosses to make the Union Jack.

REFRESHMENTS.

Many clubs serve refreshments at the close of their sessions and when the members come from a distance and have a long drive home, this plan is excellent. Even neighbors find the cup of tea a splendid way to stimulate friendship. The mind has been stimulated by the papers and discussion of the meeting and the tea-cup talk is vastly different from what is usually associated with afternoon tea

In conclusion let me quote from an article which appeared in Colliers by Dore Lyon:—"The Woman's Club is hardly understood by the mass of men and women who stand on the outside and condemn, but make no special effort towards their own enlightenment on the subject. It is simply having one's pleasure, duty, philanthropic work—as the case may be—organized."

In their club life, women exchange ideas on the important topics of the day. They give to each other the result of their study of subjects of general information. They exercise long forgotten lines of imaginative composition, by writing papers and essays. They cultivate feelings of cordiality and good fellowship towards their own sex. They bring into their lives uplifting influences.

Women likewise receive a training in their club life which is invaluable to their homes. They learn the art of self control and a dignified consideration of important questions. A woman with a well poised and rounded mind, certainly makes a better house keeper and home-maker.—Marion Dallas, Greenville Jct., Maine.

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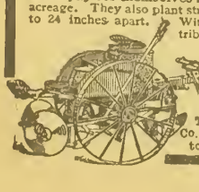

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Home Nursing.

Perhaps a few hints about home nursing might interest your readers. It is unfortunately scarcely possible to keep all members of the family well, even in healthy country districts, therefore, the following notes may be of use. In the first place, it is easier to keep well than to get well, and by cultivating good and regular habits we may keep the machinery of the body in order and the daily functions performed. Early to bed and early to rise—adults require from six to eight hours sleep, according to age and strenuous labour, children much longer. Have your food regularly, take sufficient wholesome diet, and do not eat between meals. Alcohol should be avoided, unless ordered by the doctor. Tea and coffee should be taken moderately, and never with meat. It is wise for people with weak digestions to avoid drinking anything with their food, but sufficient liquid should be taken between meals. Young children should never have tea. Teeth are of great importance, as thorough mastication is impossible if these are decayed. It is penny wise and pound foolish to postpone a visit to the dentist. By having the first sign of decay attended to the whole set of teeth will be spared. False teeth are never so comfortable and useful as those provided by nature. The teeth should be brushed twice daily—morning and before going to bed. Remove false teeth at night. Avoid eating too many sweets, and never crack nuts with the teeth, as the enamel covering of the tooth will also crack and chip off, thus causing an open germ trap.

The skin and hair require attention. Clothing should be light and warm, a woollen garment worn next the body. The bowels should act once a day; keeping to a regular hour is a wise plan, preferably after breakfast. Have your rooms thoroughly aired, and always sleep with the bedroom windows open.

Always change wet stockings and boots, or any other wet garment. Never keep on damp clothes and think you can dry them by sitting or standing before the fire. It is a most dangerous practice, and nine times out of ten the foundation of severe chest troubles. It matters little how wet one gets when walking briskly, provided that one changes before sitting still. If the above rules are attended to I can safely say you will have a better chance of keeping well and battling with our varied climate.

In caring for the sick, the first thing to think of is the time the illness will last, and to choose a suitable room if there are a few rooms at one's disposal. It should be large, well ventilated, have a good fireplace with faultless chimney, on south side of the house if possible, and well away from noisy kitchen or children's quarters. Provided the drains are in perfect order a lavatory close by is a great gain. The floor should be covered with some washable material, and mats take the place of carpet, because these can be easily taken away for shaking. Just the necessary amount of furniture to use and to look comfortable, cheery pictures, and not too many (if the illness is a long one an occasional change of pictures would be appreciated by the invalid), also a change of cushion and chair covers. All this helps to break the monotony which is bound to be felt when living night and day in the same room. A single bedstead and hair mattress is the most comfortable, healthy, and the easiest for nursing purposes; it should be free both sides and in a position so that the invalid does not face the fight; also free from draughts. The bed clothes should be light and warm. For an ordinary illness flannels are not wholly needed there should be an under blanket and sheet and on the top of this should be placed mackintosh sheet; these stretch from shoulders to knees. A

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drawsheet can be made from an ordinary sheet folded lengthwise, tucked firmly in either side. This length allows the patient to have a cool place to lie upon and can easily be pulled through to get rid of crumbs and creases. A sheet large enough to turn well over the blankets at the top, two blankets, a thin bedspread, and an eider down, if the weather is cold, is sufficient covering for the top. Pillows according to requirements.—Nurse.

Pancakes.

To make extra good pancakes allow four eggs to every ½ lb. of flour used, and the flour should be of the finest quality. For plain pancakes, allow four eggs to every 1 lb. of flour, and very economical pancakes may be made without eggs. Pancakes cannot be made too thin, nor can they be cooked too quickly. If the fire be good—but not fierce— and clear, and the pan be kept quite hot, and only enough batter put in to cover the bottam, less than a minute will cook each pancake, and in this way a great pile may be cooked in a short time. It is better that one person should cook the batter while another rolls up the pancakes. Sugar should not be mixed with batter for pancakes, as it makes them heavy.

Plain Pancakes.—Put 1 lb. of flour in a basin, add gradually a full pint of milk, stirring all the time till the batter is smooth and free from lumps; ther give the batter a good beat up with an egg-whisk or a wooden spoon. Next beat up two eggs and add them to the batter, along with a saltspoonful of salt. Have a small frying or omelet pan scrupulously clean, and have a breakfast-cupful of butter (without salt, less the pancakes stick to the pan) or lard melted, and keep it hot by the side of the fire. Put the pan on the fire, and put a dessert spoonful of the melted fat into it, and put in enough batter to cover the bottom. In a moment the batter willset, slip a knife round the edges and turn the pancake over to cook the other side. Then turn it on to a clean, hot baking-tin, or a piece of paper may be used; dredge with sugar, roll up, and put on a hot dish at the front of the oven. When all are done, dredge the tops with sugar, and pile the rolls up neatly on a folded napkin, and serve with lemon. Pancakes must be served very hot.

Economical Pancakes.—Mix up flour salt, and milk as above, then beat in a dessertspoonful of egg-powder and a reaspoonful of baking-powder. Melt a cupful of lard, put some in pan, pour in batter, cook as in last recipe, dredge with pounded sugar, and serve with quarters of lemon.

Apple Sandwich.

Mix a half cupful of sugar and half a saltspoonful of cinnamon or the grated rind of half a lemon, taking care that none of the bitter white rind gets in; melt half a cupful of butter and stir into it one pint of soft breadcrumbs; prepare three pints of sliced apples; butter a pudding-dish; put in a laver of crumbs, then sliced apples sprinkled with sugar. Repeat lavers of crumbs, apples, and sugar until your material is used. If the apples are not juicy add half a cupful of cold water, and, if not tart enough, add the juice of half a lemon. Cover with a thick laver of crumbs, and, to prevent burning, protect with a tin for a few minutes until it begins to bake. An hour's baking will suffice. Serve with cream.

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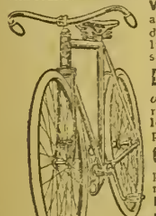

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Fleming's Tonic
Heave Remedy

will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil quickly cure them. Per. Box $1.00

Fuller Information in
FLEMING'S VEST POCKET VETERINARY ADVISER

Write us for a Free Copy
FLEMING BROS., Chemists
41 Church St. - Toronto

In Convalescence

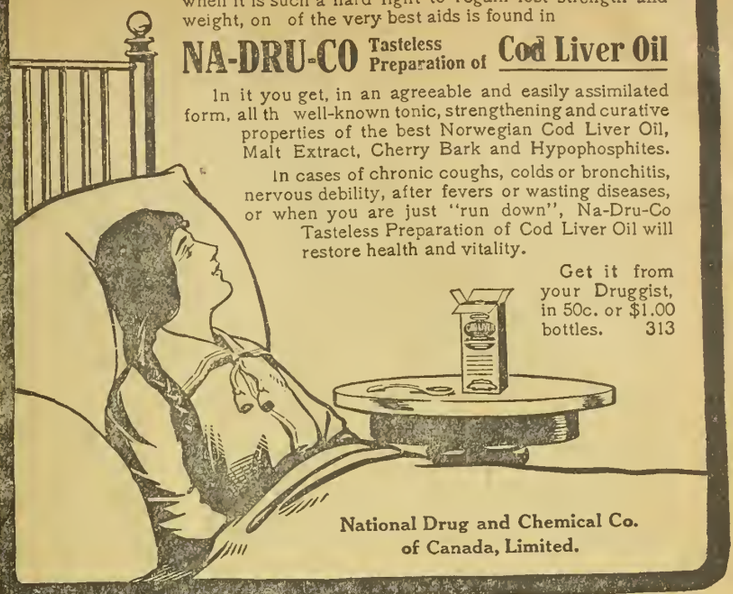
when it is such a hard fight to regain lost strength and weight, on of the very best aids is found in

NA-DRU-CO Tasteless Preparation of Cod Liver Oil

In it you get, in an agreeable and easily assimilated form, all th well-known tonic, strengthening and curative properties of the best Norwegian Cod Liver Oil, Malt Extract, Cherry Bark and Hypophosphites.

In cases of chronic coughs, colds or bronchitis, nervous debility, after fevers or wasting diseases, or when you are just "run down", Na-Dru-Co Tasteless Preparation of Cod Liver Oil will restore health and vitality.

Get it from your Druggist, in 50c. or $1.00 bottles. 313



National Drug and Chemical Co. of Canada, Limited.

SPECIAL ADVICE FOR MEN
Strength Restored By New Method

The little book described below (which I gladly send free, sealed, by mail, to any young or elderly man anywhere) contains in its 85 beautifully illustrated pages everything a man need know with regard to certain strictly personal subjects, and as a guide through his entire life, from the delicate period of youth, when wholesome advice is most needed, on through early manhood to a ripe, vigorous, healthy old age. Over a million of these books have been thus distributed by me all over the world. Therefore, please use coupon below and get YOUR free copy by return mail. SANDEN CO., DISTRIBUTORS.

Do you know, my friend, that there is a wonderful new way to apply a certain, great, natural FORCE to your body, and by which you may, without effort, trouble or inconvenience, treat your own self in the privacy of your home for debility and lost vitality, without using a single drug or medicine? This great FORCE, as a restorer of vitality and as a means to overcome those weaknesses which result from indiscretion and unnatural practices, is to-day being used all over the civilized world, and I give it as my honest opinion, based upon a vast observation and study, that any man anywhere, who leads a decent, manly life and who applies this marvellous FORCE in a scientific and rational way, can, without employing a single drug, be restored again to a state of perfect, rugged health and vigor, without a remaining ache, pain or weakness.

MANLY MEN ARE THE WORLD'S POWER TO-DAY

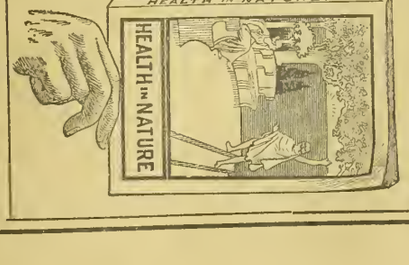
As we all know, these debiliating weaknesses handicap a man in every condition of life, while, on the other hand, a perfect speimen of vigorous, robust, lusty manhood is ever admired by both women and men alike, while, of course, it is certainly only such a man who can attain the really great success of life. Therefore, I say to you, no matter what your size, whether you are small or large, no matter what your occupation, no matter whether you are a college graduate or workng on the farm or in the factory, no matter whether you are young or elderly, it is all a question of your vigor and your vitality, and if I can give you a good, abundant supply of this same great power of VITAL FORCE, then it is easy to believe that I can completely restore your vigorous health, can overcome the evil of past indiscretions so you will be exactly the same in your influence over people, exactly the same in your manly bearing as other manly, strong-nerved, warm-blooded fellows of your acquaintance.

With an idea of attaining this all for you, I recommend you to investigate a simple little VITALIZING APPLIANCE of my invention, which I am now sending out in great numbers for use by men everywhere who need new manly strength. This little VITALIZER is very light, weighing only several ounces, and can be worn without any one suspecting that you are wearing it. You buckle it on your body upon going to bed and take it off mornings. Thus while you sleep it sends its wonderful power which I call VITALITY or VITAL FORCE, into your blood, nerves and organs. Users say it takes pain and weakness out of the back from one application, and further say 60 to 90 days' time is sufficient to restore a state of health, strength and vigor. I am not offering this VITALIZER here for sale, but want you first to send for my book, that you may learn all about the whole wonderful subject, and why I get such quantities of testimonials from users everywhere telling of results after drugs completely and utterly fail.

NOTE— With special attachments VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health. Please write for book to-day, or, if near by, I should like you to call. Hours—9 to 6.

Use Coupon; Get Free Book

Remember, the little illustrated book which I send free, sealed, by mail, as per coupon below not only fully describes my VITALIZER, telling of a special offer by which you may get one on special terms for use in your own case, but contains a great fund of private advice for men, some good, wholesome cautions, and a lot of general information that might be of value to you to the end of your days. Therefore, please write or call.



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ADDRESS .....

Don't be surprised if you have an attack of rheumatism this spring. Just rub the affected parts freely with Chamberlain's Liniment and it will soon disappear. Sold by all dealers.

Prize Winners at the Maritime Horse Show

(Continued from page 453.)

Jan 1, 1911—1, Chas. Symes, Minudie; 2, R. B. Latta, River Herbert.

Percheron Mare, foaled on or after Jan. 1, 1913—1, R. B. Latta.

Diploma Best Percheron Stallion, any age—Chas. Symes.

Diploma, Best Percheron Mare, any age.—Chas. Symes.

Roadster Stallions in harness foaled previous to January, 1911—1, Hammond Kelly; 2, H. W. Ryan; 3, Frank C. Redding, North Sydney; 4 Dr. M. F. Ronan, Antigonish.

Roadster Mare or Gelding in harness, foaled previous to Jan. 1, 1911, 15½ hands or over—A. Chas. Thompson, North Sydney; 2, J. C. Purdy; 3, W. A. Humphrey, Moncton; 4, G. A. Doncaster, Amherst; 5, J. J. Shipley, Amherst.

Roadster Mare or Gelding in harness, foaled previous to January, 1911, under 15-2 hands—1, Spurgeon Gammon, New Glasgow; 2, Edward Lowther, Amherst; 3 and 4, J. C. Purdy; 5, B. L. Beck, Amherst.

Roadster Mare or Gelding in harness, foaled during the year, 1911 —1, Jas. A. Reid, Fredericton; 2, Wm. Prescott, Baie Verte; 3, W. W. Purdy Wentworth Station; 4, Harold Coates Amherst.

Roadster Filley or Gelding, shown to halter, foaled during the year 1912 —1, A. W. Wortman, Salisbury; 2, G. W. McAnn, Petitcodiac; 3, F. M. Blenkhorn, Maccan Sta; 4, Wylie H. Black, Amherst.

Roadster Colt or Filly shown to halter, foaled on or after Jan. 1st, 1913—1, J. C. Purdy, Amherst; 2, Mrs. Harry Prescott, Baie Verte; 3 A. E. Trites, Salisbury; 4, W. Ralston, Amherst; 5, Sutton Steeves, Boundary Creek.

Roadster, matched pair, foaled previous to Jan., 1911—1, Spurgeon Gammon, New Glasgow; 2, J. C. Purdy; 3, T. Edward Lowther, Amherst; 4, Blake Fisher, Amherst.

Silver Cup donated by Hotel St. Regis, Amherst, for the best Roadster or Gelding in harness—A. Chas. Thompson, North Sydney.

Carriage Stallion in harness, foaled previous to January 1, 1911—1, R. A. Snowball; 2, McFarlane Bros.

Carriage Mare or Gelding in harness foaled previous to Jan. 1, 1911, over 15½.—1, E. I. Peel, Amherst; 2, W. A. Humphrey; 3, A. P. Elderkin.

Carriage Mare and Gelding in harness foaled previous to Jan 1, 1911, 15-2 and under—1, Charles Thompson, North Sydney; 2, Geo. M. Holmes; 3, A. P. Elderkin.

Carriage Mare or Gelding in harness, foaled during the year, 1911—1, Mrs. J. R. Kennedy; 2, George M. Holmes.

Carriage Matched Pair, foaled previous to January 1, 1911—1, W. A. Humphrey; 2, A. P. Elderkin; 3, Geo. M. Holmes.

Saddle Horse, ridden by gentleman —1, H. W. D. Armstrong; 2, W. A. Humphrey; 3 and 4, A. P. Elderkin.

Saddle Horse, ridden by lady— 1, Geo. McAvity, St. John; 2, J. C. Purdy; 3 and 4, A. P. Elderkin.

Saddle Leaper, ridden by gentleman —1, A. P. Elderkin; 2, Richard Mc. Cully; 3, C. B. Embree.

Saddle Leaper, ridden by lady—1, J. C. Purdy; 2, A. P. Elderkin.

Carriage Mare or Gelding, 15-2 hands or over—1, H. W. D. Armstrong; 2 H. J. Larkin, Amherst; 3 E. I. Peel, Amherst; 4, J. C. Purdy, Amherst.

Carriage Mare or Gelding, under 15-2—1 and 2, Geo. McAvity; 3, A. P. Elderkin; 4, J. C. Purdy.

Carriage Matched Pair—1, George McAvity; 2, A. P. Elderkin; 3, W. A. Humphrey; 4, E. I. Peel.

Carriage Tandem—1, Geo. McAvity, St. John and 3, A. P. Elderkin, Amherst; 4, J. C. Purdy.

Carriage Horses, Four-in-hand—1 and 2, A. P. Elderkin; 3, J. C. Purdy

Silver Cup donated by Terrace Hotel, Champion Horse in harness — Geo. McAvity.

Donated by Lt. Col. H. Montgomery Campbell, Silver Cup for the championship combination carriage and saddle horse—H. W. D. Armstrong.

Heavy Draught, Pure Bred Mare or Gelding, shown in single harness, foaled previous to Jan. 1, 1911—1, and 3, Logan Bros.; 2, McFarlane Bros.; 4, R. A. Snowball.

Heavy Draught, Pure-Bred Mare or Gelding shown in single harness, foaled during year 1911—1, R. A. Snowball; 2, C. B. Embree, Amherst; 3, Logan Bros.; 4, H. S. Pipes & Son.

Heavy Draught, Pure-Bred Team in harness, mares or geldings foaled previous to January, 1911—1 and 3, Logan Bros.; 2, McFarlane Bros.

Heavy Draught, pure bred team in harness mares or geldings foaled during the year 1911—1, C. B. Embree....

Heavy Draught, Pure-Bred Special, Donated by Amherst Hotel, W. D. Hill, Manager, a pair Scotch Team Collars for the best four-in-hand.—1, Logan Beos.

Heavy Draught, Grade Mare or Gelding, shown in single harness, foaled previous to Jan. 1, 1910— 1 and 3, Fowler Bros.; 2, Robt. P. P. Fcaser & Son; 4, W. P. Keillor.

Heavy Draught, Grade Mare or Gelding shown in single harness, foaled during the year 1911—1, Geo. M. Holmes; 2, H. L. Donkin, Fenwick; 3, Chas. M. Shipley, Amherst.

Heavy Draught, Grade Filly or Gelding foaled during the year 1911—1, Geo. M. Holmes, 2, Sam'l. McClary; 3, Wilson Beatty.

Heavy Draught Grade Colt or Filly, foaled on or after, Jan. 1, '13. —1, W. O Bowser; 2, Edwin Forrest.

Heavy Draught, Grade Team, in harness, mares or geldings foaled previous to Jan. 1, 1911—1, Fowler Bros.; 2, Robt. P. P. Fraser & Son; 3, W. P. Keillor.

Heavy Draught Grade Special—Donated by Arthur Wallace, Pictou, Silver Cup, for best four-in-hand—1, Robt. P. P. Fraser & Son, N. Glasgow; 2, Fowler Bros.

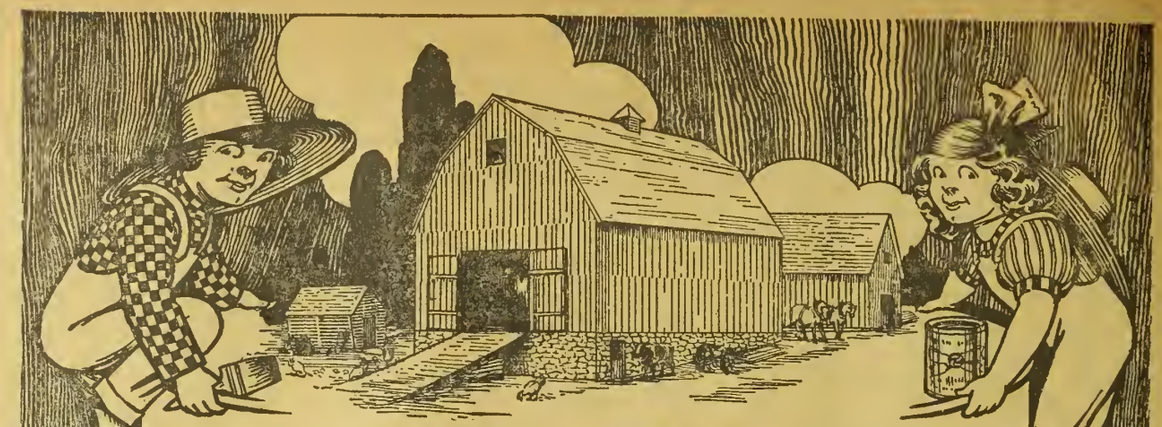
Agricultural Mare or Gelding shown in harness foaled previous to Jan. 1, 1900—1 and 2, R. P. P. Fraser; 3, T. W. Keillor, Amherst Point; 4, Frank Archibald, Truro.

Agricultural Mare or Gelding shown in harness foaled during the year 1910—1, Avery Smith; 2, A. S. Etter.

Agricultural Mare or Gelding shown in harness, foaled during the year, 1911—1, Geo. M. Holmes; 2, Frank Elliott; 3, H. L. Donkin,

Agricultural Filly or Gelding, foaled during the year 1912—1, Avery Smith, Fort Lawrence; 2, Edgar W. Atkinson, East Amherst; 3, Murray M. Thompson, Oxford.

Agricultural Colt or Filly, foaled on or after January 1, 1913—1, Norman A. Black, Amherst; 2, A. S. Etter, Amherst; 3, Chas. M. Shipley; 4, Demont Freeman, Amherst.



For Farm Service

ANYTHING around the farm that is worth building, is worth protecting. Well-painted barns and out-buildings add a real money value to the whole farm, by giving it a prosperous appearance, and making everything look "Spic and Span".

Good paint is protection against wear and weather—it is life insurance against sun, rain, frost and snow—the same as a fire insurance policy secures you against fire. Good paint is the only kind you can afford to use. Poor paint is money wasted—extravagance—the best paint is always the cheapest in the long run.

FOR THE HOUSE—it pays to use MARTIN-SENOUR "100% PURE" PAINT. It takes less and wears longer, and gives lasting beauty and satisfaction.

FOR THE BARN and out-buildings, use the Red that stays Red — MARTIN SENOUR "RED SCHOOL-HOUSE PAINT". (Trim with White and the results will be both cheerful and pleasing).

FOR WAGONS, *IMPLEMENTS AND TOOLS.*—The most satisfactory paint to use is "MARTIN-SENOUR WAGON PAINT". It makes things look like new, and lengthens the life of their usefulness.

Write for "Farmer's Color Set", showing the various paints for farm service—and the name of our nearest Dealer-agent. 35

MARTIN-SENOUR 100% PURE PAINT & VARNISHES

The Martin-Senour Co.
Limited
MONTREAL.

Agricultural, matched team in harness— 1, R. P. P. Fraser; 2, Frank Archibald; Geo. M. Holmes.

General Purpose Team in harness—Fowler Bros.; 2, Courtney Lusby, West Amherst; 3, S. M. Stiles, Amherst.

General Purpose Mare or Gelding in harness—1, Peel Bros, Oxford; 2, Fowler Bros.; 3, Fowler Bros.

Pony, in single harness, 12 hands and under—1 and 3, G. W. Casson, Truro; 2, Thos. Hooper, Truro.

Pair of Ponies, 12 hands and unher —G. W. Casson, Truro.

Pony in single harness, over 12 hands up to 13½ hands—1, Richard McCully, Amherst; 2 and 3, G. W. Casson, Truro.

Pair of Ponies in harness, over 12 hands and up to 13½ hands—1, G. W. Casson, Truro.

Ponies, matched pair, 12 hands or under driven by child under 10 years —1, G. W. Casson.

Pony, 11 hands or under, driven by child under 10—1, Marjorie Lusby.

Hauling Competition, double, —1, C. W. Pugsley; 2, Fred S. Black; 3, W. F. Beatty.

Hauling competition, single—1, Jas Goold; 2. Fred S. Black; 3, C. W. Pugsley.

Halifax Market Prices.

Since our last writing there has been a number of changes in the market quotations at Halifax. The most noticeable feature has been the rapid decline in eggs to 22c. per dozen, this is a urop of eight cents during the past two weeks. Receipts of butter continue to be heavy, but the demand for creamery prints has been very good and the quotation of 30c has held, dairy prints, however have had a drop of four cents to 24c per lb. Cheese is very scarce and any offerings on the market are quoted at 17c for wholes and 17½c for twins.

Potatoes are firm and are up to $1.10 again per ninety lb. bag. Apples are unchanged and prices are holding well at present quotations. Imported strawberries are now on the market and are bringing 40c a box.

Oats have had an advance recently and are not quoted, 49c to 51c bulk per bush.

...GRAIN—Oats, bulk, 49c to 51c; Peas $7.00. ...

FEEDSTUFFS—Bran, $26 to $27; Shorts, $27 to $28.; Middlings, $28 to $29.00; Linseed Meal, 40.00 to 42.00; Cottonseed Meal, 37.00 to 39.00; Gluten Meal, 32.00 to 34.00; Corn Meal, 1.65 to 1.70.

GRASS SEEDS.—Timothy, 8c to 11c; Com. Red Clover, 19c to 24c; Mam. Red Clover, 20c to 21c; Alsike 17c to 20c.

DRESSED MEATS—Beef (carcass), 7c to 12½c; Hogs, 9c to 12c; Mutton, 8c to 9½c; Veal, 8c to 10c.

HORSES—Drafters, 250.00 to 300.; Roadsters, 200.00 to 250.00; Carriage 175.00 to 200.00

DAIRY PRODUCE—Creamery Butter, 30c; Dairy Butter, 24c; Cheese, 17½c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 30c; Fowl, 15c to 18c Chickens, none offering; Ducks, 18c to 20c; Geese, 17c to 20c; Turkeys, 22c to 23c.

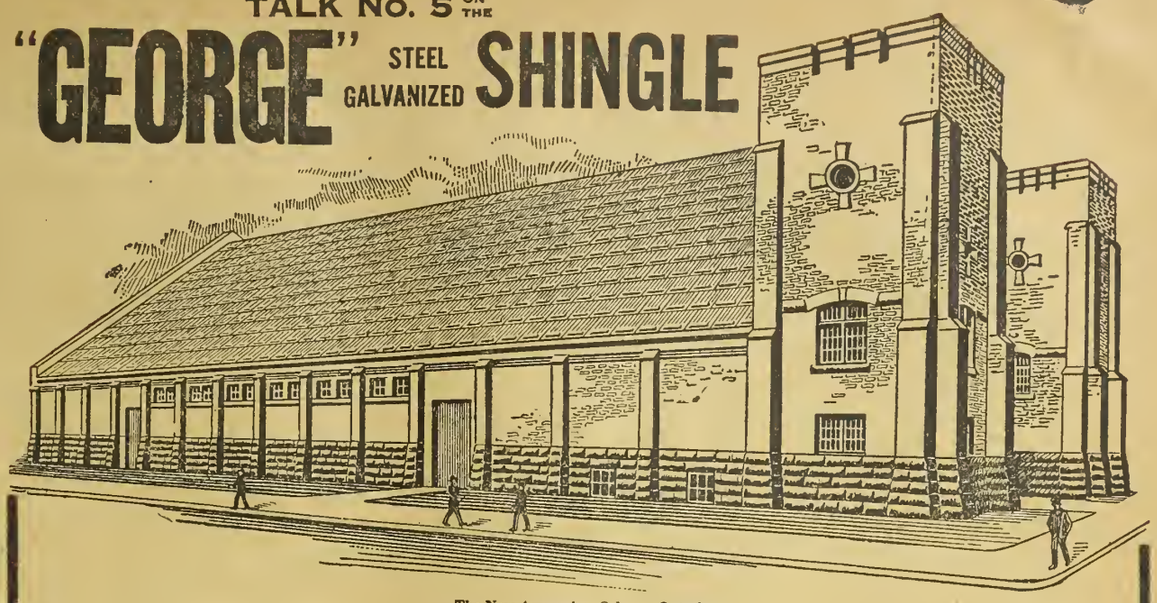
FRUIT.—Apples, 2.50 to 5.00; No. 1 Baldwin, 5.00; No. 2 Baldwins, 4.00 No. 3 Baldwins, 2.50; No. 1 Spy, 5.00 No. 2. Spy, 4.25; No. 3 Spy 2. 0; No. 1 Golden Russet, 5.00. Strawberries, 40c box.

MISCELLANEOUS — Hay 16.00 to 17.00; Wool, 25c to 27c lb.; Beef Hides, 12c to 13: Calf Skins, 18c to 20c lb.: Sheep Skins, 75c to 1.50.

VEGETABLES—Carrots, 2.50 bbl.; Potatoes, half bag, 1.10: Turnips, bag 1.25; Onions, bag 3.00; Parsnips, bbl. 2.00; Cabbage, 2½c lb.

TALK No. 5 ON THE

"GEORGE" STEEL GALVANIZED SHINGLE



The New Armouries, Oshawa, Ontario.

ON the question of cost, our METAL SHINGLES have many points in their favor. A "Pedlarized" Roof is cheaper than any other, because the first cost is the last cost.

You save time and labor by using either the big "GEORGE" Shingle (24 in. x 24 in.) on your barns, or the "OSHAWA" Shingle (16 in. x 20 in.), of identical design and quality, on your houses, sheds and smaller buildings—a wooden roof takes three days to lay, while a "Pedlarized" roof, of same size is laid in one day. No high-priced labor is required.

The long shingle (24 in.) means a great decrease in the amount of sheathing required—another Big Saving.

Laid with hammer, nails and snips only. Effect a saving of one-third in nails.

Pedlar's Metal Shingles outlast the building and the builder.

PEDLAR'S METAL SHINGLES PROTECT YOU FROM

FIRE, WIND, WATER AND LIGHTNING

The All-perfect Metal Shingle. No greater cost, but greater service and satisfaction. : : : :

Get our prices on Siding, Corrugated Iron, Vents, Eaves Trough, Conductor Pipe, Finials and Ornaments. Every article is standard throughout Canada.

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PEDLAR'S PERFECT PRODUCTS FROM THE PEDLAR PEOPLE LIMITED OSHAWA, CANADA MONTREAL-TORONTO-WINNIPEG

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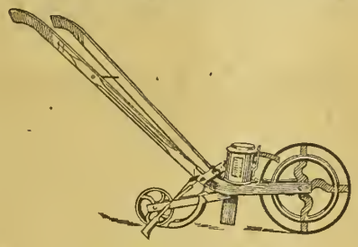
Garden Seeders and Wood Cutters



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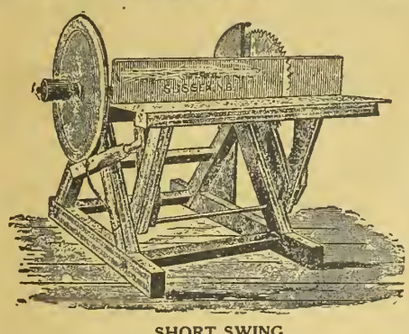
GARDEN SEEDER

Does the work of two men in half the time. Makes the drill, sows, covers and rolls the seed while you walk.

No better seeder can be built for the fast and accurate sowing of turnips, cabbage, carrots, beets, corn and all other garden seeds.

Price $7.50 Delivered at Your Station.

ORDER NOW



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"The best made" is the users verdict.

Made in four different sizes: Long Swing, Long Swing Improved (with extra long table and roller) the Flat Roller Table and Short Swing.

The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1⅝" diam.

Both bearings supplied with compression grease cups and for convenience in handling we are putting skids under our machines this season.

Send for our Wood Cutter catalogue.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

Order Your Horse Posters From the Maritime Farmer

Couldn't Do Housework

HEART WAS SO BAD.

Mrs. Thomas Melville, Saltcoats, Sask., writes:—"I thought it my duty to write and tell you how much your Milburn's Heart and Nerve Pills did for me. My heart was so bad I could not sleep, eat, nor walk about the house. I could not do my housework at all, what my husband could not do had to go undone. I had two small children depending on me besides three men to cook for, and it worried me to not be able to do anything. My husband had taken some of your pills, some years ago, and insisted on me trying them, so I started, and before I had taken them two weeks I was considerably better, and before I had taken two boxes I was doing my own work again. Anyone suffering from heart or nerve trouble of any kind should just give your pills a trial. If anyone cares to write to me I will gladly give them all the information I know concerning your wonderful medicine."

Milburn's Heart and Nerve Pills are 50c. per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use

Fleming's Spavin and Ringbone Paste

Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 45-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of

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Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.

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You will look a good while before you find a better medicine for coughs and colds than Chamberlain's Cough Remedy. It not only gives relief—it cures. Try it when you have a cough or cold, and you are certain to be pleased with the prompt cure which it will effect. For sale by all dealers.

Stable Sanitation.

(Continued from page 459)

dust, and the dust flying about will infection to the milk. Some of the carry a great deal of very dangerous most persistent germs known to bacteriologists are found on hay. Do not feed hay or any dusty feed of any kind during or just before milking if you can possibly avoid it.

I would like also to speak about some stables that I saw in Scotland. I visited the great cheesemaking districts of Galloway and Ayrshire to find out if I could, how it was that those Scotch cheesemakers could make cheese—the same kind as we have here, because it was Canadian instructors that taught them their present methods of making— that will sell for 1½ and even 2c a pound more than Canadian. I do not mean to say all of it brings such a premium, but some of it does. In visiting this district during the first week of August, going about among the dairies, where the cheese is made — because it is all made on farms where they keep as many as 150 cows— the first thing that impressed me in examining the cheese was to find some of the April cheese, and all the May and June cheese on the shelves. Now although the season had been a hot one, I did not find any cheese that were off flavor or showing any undesirable flavors whatever. The cheese were all perfectly clean in flavor. The cheesemakers here will understand what that means. It would be absolutely impossible for us to make cheese from the milk which we get in factories here in Canada, that would keep sound on the shelves for that length of time, especially if made duting the early part of the season. I had not far to go to discover the reason for this satisfactory showing, because going into the stables I found everything perfectly clean. I remember one in particular; one I visited about 10 o'clock in the morning. That stable had a good cement floor and the stalls were all of solid cement and the walls of brick and plastered smoothly. There was no lodging place for dust or dirt, and the place was well whitewashed. It is whitewashed about twice a year. The stable was just as clean as it was possible to have it. One hundred cows had been milked there that morning and there was not the slightest sign of excrement of any kind. After the rough part of it had been removed, they had scrubbed the whole place out with water, and they did that every day. The man in charge was hauling water some distance for the purpose of scrubbing that stable every morning after the cows were turned out. He did it not because he was paid by someone else to do so. This man rented the cows and paid what they call a cheese rent. He guaranteed to deliver so many pounds of cheese for each cow. It was his business to take care of the cows, to milk them and to make the cheese, and after he had delivered the stated quantity, the balance was his remuneration. Of course it paid him to make good cheese. He understood his business and he found that it paid him to go to this extra trouble to keep the stables in perfect condition so as to have clean flavored milk that would enable him to make the cheese that bring the highest price.

I am sorry to say that a great mistake was made in Canada and in the United States some years ago in advocating the aeration of milk. I believe I can accept some of that blame myself, along with others, as being one of the advocates of aeration. And when we look back on it, there never was any good reason for the practice I believe this to-day as firmly as I believe anything, that more milk is injured by what is called acration

You can get Bigger Yields of Better Quality

From your farm if you will let us help you when purchasing your fertilizers for spring crops.

Agricultural Authorities and Experimental Stations in this great Dominion of ours prove that all crops remove from the soil more POTASH than Phosphoric Acid; therefore, you must use a fertilizer containing more POTASH than Phosphoric Acid.

Having **Acid Phosphate, Nitrate of Soda and POTASH** in stock, can quote you these materials at reasonable figures, and will show you

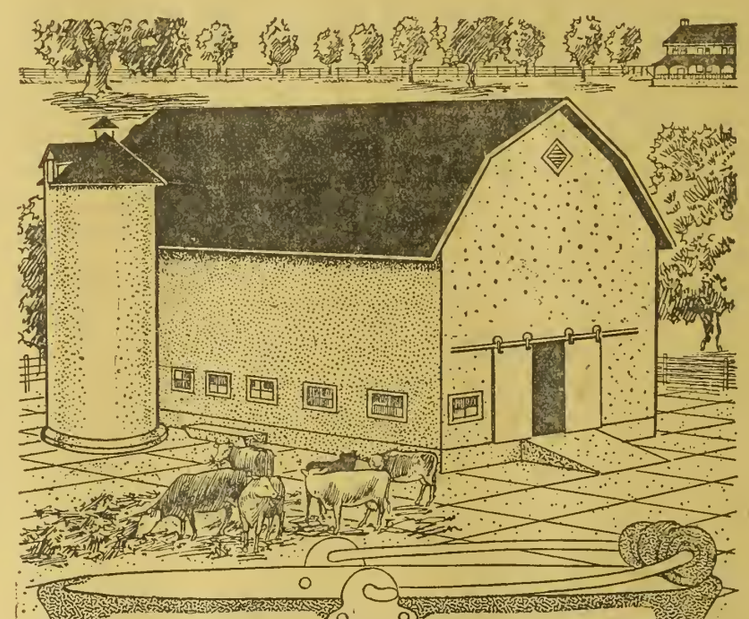
How to Mix Your Goods at Home

and save money by buying raw material and doing your own mixing.

You then know what you are feeding your crops and can be almost sure of bigger yields of better quality.

When next in town drop in and talk it over.

A. R. WETMORE, - - CLIFTON, N. B



Build Concrete Barns and Barnyards

YOU will find that they are best at first and cheapest in the end.

Concrete buildings cannot burn and many dollars are saved in lower insurance rates. They need practically no repairs and never need painting.

Concrete barnyards make the best kind of a feeding-floor and save many dollars in feed bills, as your stock gets every particle that you feed to them.

Send for this free book "What the Farmer Can do With Concrete." It shows just how to build your own concrete barn, feeding-floor or any other building that you may need.

Farmer's Information Bureau
Canada Cement Company Limited
715 Herald Building, Montreal

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

than is benefitted by it. In fact I am not able to learn that there is any direct benefit from the so-called aeration of milk.

We are all pretty familiar with the purifying effect of a liberal use of lime on the interiors of stables, of dairy buildings and such places. I found in Denmark that this sort of thing is practised to a much greater extent than we have ever thought of doing in this country. It may be news to many buttermakers to know that a great many of the cream vats used in some of the best Danish creameries to-day are simply large wooden tubs. You can understand that unless they took extra precautions these tubs would not be in good condition. I was not able to see that any injury resulted to the cream from the use of these wooden vessels for ripening vats. The secret is that they are kept perfectly clean and sweet by a liberal use of lime. Every utensil is immersed in a strong solution of lime every few days, and some of them every day. All the wooden machinery, such as churns, butter workers, etc., are coated with a thick lime wash almost every day. This coating is left on for a short time and before it quite hardens it is washed off. It is surprising how that helps to sweeten the wood and causes it to dry much more readily. The same thing applied to the floors. If they get a little greasy a liberal use of whitewash cleans them very easily and very perfectly. There is nothing that would be of more use to the cheese and buttermakers who desire to have a clean wholesome factory than a liberal use of lime water. It saves a great deal of labor, is cheap, and is a good disinfectant as well. I would recommend the use of lime in that way, not only to the farmers for the purifying of their stables, etc., but also the butter and cheesemakers who wish to keep their factories clean and their utensils in proper condition.—J. A. Ruddick, Dairy Commissioner.

Breeding Principles.

The outlines laid down by Prof. Trueman of the N. S. A. C., in a lecture before the Sussex and Studholm Agricultural Society on the 28th inst were as follows:—

You may select ten of the finest cows of about even capacity of any breed of dairy cattle and a bull of the same breed of the richest breeding that can be had, breed this sire to those cows for a series of years till his heifers come in milk and you will find a surprising difference in milking capacity of those heifers.

There seems to be a natural gravity attending all breeding operations whereby a certain percentage of the offspring revert in quality to ancient progenitors. To keep a herd of cows up to a high standard, if you do not buy females, requires a severe clarifying process; in other words, a constant weeding out. Then, again, it should be remembered that the rejected heifers contain just as good lines of blood as any. If bred in turn to a sire of strong and desirable prepotency they will be very apt to produce a large percentage of heifers that will prove very desirable. By this we can see how important it is to keep constantly in view the great ruling fact, that the sire is the chief consideration in the production of cows of high merit.

In selecting that sire the question is not so much that of family lines as it is of performance lines on the part of the mothers, particularly on the side of his dam's sire. If we find the blood of the sire strong in the qual ty of large motherhood we may be reasonably sure of his imparting that quality to his heifers. But his male calves will be more affected by the motherhood quality of their dams than by him. These are distinctions that breeders should keep constantly in mind. The qdestion of immediate importance is the sire and his individual prepotency. The question of antecedent importance relating to him is the quality of the mothers that lies back of him. If we keep these distinctions in mind we will be more willing to pay a good price for a bull of the right quality.

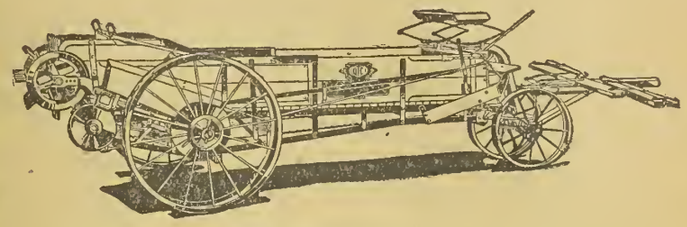
Breeding Difficulties.

Very often this is caused by the vaginal mucous being too acid, and preventing conception. It is best to try what is called the soda treatment, which is injected about one hour before service takes place and neutralizes the acid condition. The injection is made by dissolving one tablespoonful of bicarbonate of soda in half a gallon of luke-warm water, and may be used twice or three times a week while not in use. Half an ounce of phosphate of soda should be given daily in a feed for ten days or more previous to service. Keep the heifer if anything rather poor, letting her get plenty of exercise by turning her out on rather a bare pasture. Sometimes it is worth while trying another bull, especially in these cases an old one in preference to a youngster. As she has had one calf, it is well worth while to keep her, as good milkers are scarce. Should this treatment not prove successful, write again.—Southern Vet.

A Record Breaker.

The Holstein-Freisian cow Lady Paul Livardy 3rd No. 166035 has broken the record of fat production in the junior two-year class of the semi-official yearly division, by producing in 365 consecutive days 737.66 lbs. fat from 20,936.7 lbs. milk. She freshened at the age of 2 years, 2 months, 25 days. Her sire is King Walker No. 40358; her dam is Lady Paul Livardy No. 86225. She was bred by Mr. J. V. Shugart, Marion, Ind.: and she is now owned by Mr. J. W. Dimick, Rifton, N. Y. In the junior two-year class in this division she displaces Woodcrest Rifton Lassie No. 211541, whose record for 365 days is 726.66 lbs. fat from 19,560.9 lbs. milk. Eight different supervisors were employed in the conduct of this test.

International Harvester Manure Spreaders



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GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
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CORN MACHINES
Planters, Pickers
Binders, Cultivators
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Grain Drills
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Binder Twine

INTERNATIONAL Harvester manure spreaders have a score of good features in their construction. Each one is the result of careful field experiment.

An I H C spreader is low enough for easy loading, yet it has plenty of clearance underneath. The rear axle is well under the load, rear wheels have wide rims and Z-shaped lugs, insuring good traction under all conditions. Frame, wheels, and all driving parts are of steel. Apron tension is adjusted by a simple device. Winding of the beater is prevented by large diameter, and beater teeth are strong, square and chisel-pointed.

International manure spreaders are built in several styles and sizes, low or high, endless or return apron, for small farms or large. Examination will show sturdiness of construction in every detail. Repairs, if ever needed, may always be had of the local dealer.

Examine International spreaders at the dealer's. We will tell you who sells them, and we will send you interesting catalogues.

International Harvester Company of Canada, Ltd
At Hamilton, Ont.; London, Ont.; Montreal, Que.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

TIMOTHY SEED

SOW THE MOST PROFITABLE BRAND—

STEELE BRIGGS "ERMINE"

Specially selected for Purity and High Germination

SOLD BY ALL BEST DEALERS

STEELE BRIGGS SEED CO. LIMITED

HAMILTON TORONTO WINNIPEG

Eureka Potato Planter

Catalog sent free

No matter whether you grow large or small quantities of potatos, we have a size of planter that is just what you need. The Eureka line of Potato Planters is the largest manufactured. This machine takes only *one* man to operate it. That means less trouble and expense for *you*.

Opens the furrow—drops the seed any distance on depth required—puts on fertilizer (if desired)—covers up—all in one operation. Marks for next row.

It's an easy machine to operate. The steel and malleable iron construction mean lightest possible weight and increased life of machine. Your repair bill will be practically nothing. Plants uniform depth at *all times* because plows directly under the axle. Dropping mechanism in plain view of driver. Does not injure seed.

We supply planters in three sizes, for one or two rows—with or without Fertilizer Attachment.

For 15 years the Eureka Potato Planter has been successfully used throughout the world.

We also make Eureka Potato Cutters and the Eureka Mulcher and Seeder—a mulcher, smoothing harrow, cultivator, weeder, seeder.

Write today.

Sold by
FROST & WOOD CO., Ltd.
St. John, N. B.

EUREKA MOWER CO.
Box 745 Utica, N. Y.

Have You Seen Our Electric Flash Light Premium

The Apple Scab.

(Continued from page 457)

several days ahead the coming of wet weather thus enabling growers to spray their trees in time to ward off the disease. The time to spray is always before instead of after a rain. The spray usually drips in from 10 to 20 minutes and will then take many rains to wash all off.

CONCLUSION

I was very much interested to hear Professor Cumming state that he had good hopes of the appointment of a well-trained, experienced plant pathologist to help you in your various plant diseases. When I think what an array of able men Nova Scotia has already got or is getting who are enthusiatically devoting themselves to the study of your plant diseases, insect pests and other problems, I am not only hopeful but certain that in a very short time Nova Scotia fruit will be far famed for its freedom from blemishes by insects or disease. In Prof. Blair, Mr. George Sanders and your Provincial Entomologist, Prof. Brittain, you have three men whom I know well and whom I consider the equals of, if not superior to, any other these men in these same lines of study in Canada. You are to be highly congratulated on having such men. Make good use of them and you will find their advice and assistance invaluable.—Professor Caesar.

The Sussex Seed Fair.

In recent issues of The Kings County Record, the query "Do the farmers of Kings County want a Seed Fair?" was asked. All who attended the fair held on Saturday, the 28th inst, got their answer when they saw the splendid display of seed grain and potatoes made by the farmers.

The Seed Fair is not a thing of the past. We are of the opinion that it is the dawn of an era of great development in the seed growing circles of Kings County.

S. J. Moore, Maritime Representative Seed Division and S. M. Fiske, Florenceville, N. B., the expert who judged the Field Crops Competition for the past two seasons in Kings County, were the judges. The attendance was all that could be desired, and when at 2.15 p. m., Prof. Trueman, of the N. S. A. C., opened his address on "Improving the Dairy Herds of the District" in the commodious Assembly Hall, of the Dairy School, every seat was taken in the very best possible attention was given to the address, which was considered by many of the prominent farmers present to be one of the ablest addresses delivered before a Sussex audience on a question of this kind.

At the close of the address a unanimous vote of thanks was tendered Prof. Trueman and everybody expressed the wish that ere long he would have an opportunity to again stand before a Sussex audience.

Following is a list of the awards:

Wheat, Red or White Fife, 4 entries —1, Bowser Bros., Rockville, $4.00; 2, J. S. McFarlane, Sussex Corner, $1.50; 3, Stanley M. Hayes, Sussex Corner, $1.00; 4, W. J. King, Smiths Creek, $0.50.

Wheat, any other variety—4 entries —1, H. B. Parlee, Sussex, $4.00; 2, McIntyre Bros., Sussex Corner, $1.50; 3, Thos. A. Kyle, Sussex Corner, $1.00; 4, Jas. Payne, Hillsdale, $0.50.

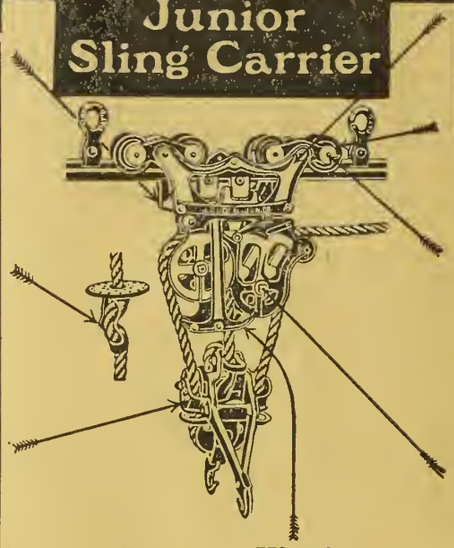
Barley, six rowed—1 entry—1, W. J. King, $4.00.

Oats, any White variety—10 entries —1, H. B. Parlee, $4.50; 2, J. H. Manchester, Apohaqui, $2.00; 3, Bowser Bros., $1.75; 4, T. J. Davis, Farlane, $0.75; 8, Irvine Mosher, Sussex, $0.50.

You save time and money

on every crop you harvest with the aid of a

LOUDEN Junior Sling Carrier



Patented Brace Block

A heavily ribbed malleable iron block attaches to the truck arms just below the track, and the bolt connecting the sides of the carrier frame passes through the lower end. This takes all strain off the bolt and increases the strength of the truck arms. No load can spread them.

Adjustable Trip

Used when desired to carry the load into the mow without elevating to the track. Slip it up or down on the centre draft rope as desired. A simple, effective adjustment without complicated parts. This trip is supplied when ordered without extra charge.

The Great Triple Purchase Feature

Three ropes lifting the load instead of two, as with the ordinary carrier; gives the horse one-half more power, reduces the strain on the ropes and lengthens the life of the outfit.

Engine Trucks

Distribute the load well along the track, increase the strength of the carrier and cause the load to run more steadily. No four-wheeled carrier, however much spread out, is so easy on the track or runs so steadily.

Short Truck Arms

The Truck Arms are only 5 inches long, nearly straight and extremely well braced. They cannot be sprung.

The Unbreakable Axle

These Axles are simply an extension of the main frame. Note how they are shouldered out at the frame; impossible to break them. No riveted or bolted pin axles are used on Louden Carriers. Such axles are always causing trouble.

Patent Bushings

The Pulley Sheaves run on Patent Bushings, recessed into the side of the frame. This takes all the strain off the bolt and puts it on the frame where it belongs. The sheaves are large, of extra strength and easy running.

Sure to Work

A trip stirrup extends below the carrier frame and attaches to the locking mechanism. It is impossible to keep the horse going on the draft rope and not bring the sling pulleys in contact with the trip stirrup. Once this is done the car is bound to leave the stop block and run back into the barn with the load. Side winds or uneven loads, cannot affect the proper working of the LOUDEN JUNIOR SLING CARRIERS.

Write for catalogue and special descriptive circular dealing with above Carrier.

LOUDEN MACHINERY CO., Dept. 38 GUELPH, Ont.

Hay Tools, Feed and Litter Carriers, Stable Equipment, Barn Door Hangers. (3)

Smith Creek, $1.50; 5, E. Roy Raymond, Bloomfield Station, $1.25; 6, McIntyre Bros., $1.00; 7, J. S. McH. B. Parlee, $2.00; 3, Stanley M. Hayes, $1.00; 7, J. H. King, Smith's Creek, $0.50.

Buckwheat, rough, 9 entries— 1, W. H. Venning, Smiths Creek, $4.00; 2,

Buckwheat, smooth—2 entries— 1,

Convincing to Ladies— This Oven Test!

So that you may use less flour, we do what a home cook would do if she were in our place.

From every shipment of wheat delivered at our mills we take a ten pound sample. We grind this into flour. Bread is baked from the flour.

We find that some samples make more bread and better bread than others. So we keep the shipment from which the more and better bread comes. The others we sell.

You save money by using flour that bears this name. And you get better bread.

PURITY

"More Bread and Better Bread" and "Better Pastry Too"

521

H. B. Parlee, $4.00; 2, J. S. McFarlane, $2.00.

Peas, field any variety—1 entry — 1, H. B. Parlee, $3.50.

Peas, Garden—1 entry—1, H. B. Parlee, $0.75.

Beans, colored—2 entries—1, H. B. Parlee, $2.00; 2, E. Roy Raymond, $1.00.

Potatoes, Green Mountain or Deleware—6 entries—1, H. B. Parlee, 1.50; 2, Irvine Mosher, $1.00; 3, W. T. McKnight, Lower Millstream, $0.75; 4, W. H. Venning, $0.50.

Potatoes, any white long variety—4 entries—1, H. B. Parlee, $1.50; 2, J. S. McFarlane, $1.00; 3, McIntyre Bros., $0.75; 4, H. R. McMonagle, Sussex Corner, $0.50.

Potatoes, any white round or short variety—7 entries—1, H. B. Parlee, $1.50; 2, T. Davis, $1.00; 3, J. S. McFarlane, $0.75; 4, McIntyre Bros., $0.50.

Potatoes, any rose variety— 4 entries—1, H. B. Parlee, $1.50; 2, T. J. Davis, $1.00; 3, McIntyre Bros., 0.75; 4, J. F. Roach, $0.50.

Potatoes, any red variety— 5 entries—1, H. B. Parlee, $1.50; 2, J. S. McFarlane, $1.00; 3 and 4, J. W. Patterson, Rockville, $0.75 and 0.50.

Potatoes, any dark variety—3 entries—1, H. B. Parlee, $1.50; 2, J. S. McFarlane, $1.00; 3, Irvine Mosher, 0.75.

Six Turnips, any variety for seed growing purposes—4 entries— 1. H. B. Parlee, $2.00; 2, McIntyre Bros., $1.50; 3, J. S. McFarlane, $1.00; 4, H. R. McMonagle, 0.50.

Special Class—Oats from Standing Crops Competition of 1913—5 entries —1, J. H. Manchester, $3.00; 2, E. Roy Raymond, $2.50; 3, McIntyre Fros., $2.00; 4, Irvine Mosher, 1.50 ; 5, J. F. Roach, $1.00.

At the close of the afternoon lecture the first prize samples in the first eight sections of the prize list were sold at auction and realized the following prices.

Red Fife Wheat, 1 bush.—$1.25.
White Russian Wheat, 1 bush—1.25.
Six Rowed Barley, 1 bush.—$1.30.
Banner Oats, 1½ bush.—$2.00.
Rough Buckwheat, 1½ bush—$2.00.
Smooth Buckwheat, 1½ bush—$2.00.
Field Peas, ½ bush—$2.60.

The Prince Edward Island Horse Show.

The Second Prince Edward Island Horse Show was held at Charlottetown on Wednesday and Thursday, March 25th and 26th.

The number of exhibitors was not as large as could have been wished, but the crowd in attendance was almost to great for comfort.

Classes were opened for Clydesdales or Shires, for Grade Draft Mares, for Carriage Stallions and Mares and for Roadsters. The chief exhibitors were David Reid, Victoria Cross; J. H. Crosby, Marshfield; T. P. Cass, North River and H. H. Acorn, Souris. David Reid won the championship for Clydesdale Stallion. Robt. I. C. Hill, Fredericton, P. E. I., for Carriage Stallion and Hammond Kelly, Southport, for Roadster Stallion.

The heavy horses were judged by Mr. R. Robertson, Ex-Superintendent of Experimental Station, Nappan, and now Institute lecturer in Prince Edward Island. The light horses were judged by W. J. Reid, B. S. A., Instructor in Animal Husbandry. The first classes were called out at 2 p. m. on Wednesday. At 5 p. m., the Carriage and Roadster Stallions were shown on the street. At 7.30 p. m., judging was resumed in the Agricultural Hall and completed at 10 p. m.

On Thursday afternoon a sale of horses took place, 22 going under the hammer. The prices ranged from $100 to $700 the average being a little over $300. The attendance at the sale was about 800 but there did not appear to be a great number of buyers. A Clydesdale stallion 3 years old offered by the Falconwood Hospital for Insane was worthy of special noial notice. He was of excellent quality and very trappy. He was, however, considered by some to be somewhat undersized. He was bought by Mr. Neil McKenzie of West River for $500. Benjamin Carter was auctioneer and gave the best of satisfaction.

On Thursday morning the annual meeting of the Horse Breeders' Association was held when the officers for the ensuing year were appointed as follows:

President—W. W. Crosby, Cornwall; Vice-Presidents, Jabez Lea, Victoria; H. H. Acorn, Souris. Directors—John Richards, M, L. A., Bideford; T. P. Cass, North River and David Reid, Victoria Cross.

Look Here Sir!

If you can get a suit valued at $25.00 in Canada for $12.50 from Catesbys in London---Will you buy it?

We undertake to prove to you that you can—if you buy from us.

You've heard that clothing is cheaper and better in London. You know, also, that you can't beat the quality of the genuine English Fabrics.

When, therefore, we guarantee to sell you a suit made of fine English cloth, cut in the best Canadian, New York or London style (as you prefer), laid down at your door, all duty and carriage charges prepaid, for a price about one-half of what you would have to pay in Canada, isn't that worth looking into? Of course, it is.

Then sit down right now, fill out the coupon below, mail to our Toronto office, and get our latest Style Book and patterns. With this book is a letter explaining our system of doing business and a self-measurement form which is so simple that you can't go wrong in using it. We'll also send testimonials from many satisfied Canadians who regularly buy from us.

Get these Patterns now and be convinced

If you don't want to cut this paper, write a postal or letter, and we'll send the patterns anyway, but to get them **you must mention the Maritime Farmer.**

CATESBYS LIMITED

(Of Tottenham Court Road, London, Eng.)

119 West Wellington St., Toronto

The "Burlington" **$12.50**

This shows the most popular style of suit worn by well-dressed men in Canada. The materials used are especially selected for this style of suit, including a fine range of tweeds, worsteds and serges.

DUTY FREE AND CARRIAGE PAID

Mail this Coupon TO-DAY

MESSRS. CATESBYS LIMITED (of London),
Dept. "H" 119 West Wellington Street, Toronto, Ontario:

Please send me your new season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit—overcoat.*

Full Name .....

Full Address .....

*If you only want overcoat patterns, cross out the word "suit." If you only want suitings, cross out "overcoat."

Maritime Farmer. Coupon No- 1.

Making Hogs From Pigs.

The pig intended for market has but a few months to live at most and may, therefore, be fed regardless of effect upon constitution, which must be considered in the case of breeding animals. There should be no let-up in forced feeding from birth. Pigs will begin to eat shelled corn at three or four weeks old. A little milk or slop at this age will hasten growth.

Good pigs should weigh from 60 to 80 pounds when weaned at three months old. They should then go on aflalfa, clover or other good pasture and have corn twice daily. Have ready for them late in summer a pasture of rape, field peas or soy beans, besides corn. If their teeth become sore, change to shelled corn, soaked for twenty-four hours and slightly salted.

To keep celery crisp for several days, first clean it, then wrap it in a soft cloth and lay it on the ice in the ice box.

A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $3.00 to $14. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

No. 6 Drill and Wheel Hoe

The Bateman-Wilkinson Co., Limited
432 Symington Av., Toronto, Can.

Trees! Trees!

We make a specialty of growing hardy fruit trees, in all the leading varieties, suitable for the Maritime Provinces, at lowest possible prices, consistent with quality.

Write for Catalogue and Price List to Riverside Nursery.

Arthur Harris & Son,
Annapolis Royal, N. S.

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Full information given on application, address

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HAWK BICYCLES

An up-to-date High Grade Bicycle, fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Enamelled Wood Rims, Detachable Tires,* high grade equipment, including Mudguards, Pump and Tools, **$22.50**

Send for **FREE 1914 Catalogue,** 90 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON,
27 Notre Dame St. West, Montreal.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

"My little son had a severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all dealers.

Drugs and Old-Fashioned "Recipes."

It is curious that one form of cruelty inflicted on animals is due to the fact that those who are guilty of it are proud of their charges and honestly anxious that they should do them credit. With this object in view they will actually go to the expense of buying drugs, sometimes making use of "recipes" which are treasured up as great secrets not to be parted with to anyone else except for a good consideration and use them more or less recklessly upon the animals. It must be admitted that it is not altogether from unselfish motives that this course is followed, because some of the drugs act as "coat shiners," and enable a man to make his horse look well without all the trouble that good and careful grooming entails; but the fact remains that in a great many cases the offender is really sincerely anxious for the welfare of his charges, and if he does harm it is through ignorance. None the less, the offence is one that should be sternly repressed, for very heavy losses of valuable animals frequently occur, and so general is the practice in some districts, that farmers have been up in arms about it, complaining bitterly of the damage done.

Arsenic and antimony and nitre are ingredients often used, and the danger largely results from the ignorance of the stableman of the fact that many drugs are cumulative in their effect, and that the continued dosing with small quantities may eventually result in poisoning the animal. Unfortunately, the evil goes on because the farmer rarely knows anything about it until a serious illness or fatality occurs, and because when he does learn of it he is soft-hearted and does not like to prosecute. Magistrates, too, fail to appreciate the gravity of the matter, and inflict inadequate punishment, or even let the offenders off with cautions. It should be made clear that, whatever object a servant has in view, he is committ- drugs secretly to his master's ani- drugs secr(tly to his master's animals, and the farmer is advised to look around the stable occasionally, to cast a glance into the corn bin, where evidence may sometimes be found that the practice is in vogue. Little bits of paper that may have contained powders may be picked up, or even samples of the drugs hidden away, and careful watch may be the means of preventing heavy loss. A reprimand and warning should be given and prosecution should certainly follow a second offence, whatever the result may be to the animals.

STRANGE RECIPES

Recipes in use on the farm are often of very stragne composition. They are perhaps not more absurd than some of those in use for human beings in the dark ages of medicine, but they seem to have survived much longer, and come up now and again even in this age of general education. They are sometimes handed down from father to son as a valuable legacy, and are found in the possession of men who read little and are quite unaware of the great advances made in veterinary treatment—indeed, who in many cases do not know what they are asking for when they take their list of "drugs" to the chemist. "Oil of man" and "Oil of woman" are not found in the British Pharmacopoeia, but they are in use, and the country chemist, who has learnt his business in a rural district, probably smiles as he fills them up from the same bottle, which bears quite a different name on the shelf. Some of these recipes are marvelous in the number of ingredients that enter into them. It would almost seem as if the compounders felt that if they only put enough shots into the gun some of them would be bound to hit the object aimed at. Here are a few of them used in a single recipe: long pepper, tumeric, aniseed, flowers of sulphur, fenugreek, liquorice, elecampane, and bay berries. Oak rind, nettles, yarrow, and bramble buds are used in various quantities—a little more or less can make no difference!—quite after the style of the old herbalists, and indeed "herbal treatment" holds its own largely in rural places. Filthier ingredients are in use also, and chamber lye is credited with wonderful medicinal properties. So far as most of the recipes are concerned, probably the chief harm they do is that the effective treatment called for is delayed, sometimes with serious results; but occasionally they are actively harmful, and it is to be hoped that farmers will decline to allow their animals to be experimented with, and will recognize more generally that there are now ontainable drugs in the form of tabloids with properly regulated doses for their use, if drugs be really needed.

SURGICAL METHODS.

It is not, however, only in regard to medicine that ancient and dis-

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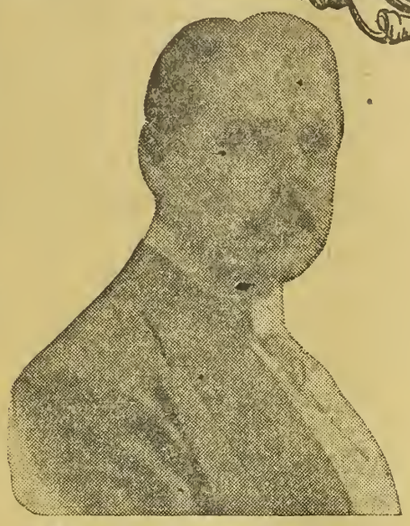
credited practices prevail, for some of the surgical methods are even worse in the sense that they cause more immed ate and unnecessary pain. Bleeding has almost died out, hut unnecessary blistering and cauterising, and the use of crude ointments applied to wounds are still too be met with. For all these things much of the blame must be attrihuted to the old farriers' books kept on the shelves and religiously consulted from time to time. They are hopelessly out of date, but a recipe in print is sacred and they are put in use with every confidence that the right thing is heing done. There are so many really good handbooks now issued, containing up-to-date methods of treatment of stock, that there is no excuse for a farmer who refers to ancient puhlications. They ought ta be burnt or stored away in museums as curiosities.

COMMON TROUBLES.

Among "recipes" of quite a different character may be mentioned some cruel methods of dealing with common troubles. The use of paraffin for the destruction of lice is anample. It is dangerous, not so much because of the inflamahle nature of the material with which the coat of an animal is sometimes saturated—there is certainly some risk if a naked light is used—as hecause paraffin so used may cause severe hlistering of the skin which will torture the animal and may take some time to heal. Even more foolish and cruel is the use of mechanical irritants in the case of eye troubles, which are common among cattle and sheep, sometimes in the latter appearing almost to take the form of an epidemic. Chaff often falls into bullocks' eyes, and the obvious remedy, as soon as the injury is detected, is to endeavour to remove it. It is not an east matter, but can generally be done by a patient attendant with the aid of a little Venice turpentine; if this is placed on the finger the intruding morsel may be made to adhere to it and to come away. Some people actually blow powdered white sugar, chalk, oralum—we have even heard of the use of powdered glass—by means of a quill, into the eyes of suffering animals. This is shocking cruelty and can only increase the trouble whatever may be its first cause. Animals suffering from affections of the eye should be kept in darkened stalls, and have the eyes bathed, and be treated in much the same way as are human beings in similar circumstances.

A frequent cause of suffering to animals is misconception of the actual evil to be dealt with. Mange, for example, is often confused with eczema, and remedies that are perfectly suitable in the one case are absolutely useless in the other. The result is not only that the great evil is untouched but that the complaint often extends to other animals. The loss to a farmer may be considerable, and it would certainly pay him, if he does not care to get expert advice, to invest in a "magnifying glass" by means of which he would be able to detect the presence of the mange insect. While the farmer is mistakenly applying remedies for a "skin disease" to an animal suffering from mange, the real trouble is probahly spreading among other members of his stock, and becomes a serious matter, while the necessary isolation is perhaps made impossible, owing to the number to be dealt with. Mistakes in diagnosis are responsible for many serious errors in treatment, and we recall one of a very singular character, where a sheep farmer concluded that lameness in his flock was due to a worm in the foot, and deliberately proceeded to dissect from the limb a portion of the anatomy—the biflex canal—possessed by every sheep in the world. The owner referred to had taken a great deal of trouble with the intention of relieving his sheep from their complaint, but what he effected was to cause them serious suffering, and he was guilty of cruelty. "Ignorance of the law excuseth no man" is a well-known legal maxim; certainly ignorance of anatomy affords no excuse for a man who, notwithstanding his ignorance, venture to perform surgical operations. Indeed, we are constrained to believe that in the aggregate quite as much suffering is caused to domesticated animals by the activity of well intentioned but ignorant attendants as is due to downright cruelty.

The use of the "recipe" which calls for burning straw to be placed between the legs of a jihbing horse in orller to induce him to move deserves stern reprobation and punishment. It is not only wicked but silly; it may lead to serious accidents, and if the animal, as is very likely, moves only a few feet away itis not only useless to serve its purpose, but may result in damage to the owner's property, while ohviously there is a risk of serious injury to the animal himself.



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Breeding for Heavy Layers.

The inheritance of heavy egg production is transmitted through the hen to her sons, and through the male to her daughters and sons. At least the very careful investigations of Dr. Rgymond Pearl indicate this. It does not follow, however, that all the sons of a prolific hen can transmit in the same way. Through a very careful system of trap-nesting and pedigreed breeding each bird must be tested. This work is beyond most poultrymen.

Fertilizers for Potatoes.

Editor Maritime Farmer:

The potato crop demands a deep, well prepared soil, having a liberal supply of humus and available plant food. The lighter and more open soils are the best for potato production. However, good results can be obtained on the heavier soils, providing that they are deeply worked and well supplied with humus.

For potato production the soil should be thoroughly prepared and worked to a considerable depth. The depth of preparation of the soil is one of the most important factors in the production of this crop. In cultivating the soil at a considerable depth it must be remembered that the cold inert subsoil is not to be brought to the surface. By leaving a good depth of well prepared soil, conditions are rendered favorable for the development of an extensive root system. This factor is of considerable importance as the potato is a gross feeder.

Closely coupled with the question of cultivation is that of humus. When well supplied with humus, the soil is much more easily cultivated and it becomes more retentive of moisture, which is a factor of vital importance. A soil rich in humus is friable and porous, giving ample opportunity for air and water to move through it. Further, the humus in decomposition has considerable effect in rendering available much of the insoluble plant food in the soil.

The potato crop requires a liberal supply of plant food. This fact is now commonly known. In our potato producing districts heavy applications of high-grade mixtures are made and found profitable. In these districts the extensive use of fertilizers has become common only after several years of experience. It is then based upon the results of actual and profitable practice.

Potatoes demand a fertilizer rich especially in nitrogen and potash. Phosphoric acid, though essential in the production of the crop, is not needed in as great a proportion to the other ingredients, as is the case with some of the other crops. Though nitrogen is of importance, an excess of this element will cause great growth of "tops" at the expense of the development of the tubers. We frequently have a concrete example of this condition where a heavy application of barnyard manure is made for potatoes; the result being a heavy development of tops accompanied by a comparatively low yield of tubers. This condition is due to the high proportion of nitrogen to the other plant food substances in the manure.

Potash effects particularly, the formation of starches, sugar, and wood fibre in the development of the crop. As considerable starch goes in the composition of the potato, potash is then of special importance as a fertilizer ingredient. In fact, it can be stated, that as a rule, potash is the dominant fertilizing ingredient for potatoes.

It is impossible to state definitely the best fertilizer mixture for potatoes. Conditions of soil cultivation, and cropping vary to such an extent that each farm is a problem by itselfself. The best that can be done is to outline what has, in general experience, been found profitable. The individual farmer can thus vary such a mixture to meet his particular requirements. These requirements he can only find by conducting actual field tests.

The following has been found to be generally successful.

80 lbs. Nitrate of Soda; 70 lbs. of Ammonia; 400 lbs. Acid Phosphate; 160 lbs. Sulphate of Potash, or about 800 lbs. of a mixture analysing 3.5 p. c. Nitrogen; 8 p. c. Phosphoric Acid; 10 p. c. Potash.

The combination of Nitrate of Soda and Sulphate of Ammonia has been found to give the best results. This is probably due to the difference in availability, the Nitrate being immediately available to the crop and the Sulphate of Ammonia becoming so a little later in the season. The amount of Nitrogen used would depend upan the amount of barnyard manure applied and upon whether or not the potato crop follows a clover sod.

Slag may be used instead of Acid Phosphate, in some cases, providing that it is applied very early in the spring, and that it is broadcasted instead of being put in the row. The latter point is mentioned as the alkilinity of the slag due to the lime content would tend to help the development of scab. Slag and Sulphate of Ammonia should not be used together as the lime in the slag would tend to cause a loss of ammonia as a gas.

It has been generally recommended to use Sulphate of Potash in preference to Muriate of Potash as the former is supposed to produce a better quality of tuber. However, this question has not been satisfactory solved for Canadian conditions. It is the opinion of many that providing the soil is light and well drained and that the fertilizer is applied early, the Muriate will probably be satisfactory.

It is preferable to apply the fertilizer some time before the plant the crop, thus giving some time for the dissolving of the plant food by the soil water. The fertilizer or at least three-quarters, should be applied broadcast, the remainder being applied to the row. By this means the fertilizer is distributed evenly throughout the soil. Thus the fine feeding roots of the crop, which extend all through the surface soil can readily reach the plant food. If the fertilizer is all applied in the row, it is confined to a narrow space under the plant, while the feeding roots are spread throughout the soil. By broadcasting, the fertilizer can be applied sometime before the crop is planted, which is of importance, particularly in a dry season.

We notice, then, that in the production of potatoes, the deep cultivation of the soil and the incorporating of a large amount of humus are two essential factors in the preparation of the seed-bed; that a liberal supply of fertilizer containing a relatively high proportion of potash must be applied and that the fertilizer should be broadcasted sometime previous to the time of planting.—E. A. Lods.

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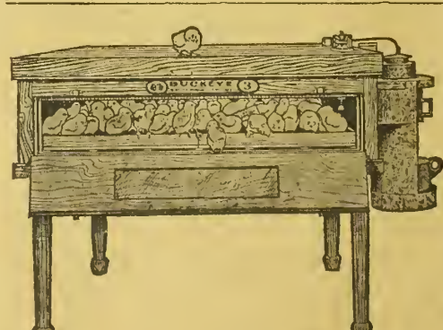

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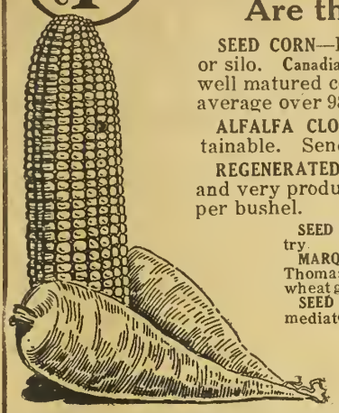

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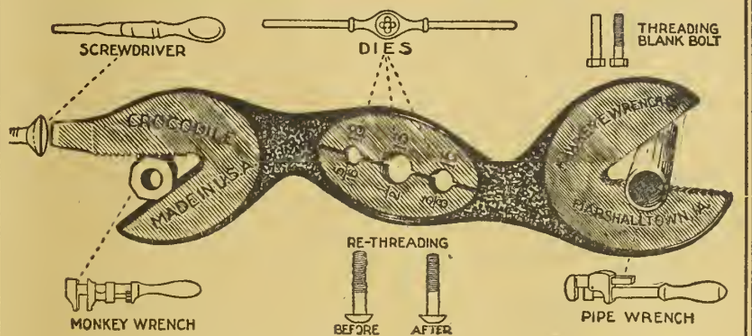

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Pure Bred Berkshire Pigs for Sale

from first prize winners at Fredericton Exhibition, 1913, pairs not akin, ready for delivery after April 1st, 1914, registered. P. O. Address

SHAW BROS., VICTORIA, Carleton Co., N. B.

DON'T SOW UNCLEANED GRAIN

The Eureka Fanning Mill and Seed Separator

is guaranteed to clean and separate all kinds of grain and seeds.
Send for circular.

HALL MANUFACTURING CO., LTD.
Summerside, P. E. I.

EGGS FOR HATCHING

White Wyandottes, Columbian Wyandottes, S. C. Brown Leghorns, Black Cochin Bantams. Bred to lay. Good enough to win at Halifax and Amherst, 1913. 13 first, 3 seconds, 1 third, 1 fourth, 1 fifth.

Eggs from Exhibition Matings ..... $3 per 15
Eggs from Utility Matings ..... $1 per 15
Black Cochin Bantams ..... $2 per 13

Satisfaction guaranteed.

Wolfville Poultry Yards
Wolfville, - - Nova Scotia

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Parks Strain of Barred Plymouth Rocks are the Greatest Laying

strain of Rocks in the world, bred for egg production over 20 years. Send for mating list, eggs $2.00 and $1.50 per setting.

J. H. PRICHARD, Summerside, P. E. I.

Cattle and Sheep Labels

Inexpensive, Simple, and Practical

Cattle	75c	$2.00
Light Cattle..	60c	1.50
Sheep or Hog.	40c	1.00

No postage or duty to pay. Cattle sizes with name & address and numbers; sheep or hog size, name and numbers.

Get your neighbors to order with you and get better rate. Circular and sample mailed free.

F. G. JAMES, Bowmanville, Ont.

Wanton Slaughter of Dairy Heifers Detrimental to Dairy Interests.

(Continued from page 455.)

peal to him. The quick and regular monthly returns, the distribution of labour over the entire year and the certainty that his farm is steadily growing more fertile will always be strong arguments in its favor. The greatest need of the industry today is more real good cows, good dairy grades bred right and trained to be persistent milkers.

The Province is not in earnest yet about breeding better cattle. Even in what are supposed to be good dairy sections $1.00 stops the pure bred sire. It don't matter if the pelt of a bull calf (if the luck is such) pays for the service. The free service mongrell gets the heavy end of the business. It matters not if his get when mature is $25.00 or $50.00 less valuable than the get of a good pure bred, the profit seems no inducement. A bird in the hand looks better than a whole flock in the bush in this case.

During the past season many dairy cows, and cattle that we cannot class as dairy cows, have left the Province, the well-bred ones to make a reputation for the kind of stock to be had on P. E. I., the mongrel scrubs also to make a reputation as to the class of stock we breed in the Province.

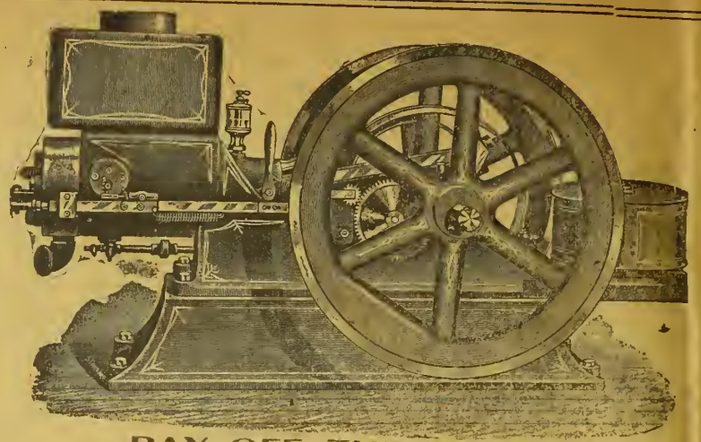
I was sorry to read a contribution from a correspondent in Ontario in reference to an importation of cattle from our Province. "They brought much lower prices than lacal stock, being of very poor quality, yet it was claimed the importer made money on his venture, which it was cited could be taken as evidence of the much lower value of cattle on P. E. I. than in Ontario." This article appeared in a November number of "Farm and Dairy" and was poor advertising for our live stock.

What are we going to do about it? Get to work with the best pure bred bull obtainable and stick to his kind until we have a valuable herd of some distinct species, or continue changing irom one pure bred to another with a generous mixture of all of them at once? This has an important bearing on the dairy industry and the permanent prosperity of the Province. It is for this association now assembled to offer some suggestions. I think that the offering of prizes, either by this association; or private creameries should induce the breeding or grading of the winning herds and whether or not a pure bred bull is now being used. I would take chances that the good cows will be found to trace their goodness to a pure bred sire.

In conclusion let us not forget that dairying increases the prosperity of the community in general in which it is conducted to a greater degree than any other line of farming. If more labor is needed, better buildings and more capital needs be invested, sa much the better for the community. We should aim to increase the producing ability of our farms each year. Nothing is so important as a fertile, clean farm, one that can be depended upon to grow a paying crop in unfavourable as well as favourable seasons.

Successful dairying will be accom-

Successful dairying will be accomplished if intelligently and persistly followed. We should stand by the industry that has proved so profitable in the past and has such promise for the future.—Paper prepared by W. M. Lea to be read at the P. E. I. Dairymen's Association.



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and get one that will do the work of four at a cost of Five Cents a day. —It never SLEEPS, never EATS, never SHIRKS, never SKIPS OUT FOR SUNDAY.

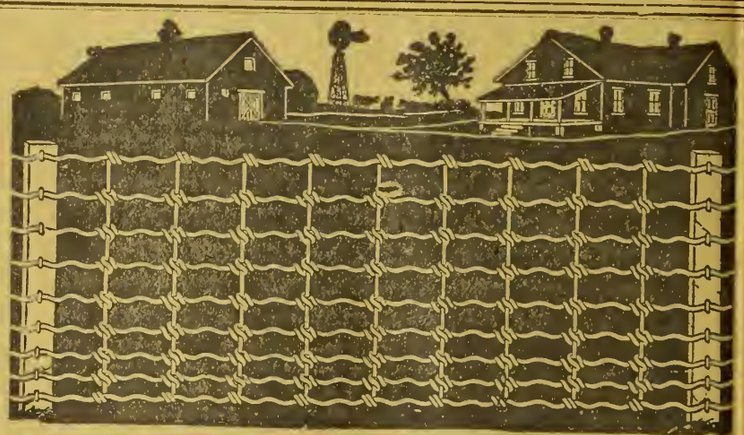
The Sussex Motor Co.'s engine is the BEST, SIMPLEST and most satisfactory gasoline engine made. It will develop more power at less expense than any other.

The Sussex Motor Co.'s Engine Is Guaranteed For Five Years

Write today for catalog. It will cost you nothing to investigate.

THE SUSSEX MOTOR CO., Ltd.,
SUSSEX, N. B.

Gasoline Engines, Stationary and Marine, Wood Cutters, Grain Grinders, Gasoline Ice Cutters, Cream Separators, etc.



Take a Look at a Farm Fence Worth Building

Looks strong, doesn't it? It "is" strong. It's made to last. All made of No. 9 hard steel wires, both horizontals and uprights. Heaviest fence wire used. That's why "Ideal Fence" always stands erect, and resists all destructible elements.

"Ideal Fence" is easy to build, fits any surface, hilly or level.

IDEAL FENCE

May not be the cheapest Fence from a purchase point of view. No, but if you consider the cost of "Ideal Fence" from the point of view of the good material, perfect construction, a very long service, then certainly, "Ideal Fence" is the cheapest.

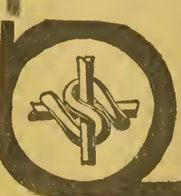
Why is it the most economical Fence that can be bought?

1.—Because being built very strong, it requires less posts.
2.—Having less holes to dig, labor is saved and the entire cost of erection is reduced.
3.—With all this economy it will last longer than any inferior fence, and not cost half as much for its maintenance.

Only these three reasons would justify the preference to purchase "Ideal Fence" above all others, and yet there are many more reasons why.

Consider the safety of farm products, as well as cattle, etc. protected from without and within from the most reliable fence at medium prices.

"Ideal Fence" means Quality, Durability, Safety and Economy.
Send postal and receive our free booklet No. 11.



The McGREGOR BANWELL FENCE Co., Ltd.
60 McGILL ST., - - MONTREAL

Clover and Timothy

SEED

You can buy good clean No. 1 Government Standard Seeds direct.

Below find present prices Freight Prepaid

To your nearest Railway Station on C. P. R. or I. C. R. for an order of 180 lbs. or more. If ordering less than 180 lbs. allow $1.00 for freight.

All Seeds offered herewith grade No. 1 Government Standard

Mammoth Clover $13.50 per bus. of 60 lbs. Bags free.
Red Clover $12.50 per bus. of 60 lbs. Bags free
Alsyke " $13.75 " " " 60 " " "
Alfalfa " $10.75 " " " 60 " " "
Timothy Seed $4.75 per bus. of 48 lbs. Bags free.

Order early. Ask for samples, also catalogue.

GEO. KEITH & SONS
(Seed Merchants since 1866)
TORONTO, - ONTARIO

ORDER YOUR

POTASH

AT ONCE

Order your POTASH at once. The Potassic and Phosphatic Fertilizers should be applied to the soil as soon as the land is workable so that the crop can get the full benefit of these materials in the first season.

Many disappointments with fertilizers are due to the fact that they have been applied too late for the crop to get full benefit from them, although ensuing crops always benefit. Remember these fertilizers are not used up in the first season but are effective for several seasons.

Nitrate of Soda should generally be applied as a top-dressing at planting time. Slower acting Nitrogenous fertilizers can be applied earlier with other materials.

MURIATE OF POTASH
AND
SULPHATE OF POTATH

can be obtained from the leading fertilizer dealers and seedsmen.

WRITE for our FREE, educative bulletins, which include:

"Artifical Fertilizers; Their Nature and Use"
"Fertilizing Grain and Grasses"
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"The Potato Crop in Canada"
"Fertilizing Hoed Crops"
"Farmer's Companion" etc.

GERMAN POTASH SYNDICATE
1102b Temple Bldg. Toronto, Ont.

Farmer Ads. will Bring Results.

THE APIARY

Handling the Bees.

Spring Management.—In this province, bees are practically all wintered in cellars. We shall begin to discuss their management from the time they are put out in the spring.

The Time to Put the Bees Out.—Do not be in too much haste to get the bees out of the cellar in the spring. If you can keep them quiet, leave them alone until the soft maples are in bloom.

Choosing the Day.—First get everything ready, so that all the hives can be carried out at one operation. Watch the weather closely, especially after a few nice days, for it is very changeable at this time of year. When the wind gets in the east, and it commences to get overcast, with lazy clouds, and has every appearance of bad weather for the morrow, commence about sundown and carry out all the bees, even if it takes you all night—and if it begins to rain before you are through, so much the better, for you don't want any bees to fly away until they have been out for two or three days, if you can help it. During this time, they will become nice and quiet and when a fair day comes they will commence to fly, only a few at a time, and will not mix or rob.

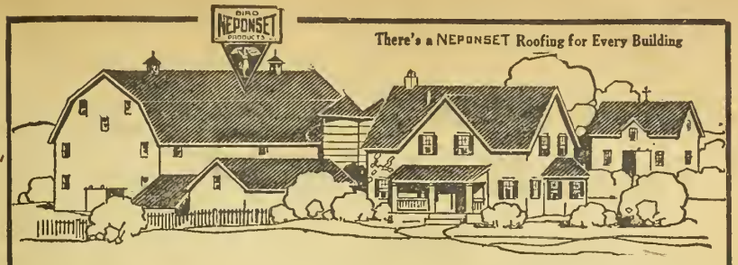
Feeding.—When carrying them out, mark all light colonies for feeding. Make a good, thick syrup, using granulated sugar, two parts, water one part, by weight; The water should be poured on the sugar boiling hot, and the mixture stirred until the sugar is all dissolved. For feeder, use any hive feeder that is convenient; the Alexander or the division-board feeder are both good. Caution—Do not feed out of doors for fear of starting robbing. The hives should be given all the protection possible, the entrances contracted and the bees left pretty much to themselves, till dandelions and fruit bloom.

Examination.—On the first warm day after fruit bloom is out and the bees are working briskly, open up the hives and "take stock" of your bees. Clean off all superfluous wax from frames and parts of the hive. Catch and clip the wings of the Queen. Cut off about 1-3 of both wings on one side. This will prevent the loss of the first swarm, if swarming is allowed, also serve in the way of a mark for keeping a record of the age and efficiency of the Queen. If there is some old seated stores in the brood chamber, break the capping of a part or all of it, by lightly scraping the surface with a knife.

Take a look into each colony about once each week to note progress. When fruit bloom is over and the honey-flow from this source is cut off some of the colonies, that have large numbers of larvae, may require some feeding. Do not allow a shortage of food supply to interfere with the production of brood at this season. It is good bee-keeping to use every effort to increase the number of bees in each colony as much as possible, before the clover honey flow opens.

Putting on Supers.—When everything possible has been done to increase the army of workers, then we are ready for the clover honey flow. Watch for the first White Clover blossom. When it appears then you may be sure that in about ten days the great rush will be on. While there is no fixed time for placing the supers on the hives, this should be done in good time. It is better to be a little early than too late.

Swarming.—To the person keeping bees on a commercial scale, there is probably no other one thing that causes so much worry, as the habit



HERE'S one thing about roofings you ought to know—a "slowly made" roofing is the only kind that is slow to wear out.

Every foot of NEPONSET Roofing is made, not on the how fast but on the "*how-good-can-it-be-made*" principle. This takes time. But it's the only way to *surely* make a roofing absolutely reliable and 100% weather and waterproof. You buy roofing for an investment. But a half-made, "hurry-up" roofing is the worst kind of an investment. You pay almost as much. What do you get? A quick-spoiling roof—a roof that's only half a roof—a roof that is a constant nuisance and source of expense. NEPONSET Roofing is slowly made—to give a service of years—not merely to sell.

Sold by dealers everywhere. Write for name of nearest dealer.

Surely Send for Roof Book—FREE

NEPONSET PAROID ROOFING

Other Neponset Roofings are—Neponset Shingles for residences; Neponset Proslate, the colored roofing.

BIRD & SON (Est. 1795) 786 Heintzman Building, Hamilton, Ont.
Montreal St. John, N. B. Winnipeg Vancouver

Also makers of Neponset Wall Board, used in place of lath and plaster, and Neponset Waterproof Building Paper

This Name Protects You

The proverbial "pig in a poke" was not a more uncertain purchase than are garden seeds if you do not know that there is a reliable firm behind them.

You cannot tell by looking at them whether field and garden seeds are well-bred, vigorous and sure to grow, or exactly the opposite. You must buy by faith, and your faith has the best foundation when you select

EWING'S
Reliable Seeds

For over forty years these seeds have produced the finest vegetables and flowers grown in Canada — and they are better to-day than ever. *They do not disappoint.*

Write now for our illustrated Catalogue, and if your dealer hasn't Ewing's Seeds, buy from us direct.

EWING'S RELIABLE SEEDS MONTREAL

The William Ewing Co., Limited
SEED MERCHANTS
McGILL ST., MONTREAL. 37

FINE BASEBALL OUTFIT FOR BOYS

BOYS—Don't spend several dollars for a baseball outfit, but write us to-day and you can get ABSOLUTELY FREE, this magnificent, big league baseball outfit consisting of a high-grade leather catcher's decker, extra well padded, with raised heel and web thumb; a dandy all-leather fielder's glove; a jim-dandy full size baseball and the handiest score card you have ever seen. It looks just like a baseman's mitt and with it you can keep accurate tally, either as a spectator at the big league games, or as umpire for your own team, of all the runs, hits, and innings, etc., of both teams, and no pencil is required. In addition to these, every boy who earns the outfit can also receive the finest pair of rubber-soled baseball shoes you could want.

BOYS, GET THIS DANDY OUTFIT AND YOU WILL BE THE PRIDE OF THE TEAM.

Just write us today and you will receive by return mail, postage prepaid, only 25 Hearts of Flowers, our delightful new perfume, to sell at only 10 cents each. There are eight different, lovely odors: Beauty Rose, White Lilac, Wood Violet, Carnation, etc., and as everybody always wants two or three, you will sell them in no time. Return our $2.50 when the perfume is sold and you will receive at once the complete baseball outfit just as represented, and when you show the boys your outfit get just two of them to earn one as you did, and the fine baseball shoes are yours as well. They are guaranteed to fit well and give you satisfaction. Boys, write us today. It's as easy as wink to sell only 25 of these delicious perfumes and this grand outfit will be yours in no time. Don't pass this chance by. Write to-day.

72

Address: REGAL MANUFACTURING CO., DEPT. BB 7 TORONTO, ONT.

Her Cough Racked Her Terribly.

DR. WOOD'S NORWAY PINE SYRUP Effected A Cure.

Obstinate coughs and colds yield to the greatful, soothing and healing power of Dr. Wood's Norway Pine Syrup, and for the racking, persistent cough, often present in consumptive cases, it will be found exceedingly beneficial and pleasant to take. The use of it is generally indicated wherever symptoms of throat, or lung troubles appear, but especially so with all persons of a consumptive or catarrhal tendency, as its prompt curative properites speedily remove the danger, and restore the throat and lungs to a sound healthy state if used in time.

Mrs. Edward Patterson, Young's Cove Road, N.B., writes:—"I have had occasion to use Dr. Wood's Norway Pine Syrup, and can say that it is certainly a good medicine. About a year ago I contracted a severe cold which settled on my lungs, and left them in a very weak state. The cough racked me terribly, and I was in despair until a friend advised me to give Dr. Wood's Norway Pine Syrup a trial. I got a bottle, and before I had it half gone I found relief. I used two bottles, and have never been bothered since. I would not be without it in the house."

Price, 25c.; family size, 50c. Manufactured only by The T. Milburn Co. Limited, Toronto, Ont.

Better Butter— Bigger Profits!

If you wish your butter to be smooth and uniform, use the

"BRITISH" Butter Worker

Adopted by the best dairies in Gt. Britain and Canada. Makes the butter firm-even-consistent all through. Results in better butter and bigger profits!

Sold by dealers everywhere. Three sizes — 14 in., 17 in. and 20 in. wide.

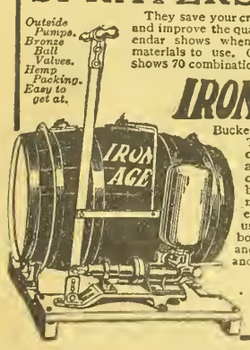
MAXWELLS LIMITED, ST. MARY'S ONT. 4

SPRAYERS Are a Necessity and a Benefit.

Outside Pumps. Bronze Ball Valves. Hemp Packing. Easy to get at.

They save your crop, increase the yield and improve the quality. Our Spray Calendar shows when to spray and what materials to use. Our "Spray" booklet shows 70 combinations of

IRON AGE



Bucket, Barrel, Power and Traction Sprayers for orchard and field crops and other uses. Built complete or in units—buy just what you need. Ask your dealer to show them and let us send you our spray booklet, spray calendar and "Iron Age Farm and Garden News" free.

The Bateman-Wilkinson Co., Limited
434 Symington Av.
Toronto, Can.

For rheumatism you will find nothing better than Chamberlain's Liniment. Try it and see how quickly it gives relief. For sale by all dealers.

the bees have of dividing up, and a part of the colony going out in search for a new home. There are a great many "causes" of swarming; and sometimes bees will swarm without any apparent cause. The old saw, "an ounce of p revention, etc.," is most true in the case of swarming. It is very hard to stop a colony of bees from swarming, once they have got the impulse to do so, but by providing plenty of empty combs, particularly for the queen to lay in; by providing plenty of ventilation and shade for the hive; and by the removal of drone comb, the number of natural swarms can be greatly reduced. There are a number of artificial preventatives, which are more or less effective in preventing and retarding the swarming fever. ...

Summer Management.—Early summer management consists of keeping a lookout for swarms and adding supers. If there is to be a fall flow of dark honey, then all clover or light honey should be removed from the supers before any of this comes in.

If you have been keeping a close watch on the work of each queen, you will know which are beginning to show signs of weakening. Such queens should be replaced by young, vigorous queens, as soon as the heavy honey flow is over. Young queens will fill the hive with vigorous, young bees for going into winter quarters, it is useless to put old, worked out bees into the cellar for winter.

Fall Care.—When the fall honey flow is over and there is practically all supers may be removed. Gobd bee-keepers follow the plan of feeding no more honey to be gathered, then the colony all the stores it will take, just after the last honey is removed, say about the end of September. After being fed, the bees are ready for winter quarters.

Wintering—Taking everything into consideration in this province, the cellar is probably the best winter quarters for bees.

Preparing the Cellar to Receive the Bees.—The preparation of the cellar will depend, to some extent, on the number of colonies to be placed in it. The portion devoted to the bees should be partitioned off from the remainder of the cellar, especially if it is a root cellar. The hives should be placed on racks, the bottom tier not less than one foor from the floor of the cellar.

The best cellar will be fairly dry; capable of being kept at a uniform temperature, 40 to 50 degrees F.; well ventilated; dark and quiet.

When to Bring the Bees In—While weather conditions will influence the time, yet in this province, between the 15th and 20th of November seems nearest correct. It is better to have the bees in a little early than to take them in after they have been subjected to a severe cold spell.

Preparation of the Hive.—While some have fairly good results by leaving the hives with bottomboard and cover on, just as they are on the summer stand, yet most good bee-keepers consider it advisable to remove the cover and put in its place something like old burlap or a cushion of planer shavings or buckwheat hulls or chaff to absorb the moisture which is the result of the breathing of the bees. It is also considered advisable to increase the ventilation of the hive by raising it from the bottom-board, at the back, and placing a bit of lath between hive and bottom-board at each corner.

Outdoor Wintering.—In many parts of Ontario, where the temperature falls as low as it does anywhere in this province, outdoor wintering is being practiced with considerable success. In some cases, single hives are enclosed in an outer box and leaves, planer shavings, buckwheat hulls or

A handy pump for farmers

It is a direct lift pump that can be attached to wind mills, a Fairbanks-Morse Eclipse Engine, or operated by hand.

This is one of the least expensive and most efficient of our high grade farm pumps.

Adapted for lifts from 30 to 125 feet. Altogether an ideal pump for any farm—easy to operate—will keep in good repair for years.

Send for free catalogue of pumps and water systems. If you are interested in farm engines, spraying outfits, lighting systems, power and hand tools, scales or mechanical goods of any kind, full particulars will be sent to you on request. Address Dept. 44

The Canadian Fairbanks-Morse Co., Limited

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Canada's Departmental House for Mechanical Goods

The Triple Test + Comparative Growing

This means that Carter's Seeds are triply tested for purity, germination and production. They are clean, healthy and profitable.

But we go still further.

At the trial and testing grounds of James Carter & Co. at Raynes Park, London, England, Carter's Seeds are put to the test of practical growing alongside of rival strains.

If any seed of ours fails to surpass these other strains, we discard it.

You have two reasons, therefore, for using Carter's Tested Seeds:—first, a **larger yield per acre** — second, a **larger profit per bushel.**

Kindly write us your address so we can send you a free catalog of Carter's Tested Vegetable and Flower Seeds — special edition with all prices in American currency.

Carters Tested *Seeds*

Carter's Tested Seeds Inc.
133 0 King St. I.
Toronto.

Have You Seen Our Electric Flash Light Premium

Dr. Morse's Indian Root Pills

are made according to a formula in use nearly a century ago among the Indians, and learned from them by Dr. Morse. Though repeated attempts have been made, by physicians and chemists, it has been found impossible to improve the formula or the pills. Dr. Morse's Indian Root Pills are a household remedy throughout the world for Constipation and all Kidney and Liver troubles. They act promptly and effectively, and

Cleanse the System.

49

Carry Your Lantern in Your Pocket

Our Electric Flash Light Premium

Something Quite New

Given Away With Maritime Farmer Subscriptions

These lights are always ready for use. The only safe portable light for barns and outbuildings.

The Maritime Farmer one year and one of our 1½x6½ Tungsten barn lights, handsomely finished, for $1,30 (Light alone sells everywhere for $2.00).

The Maritime Farmer one year and one of our vest pocket lights complete for $1.25 (Light sells everywhere for $1.80).

We have other valuable flash light premiums which we will gladly furnish on application. We can supply them at about half-price, with the Maritime Farmer.

We have secured the agency for the Maritime Provinces for a leading house and can thus supply these premiums at these wonderfully low prices.

If interested write us.

The Maritime Farmer, Sussex, :: New Brunswick

some other absorbent material is this province, outdoor wintering, packed between the hives and the outer wall.

Another practice is that where four hives are arranged in a group close together, with back ends together and entrances of each pair in opposite directions. In this position, they are packed as the single hive is. Each method has its advantage and disadvantages.

The most essential thing in handling bees, is to do the right thing just at the right time. No amount of subsequent good care will result in a crop of honey, if the bees have been allowed to suffer neglect at an earlier stage in the game.

Address by H. B. Durost, before the Short Course Students at the Fisher Vocational School, Woodstock, N. B., March, 1914.

Scotsburn Creamery Co., Ltd., in Annual Session.

Tne Annual general meeting of the Scotsburn Creamery Company, Limited, was held at Scotsburn, on Tuesday, March 10. President D. W. Murray in the chair.

The Directors' Report, presented by the President, was most encouraging. During the year, $55,305 was paid for cream as compared with $44,788 in 1912 and $36,181 in 1911. Many new improvements were added during the year and a practically new system of bookkeeping adopted; the work all better systematized and now managed entirely by local men, under the able management of Mr. Robt. T. Stewart. The system of co-operation in the handling of eggs was not yet perfected but it was expected it would be shortly. About 6,000 dozen were handled during the year. The quality of eggs was pronounced excellent and many complimentary letters were produced from the buyers.

The Secy-Treas., R. T. Stewart, in his Annual Report, showed a turnover during the year of $73,240.79. Paid for Cream $55,305.06; Eggs, $1217.29; Feed, $7809.27.

The usual dividend was paid and a nice sum set aside for contingencies These accounts were all vouched for by the Auditor, B. Gravestock, C. A.

The retiring Directors were re-elected, making the Board the same as in former years.

The Company will not handle feed during the coming year, this branch of the business being handed over to the new Co-operative Trading Company established last year.

W. A. MacKay, Dairy Superintendent, was present and gave a short talk on the Development of Co-operative Dairying in the Province, and of the necessity of greater development along productive lines.

The meeting was perhaps the most enthusiastic ever held by this strong Co-operative Company. All the reports were well received. The business is now on a splendid paying basis as a co-operative concern and the great principles of co-operation are getting more firmly imbedded in the district yearly.

We need many more of just such concerns in the Maritime Provinces.

I believe in Horace Fletcher, Dr. Dewey and Joseph Wallace. Some of all, and all of some, and the substance of these is this: Mastication is the thief of time; but he is an honest rogue, for he returns his plunder with interest. The wise man is he who, in the matter of food, first choose it, then chew it. Bolt your food, and you bolt a door—against health. A soft answer turneth away wrath, but soft food turneth little Mary. Hard food and hard work lead to easy old age.

SEED OATS

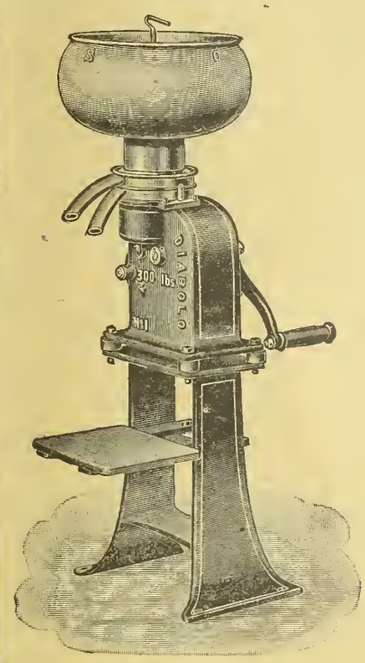
Now landing 6,000 Bushels FANCY SEED OATS. Gartons Abundance, Newmarkets, Banners. The finest selected *Strictly Seed Oats* produced in Canada.

Price right.

C. H. PETERS' SONS, Limited

Peters' Wharf, St. John, N. B.

THE "DIABOLO" CREAM SEPARATOR



The "Diabolo" Separator is a high grade machine. Its record in skimming capacity has never been beaten. It is simple to handle, easy to clean and light to work. On account of its accurately machined parts it runs noiselessly and smoothly, while wear and friction are reduced to minimum. Fully guaranteed for ten years.

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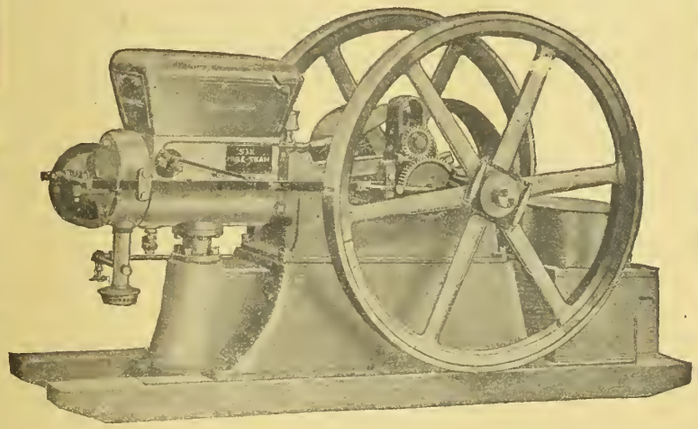

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Berkshire Pigs

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If you want to get into an A1 Clydesdale Stallion in a year or two, now, is your chance. We have a yearling that will make them all go. Write for price. Our first litter of Berks is due in April.
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Volume 19. SUSSEX, NEW BRUNSWICK, APRIL 21, 1914. Number 14.

Some Practical Suggestions on Soil Cultivation

Address by W. W. Baird, Supt. Dominion Experimental Station, Nappan, N. S., Before the Nova Scotia Farmers' Association and the New Brunswick Farmers' and Dairymen's Association at Their Recent Annual Meetings

Mr. Chairman and delegates it gives me a great deal of pleasure to attend this convention to meet and exchange ideas with you.

I also esteem it an honor to have the opportunity of discussing with you for a short time the subject of Soil Management, which is to my mind of very great importance to us as farmers, if we expect to attain a high standard of pronciency in our agricultural pursuits and which is one of the means of success in farming if properly considered.

We cannot, however, in the short time at our disposal, go into the subject very fully. We must, therefore, confine ourselves to the more important factors underlying soil management.

It has been rightly said that all nature is variable but few things in it are more variable than the soil covering the globe. Therefore, the first step for us to take is a study of of the various types of soil and to learn as much as possible of their peculiarities and requirements in order that we may be able to handle them to the best advantage.

Soils are not, in a very large measure, controlable; we must take the soil as we find it on our farms. We may have at the outstart the privilege of selecting our land but once settled we are compelled, so to speak, to do the best we can with it. Hence the phase of the subject is almost most a negligable quantity, except in so far as the methods which are to follow should suit the land under cultivation.

Generally speaking and for most purposes, we can classify the different kinds of soil as follows: coarse gravelly, fine sand, light loam, medium loam, heavy loam, clay, hard pan and black muck. I take it that this includes pretty nearly the whole range of soils we have in the Maritime Provinces. Fortunately or unfortunately we find these varieties all on the same farm.

We know that the soil is formed by the disintregation of rock or rock particles, caused by the action of heat, water, frost, corrosion and weathering of all kinds. Hence we say that most soils are made up of rock particles of various kinds, but associated with these are varying amounts of organic matter derived from vegetable matter or plane tissue in the six different classes of soil varying in equality according to the percentage of the small or large rock particles. They contain also humus, which is the decayed vegetable matter. For example, if a soil contains 90 per cent of very minute rock particles and very little humus or no humus it would be termed gravelly. If it should contain an equal amount of either and a goodly amount of humus, we would term it loam. Further, one that contains a large percentage of vegetable matter is termed black loam. Hence the gradation of our soils.

Minnie and Major

Fowler Bros'. Grade Clydesdale Team, that figured so extensively in the winnings at the 1913 and 1914 Maritime Horse Shows, Amherst, N. S. These horses were sired by Prince of Annick.

From the aforegoing it is quite evident that the methods of soil culture must vary with the various types of soils, if we wish to realize the most out of them. For instance, the same methods of handling clay soil would not be suitable for sandy soil. Why? Because in one case the object should be to make the sandy soil more retentive of moisture and fertilizer for the immediate use of the crop. Whereas, in the case of clay soil, the object should be to render it more open and thereby more suitable for plant growth. Further, the latter soil may be fertilized for several crops without the danger of much loss occurring from leaching. Thus the question arises as to how we can handle the different soils to the best advantage. This must necessarily be determined to a great extent by "the man on the spot."

In other words, under our varied conditions, a set of hard, fast rules, suitable for farmers, cannot be worked out to our advantage. On the prairie lands which are fairly uniform this may be done in a measure. In the West, they have large tracts of land similar in character and generally speaking conditions are similar and the climate is also not so changeable as ours, all of which goes to make it desirable to follow certain rules in regard to the handling of their crops, at least, over a larger area than we can in the Maritime Provinces where our climatic and soil conditions vary so. There are, however, soil management principles familiar to all of you. For instance, you are all agreed that to incorporate manure with soil thoroughly will give better results than to do otherwise. For example, take the vegetable grower, he goes in for intensive farming so to speak, and he wants to make just as much as possible out of a small area. Hence he finds that to put his manure through a manure spreader, which breaks it up well, and ploughs it in then to incorporate it thoroughly with the soil by repeated cultivation, gives him better results than to spread it on, unevenly and plough it under in lumps. If then these methods pay the vegetable farmers, they would most assuredly pay us. Many farmers try to handle too great an area, more than can be properly fertilized and cultivated. By following the methods of the vegetable farmer we would get better results.

With smaller farms there naturally would be more of them and it would stimulate social life, which would make the country life more attractive for many.

THE USES OF THE SOIL

First, in the agricultural sense the most important use of the soil is as a storehouse for moisture for the use of the plants. The productiveness of any soil is to a great extent determined by the amount it is capable of holding, by the manner in which it is held and by the readiness and completeness with which the plant growing in it is able to withdraw the water for its uses.

Second, a store house from which the plant derives ash ingredients, the lime, potash, phosphoric acid and other materials, all of which are derived from their gradual breaking down of the soil grains.

Third, it is the laboratory in which a great variety of microscopic forms of life are at work during the warm portion of the season, breaking down the dead organic matter of the soil and converting it into nitric acid and other forms of plant food available to the higher plant life.

Fourth, it acts as a medium in which plants may place their roots in such a measure as to enable them to stand erect in the open sunshine and moving air currents.

Fifth, the soil is a means whereby the sunshine is changed into energy available to the needs of organism and roots of plants without which plant life could not exist, for all its movements must originate primarily from the sunshine altered in the soil or plant tissues above the ground.

TREATMENT OF SOILS

Experience has taught us that coarse, gravelly soils are the most difficult ones to handle profitably The only salvation is the addition of humus in considerable quantities. Even then we are not sure of extra good crops being obtained, excepting in the wet season. Fine sand likewise is a soil very difficult to obtain a good crop from, in that it is open and very porous, allowing water to

percolate through it very rapidly. It is then absolutely necessary to have the humus in considerable quantities in order to make it more retentive that it may give up the plant food more readily.

Light loam, on the other hand, is likely to give us best results under average conditions. On this soil we get good crops of clover, excellent crops of roots and corn and a fairly good crop of grain. It being fairly well supplied with humus is capable of holding sufficient moisture for the crops and is yet sufficiently open and porous to allow the excessive soil water to percolate away.

Coming to the clayey soils which are equally as good for giving good crops but are slightly more difficult to handle; though with the addition of manure or green crop ploughed under, this difficulty is overcome to a greater or less extent. Under adverse conditions, the soil which is most difficult of any to handle is a clayey soil. If too dry, it bakes very hard, making it very difficult to get into condition for crop production. It is naturally quite wet and if the season happens to be such it is pretty nearly impossible to work it with any satisfaction. But again, these difficulties can be greatly overcome by drainage and the addition of humus in the form of manure and green crops which will make the soil much more porous and friable.

Of all the varieties of soil the one that questions us the hardest is the black muck or peaty soil in that they are the most difficult to manage. First, it is hard to keep free from weeds; secondly, hard to handle in the spring; thirdly, it is the most difficult of all soils on which to get a catch of grass.

From the foregoing we have gathered some idea of the relative value of the various types of soils. We have also noticed that there are two things that enter into soil management that are essential. They are humus and moisture. Hence there must be certain principles to be followed in order to have these two essentials present in the soil in the right amounts when needed.

Let us first consider humus: As before stated, humus is decayed vegetable matter formed in the soil. It can be produced in various ways, usually by the application of barnyard manure or the ploughing under of green crops. In order to receive the best out of barnyard manure, which is undoubtedly the farmer's best fertilizer, it must be applied in as fine and as uniform a state as possible. In this way it can be ploughed under and with repeated cultivation be more thoroughly mixed with the soil particles. Thus the plant food it contains will be much more readily

A Good Mount

H. W. D. Armstrong, Fredericton, N. B., on his splendid Hackney-Thoroughbred Mare, Empress Champion combination carriage and saddle horse winner of the Col. H. Montgomery-Campbell Cup at the 1914 Maritime Horse Show.

available to the plants' immediate use than if it had been supplied in large lumps and poorly mixed with the soil. Barnyard manure not only adds plant food to the soil but when applied to sandy or gravelly soils improves their texture, making them more retentive to soil moisture. Then, too, the decomposition of manure takes place and heat to a slight extent is produced which makes the condition of the soil more suitable to germ life, and they become more active. We must also remember that the decomposition of manure should be slow, otherwise a great deal of its valuable plant food "Nitrogen" may be lost in the form of ammonia. This is true where it has ready access to air. Hence we will see that in sandy and gravelly soil we are more liable to loss as such soils are more open and porous. There is, too, considerable loss from percolation or washing away of plant food, hence it would seem most advisable not to plough your manure too deep in the soils, nor to add a grat deal more than required for the immediate use of the crops. The physical conditions of such soils will be changed, however, and made more retentive of plant food and moisture as soon as we are able to get a crop such as clover growing in it which send its roots down deeply into the soil and in turn would add humus to a greater depth by the decaying of the roots and thus improve the texture of the soil to such an extent that very little leaching would occur. If we add barnyard manure to the heavier soil, such as heavy loam or clay we find that it makes them more open and porous, more friable and easy to work and put them in better shape for the conservation of moisture. It also aids in good ventilation, all of which facilitates the ready production of available plant food. These types of soil alone retain fertilizer much longer than do the former types owing to less possibility of leaching.

Green crops, ploughed under, have practically the same effect on the various types of soils as has barnyard manure. One would think, however, and rightly so, that such crops as clover are more beneficial in the improvement of soil texture because these crops have a very extensive root system, which penetrates very deeply into the soil and when these roots decay they will supply humus to a greater depth than we can by ploughing in the manure. They will improve the texture of the soil to a greater depth and thereby increase its productive power more than is possible by the application of manure.

We must not forget that it is not always quantity but quality that is needed. That is to say that it is far more profitable to keep adding a little fertility such as barnyard manure or green crops in the form of clovers, especially, if the manure is properly applied and the green crop well ploughed under, than to add large quantities at long intervals. "A little at a time and that done well" is a very good rule.

From what has been said we can readily see that in order to get the various kinds of soil into as nearly a perfect condition as possible for the best plant growth the fertilizing materials should be well mixed with it and the soil must contain a certain amount of moisture and it should be in such quantities that the bacteria or germs which act on the various soil constituents, thus making them available for plant food, will be most active. That is to say the physical condition of the soil must be the best we can make it.

We have gone quite fully into the various types of soil and their physical requirements for productiveness, now we should consider as to what are the plant food requirements.

Officers of the 1914 Maritime Horse Show

Front Row:—Fred Henderson, Judge; W. W. Black, Vice-President for Nova Scotia; Lt. Col. Montgomery-Campbell, President; E. A. Trites, Vice-President for New Brunswick; Dr. J. A. Sinclair, Judge.

Back Row:—R. S. Starr and S. A. Logan, Directors; Frank Power, Superintendent of Arena; Morris Allair Scovil, Director; James F. Roper, Director; F. L. Fuller, Secretary-Manager.

From the composition of plants we can quite safely state that certain substances such as potassium, calcium, magnesium, phosphorous, sulphur, and iron and probably a little chlorine are essentials Further experiments have shown that should any of these be absent the crop will not develop or mature properly. These substances occur in plants as salts, being combined with phosphoric, nitric, sulphuric and various vegetable acids. Sometimes these metals are present as chlorides. Phosphorous occurs as phosphates and sulphur as sulphates and in the ash of plants the basis of nitrates and of salts of vegetable acids are found in the form of carbonates. The above mentioned ingredients of plants are generally termed the incombustible parts while carbon, oxygen, hydrogen and nitrogen are termed the combustible ingredients. Hence the plant is made up of a combination of all these various forms.

Soil analysis generally show these elements to be present, though not always in elementary form, but combined in a great variety of ways not always available for the plants' immediate use, but under favorable conditions plants are able generally to obtain their needed supply. By favorable conditions we mean that there should be plenty of moisture in the soil to aid in dissolving the soluble plant ingredients and to carry it into the roots and on up to the leaf where it is prepared for building up the plant. That there should be plenty of good, pure air circulating through the soil to supply oxygen and nitrogen for the nitre forming germ which acts on the ammonia salts in the soil changing them into nitrates, the latter form being used by the plants, and also carry off the excessive amount of carbon dioxide, which is set free in the soil.

TEMPERATURE OF SOIL.

The temperature of the soil is likewise an important factor. It is known that none of the chemical, physical or biological changes essential to the development of the plant food in the soil and to proper root action of plants can take place in the

Blackmail and Business

The Eastern Farm and Home and Fur Farm Review is evidently after business at any cost. One of the leading and most highly respected breeders of the Maritime Provinces had an experience at the Amherst Horse Show, which suggests that the management of that paper is out on a "your business or your reputation" basis.

The gentleman in question was approached by the manager-editor of Fur Farm Review and asked to subscribe.

The breeder declined and unhesitatingly stated that he was a subscriber to the Maritime Farmer and he proposed to stand by the paper which has served the interests of agriculture in Eastern Canada for twenty years.

The manager-editor of Eastern Farm and Home promptly informed the breeder that his paper would give the breeder's stock a black eye when the fall exhibitions came around.

Blackmail is rather a dangerous weapon. The criminal laws of Canada have provided penitentiaries for those who use it. The little incident above shows particular solicitude for the welfare of farmers.

Apart from the scandalous suggestion that a club is to be used on persons who do not come over with business for Fur Farm Review, the general public can from their own opinion as to where they will come in under the advanced system of forcing grist to the mill.

Apparently the standard of the quality of a breeder's stock is to be the amount of money he is willing to contribute to Fur Farm Review. If he does not "come over," he is to be given a "black eye" as per the threat of the manager-editor of the journal. The man who wants to buy live stock will be placed in this position, provided he accepts, Eastern Farm and Home as his guide: "he may be forced to conclude that the high grade stock of a non-contributor is worthless and that the worthless stock of a business contributor is "high grade."

We make no comment. We will allow the breeders and the general public to draw their own conclusions.

absence of energy stored up in the soil as indicated by its temperature. When the temperature falls below 32 degree F. practically all life processes becomes dormant and for the greater portion of cultivated crops the soil temperature must rise to forty degrees before growth will start. The temperature at which best results are obtained lies between 68 aod 85. Nitrogen forming bacteria will not start action till at least 41 to 45 degrees are reached. Hence we can readily see the importance of heat in the soil.

Generally speaking, these favorable conditions are brought about by good soil cultivation and fertilization, for without the best conditions for plant development, plant food will be wasted or not made proper use of. Here again, we may say that the methods and application must conform to the condition and all details must be worked out by each farmer as will meet his conditions best.

Next we might take up tillage, the chief factors of which are:

First, to destroy and prevent weeds and other undesirable vegetable growth.

Second,to place beneath the earth manure, stubble and other organic matter, where it will readily be converted into humus.

Third, To develop various degrees of openness of texture and uniformity of soil conditions suitable to the planting of seed and the setting of plants.

Fourth, to modify the movement of soil moisture.

Fifth, to change the temperature of the soil.

TWO CLASSES OF TILLAGE

Now, tillage can be divided into two classes, viz., preparation tillage and maintainance tillage.

By preparation tillage is meant the tilling of the land before planting. The heavier and more compact the soils the greater the necessity for thorough and deep cultivation in order to get the manure well mixed with the soil thus making it more porous and open to admit air and enable the plant roots to penetrate deeply and in so doing stand firmer and thus feed from the plant food deeper in the soil. Especially should this be true in growing a crop like potatoes, that send their roots down very deep. Such land must be fairly loose and open to permit the tubers to develop properly. Experience has taught us that they do best on a friable loam, but sometimes we are compelled to grow them on a heavier soil and in such a case you can see the importance of a thorough drainage and proper cultivation of the soil to a good depth before they are planted; because once they are planted we are unable to cultivate tnat soil to an appreciable depth afterwards. This rule holds equally true for all crops but not to so great an extent perhaps for some as for instance a crop such as turnip with its less rangy root system will grow and do well on a much heavier soil than will potatoes and deep cultivation may not be necessary. Though this is true we must not forget that the more thoroughly we cultivate in the preparatory stage the better crop we are likely to get.

The maintainance tillage is the tillage required after the plant or crop has been sown and generally speaking should be shallow, the main object being to destroy noxious weeds and to leave a fine earth covering on the surface of the ground, to prevent evaporation. The younger the plant the deeper can the cultivation be between the plants, gradually getting shallower and narrower between the plants as they develop until there is danger of injuring the root, then stop.

We have only mentioned the heavier soils but we can readily see from what has been said that with the lighter soils the less depth should be cultivated depending of course on conditions.

By cultivating we destroy noxious weeds while they are yet young by turning their tender roots up to the burning heat of the sun. It is the agency through which moisture is conserved in the soil, by breaking up the capillary action and preventing the evaporation of soil water. We are all agreed that soil is made up largely of small rock particles. To illustrate how cultivation conserves moisture suppose you take a marble, dip it in water, and when you take it out it is covered with a thin film of water. All rock particles in the soil are just the same. They all have (when there is sufficient water in the soil and generally speaking there is) a similar film of water around them. Now as they are all touching together at various points, this film of water is more or less continuous and as the heat from the sun dries up the moisture from the top particles, they in turn draw from that neighbor below and so on down, so that if the action continued a great deal of the soil water needed for crop use would soon be lost but by cultivaelon we separate these top particles from their neighbour below, hence for a time they are cut off as it were and they become dried out and as we know from experience these very dry particles of soil will be very slow in making the necessary connection to draw water from their neighbors unless moistened by rain. A good example is the sponge. Take a sponge that is very dry, place it in water. Will it take up water very rapidly at first? No. But moisten that sponge well then squeeze out all the water you can, replace it in water and it will take up water quickly. The same thing is true of soil particles.

Now temperature comes in here and this is where cultivation will improve the temperature of the soil. We know from experiments that it requires a great deal more heat to warm up one pound of water than it does one pound of dry soil. In fact it takes 100 heat units to raise the temperature of 100 lbs. of water one degree, while it only takes 20.86 heat units to raise 100 lbs. of dry humus one degree. Sand 10.08. Loam 14.96 and so on for the other types of soil.

Now if by proper cultivation we cut off the rise of soil water by evaporation and our top few inches of soil, which is used for the seed bed, becomes moderately dry, will not the sun's rays have a greater effect on it than if it contained a lot of water? You know it certainly will. You know a dry land heats up more readily than a wet one. Professor Grisdale, of Ottawa, found a difference of from 4 to 5 degrees in one to one and a half days. While this does not seem very great, it is nevertheless of a very great importance to us at seeding time. As before stated it requires a temperature of over 50 degrees to get good germination and good germination means a more vigorous growth.

It has also been found that to roll land first, then harrow, that the temperature of the first one and a half inches of soil was raised 10 degrees as against the adjacent land not rolled, also to a depth of three inches a difference of 6.5 degrees. This is certainly of value to know.

VALUE OF DRAINAGE

Further by thorough cultivation, we open up the soil and allow a more free circulation of the air, which is essential in the soil. Here, too, drainage will come in as a very important part of soil cultivation. Take for instance water-logged soil. The water there has become stagnant The plant germs soon use up all the oxygen contained in it. The rate at which the oxygen from the pure air above the soil can make its way down through the stagnant soil water is all too slow for the use of plants and germs living therein. The fact also remains that the nitrogen forming bacteria are able to do their work properly hence we can readily see the need of drainage for such soils. In fact this holds true of any soils that contain an excessive amount of water and we must assuredly have lots of these in the Maritime Provinces.

Experiments go to prove that in order to get profitable returns for our time and labor that it will pay to underdrain artificially such lands as black muck, loam and clay.

By underdraining we are able to work our lands a great deal earlier in the season. That alone means a great deal, for it is an old saying "a day in spring means a week in the fall." Now a season like that just passed that would have meant thousands of dollars to the farmers of the Maritime Provinces alone. We, at Nappan, were able to get practically all our grain harvested and stored before the wet spell came on, where-

Continued from page 495

The Standard Bred Mare, Mamie Jay

First in her class and first as Roadster in harness. Winner of the Hotel St, Regis Silver Cup at the 1914 Maritime Horse Show. Owned by A. Chas. Thompson, North Sydney.

SOMETHING ABOUT OURSELVES

It has never been the policy of the Maritime Farmer or its editors to do a great deal of horn tooting. Their policy has rather been the reverse. They have pinned their faith on the old, yet ever new, adage "By their deeds ye shall know them." In this issue we are going to digress a little

As editors of the Maritime Farmer we have striven to give the best that is in us, so far as lay within our means and power in giving to our clientile a clean paper, keeping closely in touch with agricultural conditions in the Maritime Provinces.

That our efforts have been and are appreciated is vouched for by the fact that over 11,000 of the most progressive and intelligent farmers of Prince Edward Island, Nova Scotia, and New Brunswick are enrolled on our subscription lists. Many of these have been constant subscribers ever since the Farmer was brought into existence, nearly twenty years ago.

The expressions of good will and appreciation that reach us in nearly every mail are most cheering and an incentive to put forth special efforts to still further our usefulness to our readers.

But our readers are not the only satisfied clientile we have Advertisers who use the columns of the Maritime Farmer have no hesitation in announcing that, without an excepeion, it is the best advertising medium in the Maritime Provinces, when the object is to bring their wants and wares to the attention of agriculturists. We have numerous letters on our files that bear testimony to the good results that our advertising patrons are receiving.

Among our present day advertising patrons are business firms, who have not missed a single chance to use our columns since we made our first bow to the public twenty years ago.

Despite the fact that we have received a fair share of the support of the farmers of Maritime Canada, it has not always been "just plain sailing" for the Maritime Farmer. It has taken years of hard work and a lot af cash to acquire the position of confidence we now hold.

We have followed the policy of giving an accurate report of exhibitions fairs, etc., without fear or favor. We have done so, although on more than one occasion we have been approached by an unscrupulous breeder with the request that his stock be given an undue boost to the detriment of some one else's, who may have stood a little higher in the winnings. Needless to say the same request never came twice from the same party as he was given to understand in no uncertain terms that the editors of The Maritime Farmer did not sail their ships in such turbid waters. We are pleased to give the small exhibitor as prominent a place as the large exhibitor, if his goods warrant it and the advertiser does not get any more publicity than the non-advertiser unless his stock warrants special mention. The Maritime Farmer's opinions are not bought and sold, and the men responsible for them have some standing in the community in which they live, as well as among the men who are doing things agriculturally in Canada.

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

RATES FOR CASUAL ADVERTISEMENTS.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

APRIL 21, 1914.

DATES OF ISSUE.

May 5-26
June..... 9—23

BALANCING THE ROTATION

In arranging a rotation to meet the needs of a general farm it may be well for the manager to have four objects in view when the crops are planted—cash, food, feed and fertility. It is well to remember also that these objects bear a close relation to each other, that the one should supplement the other. Where a large portion of the farm is planted in orchards or potatoes and the acres in feed reduced, it means that feed must be bought and that the manager of the farm must pay the expense of producing the feed crops, the cost of marketing and, in addition, a profit to the producer. If the crop designed for cash income be allowed to reduce the fruits, vegetables, swine, cows, sheep and other crops and animals for food, the manager must buy these products with the cash crop and pay a profit above the cost of production.

To buy products for food, feed or for fertilizing the soil when these can be raised on the farm is an economic loss' unless the cash crop afford a profit large enongh to cover the cost of marketing the other products. The same objection could be raised to planting too large acreage in feed crops or food crops.

By planning the rotation wisely the crops may be distributed in correlation with the livestock so that each will supplement the other, so there will be little loss of time in cultivation and harvesting and so the waste of time and equipment required to market the crops will be reduced to a minimum. Food for the manager and his family should be produced, so far as is economical; feed must be produced to supply the animals; the fertility of the soil for future crops must be provided in cover crops, legumes and other changes in the rotation.

The equipment, such as men, teams, implements, etc., must be used in such a manner that there will be a profit upon the investment and a salary for the manager. All of this need not be expected in cash at the end of the year, as a portion of it may be in young animals, reserve feed or surplus food, all of which may be converted into cash should it be necessary. The increased fertility will also be an asset, as it will bring in greater income in larger crops, which means less expense in production.

DIVERSIFY FOR SAFETY

Intelligent diversification of crops is the safest practice unless one be especially well prepared to specialize. Specialization is desirable in most lines of business, put in farming it is not always safe for the average farmer. For the specialists in farming it is desirable; the average man on a general farm will find diversification safer and more profitable when results for a number of years are compared.

But diversification for a variety only is not desirable. In the system of rotation every crop produced and every animal raised should correlate with every other crop and animals in such a way that the plan of farm management utilizes the equipment to its highest efficiency. The plan must be arranged so that the capital invested and the labor performed will bring in profits not only upon the investment, but a salary for the manager.

Intelligent diversification is economical in that it utilizes the equipment to the fullest extent;it furnishes employment for men and teams and produces feed, food and fertility crops with one or more crops for cash income. This is safe farming and it is best for those not situated favorably for specialization.

THE SPIRIT OF ARBOR DAY

Should not the Arbor Day spirit reach much farther than the setting out of a few trees and shubbery? Could it not also be profitably set aside as a clean-up day for the country villages, churches and schoolhouses? There are the signs of every kind on beautiful trees, on fences, on stables and other small puildings which have been placed there without permission of the owner and with no thought as to appearance, that might be removed. Rubbish of all hinds, ash piles, exposed manure, dead branches of trees and much other unsightly trash that has accumulated during the winter can be cleaned up. It is such things as these that mar the beauty already created by trees. Although Arbor Day is set aside for the planting of trees and protection of birds, its significance would be greatly increased if the community is also beautified by cleaning it up.

ADAPTATION OF LEGUMES

The many advantages in growing the various legumes such as peas, beans, clover, alfalfa, vetch, etc. should be apparent to all who have given serious consideration to the relative merits of crops grown on our farms. When we enumerate the various purposes for which crops are grown we are apt to decide that the legumes such as are adapted to our conditions in the Maritime Provinces should be grown more extensively. These crops are needed in nature's plan of restoring worn soils and conserving food to make the earth maintain our rapidly increasing population. They are the one type of plants, so far as our present knowledge is able to determine, that make land richer in nitrogen under certain conditions after producing the crop.

It is an interesting story familiar to those who have studied plant life of the relation between plants of tee legume family and certain soil organisms by which the plants furnish a home free of rent and receive in return free nitrogen on their roots in the form of nodules. This phenomenon has a direct bearing upon human life and human happiness, because it provides a way to restore our worn soils in nitrogen without expensive fertilization and makes it possible for soil improvement by judicious crop rotation.

In feeding livestock the plants of the leguminous family are very valuable, because they are rich in feeding nutrients, especially protein, which is an expensive constituent when it must be bought in feed. Most of these legumes are exceptionally palatable to stock; they mature quickly as a rule; endure thin soil; stand drouth and are not, as a rule suseptible to insect attacks and disease ravages.

It seems to have been designed in the economy of nature that the soil should produce both legumes and non-legumes and that the one should follow the other in succession.

TIMELY WORK WELL DONE

Everyone must have noticed at the races usually held at the fairs how extremely important it is for a horse to get an even start in the race. With only a few inches behind in the start the horse is greatly handicapped in winning the race.

This is descriptive of the planter who must for any reason get behind with the preparation of the seedbed and the planting of early crops. His increased energy must go, not in taking advantage of his work and doing it better, but in gettiug over the field in any manner. This means poor preparation and planting under unfavorable conditions, which may never be overcome in a satisfactory manner.

There is no other occupation of which we have knowledge that diligence and determination count for more than in farming. Half-hearted work or work done in a hurry may and generally does cost the manager dearly. The seasons are uncertain and he can never be sure that his honest, earnest endeavor will be rewarded amply, but he can depend upon paying the penalty for neglect and for rush and hurry in field work.

Do what we may, we sometimes get behind with our work and find to our sorrow that we are late with planting, cultivating, harvesting, etc. We can never tell what will be the condition of the weather and that is an important reason why we should look for the worse and get ready for the best.

PLANTING HOME GROUNDS.

The casual observer in passing through the country may not make a close comparison of costly and pretentious homes with the modest building and the cabin, but his attention will more than likely be attracted by the planting of the home grounds. Stately shade trees, attractive shrubs and showy flowers will be admired and they will cover many defects that might otherwise be apparent in the home itself.

A little time and small expense can be no better employed in improving the home than in planting the home grounds. A few trees properly set in ihe yard, a few shrubs rightly located, and a few flowers carefully cared for will increase the value of your farm and make farm life more attractive. If you have ever seriously considered selling the farm, plant trees, shrubs and flowers and these will either sell the farm or they will make the price prohibitory to the buyer.

POWDERY SCAB OF THE POTATO

This disease has been known in parts of Europe for more than half a century. It has been studied by a number of different men and has had a number of different names. It was first recognized as a serious enemy of the potato when it appeared in Ireland about twenty years ago. Within the last few years it has reached Canada and is now found in a number of districts in New Brunswick.

The fungus causing Powdery Scab belongs to one of the lowest groups of organisms, the Myxomycetes or Slime fungi, the lowest group considered by the botanist and one that is very near the dividing line between the vegetable and animal kingdoms. The distinctive characteristics of the memebers of this group are the production of amoeboid cells or masses of naked protoplasm composed of numerous unwalled units. These commonly develop inside the vegetative cells of the host plant as small foreign bodies, differing in this way from nearly all other kinds of fungi that produce a regular mycelium or root-like growth that attacks the cells from the outside. The growth of these foreign bodies inside the cells of the host plant causes the production of the abnormal forms or deformities, such as are seen in the club-root, of cabbage, the most common example of a disease caused by a fungus of this group. The particular fungus causing Powdery Scab in the potato closely follows this habit by producing in its bad stages gnarled and misshapen tubers showing large sores and areas of corky tissue.

APPEARANCE OF POWDERY SCAB.

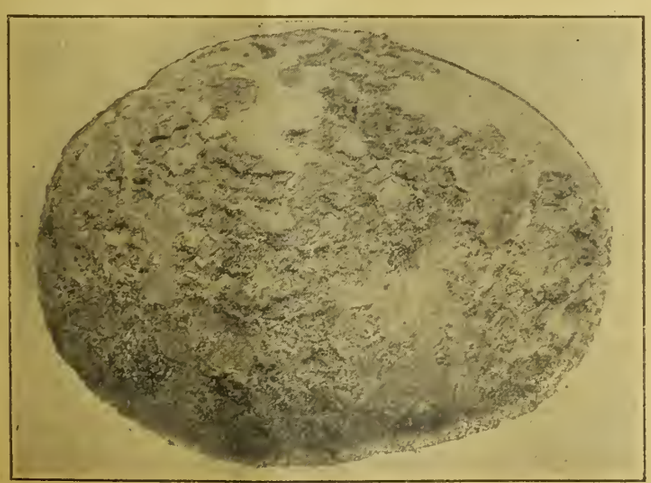
The most characteristic feature of the disease in its mild form is the production of scab spots on the surface of the tuber. These first appear as small pimples on the skin of the potato, later on they burst up through the skin and appear as dark, raised sori exposing a mass of olive-black spore balls within. These spots vary in size, but are usually about one-eighth inch in diameter and either raised or depressed. If unrubbed, they appear as dark, raised sori, with the skin at the edges turned back exposing the mass of spore balls. When rubbed, the raised portions of these sori crumble into a mass of what appears to be dust. This leaves the spot as a slight depression in the skin of the potato (a stage that it is very easy to overlook). Each little grain of the dust-like powder rubbed off is a "spore ball," and is composed of numerous spores bound together into a sponge-like mass. These soore balls spread the disease from field to field and from farm to farm and remain in the soil where a diseased crop has been grown, as a source of infection for succeeding crops.

If the attack is a mild one, it only amounts to anumber of scab spots on the skin of the potato. These render the tuber unsightly, but do not injure it for food. Unfortunately, however, the disease often reaches a more severe stage and causes the formation of open sores and misshapen tubers that are unsaleable and almost unfit for table use. A still worse feature about the disease is that the soil where an affected crop has been grown is sure to be infected with the spores of the fungus and any crop of potatoes grown on the same field within ten years is liable to become affected.

HOW POWDERY SCAB MAY BE DISTINGUISHED FROM COMMON SCAB.

Powdery Scab spots are small in size, raised and dark in color. The skin of the tuber is nearly always turned back at the edge of the spot. If the potato is washed and allowed to dry slowly in the air the scab spots become nearly black in a few minutes.

Common Scab spots are usually from one-quarter to one-half inch in diameter, are flat or sunken and have a granular appearance. When washed they become lighter in color and when allowed to dry in the air are a light brown or mud color.



Ordinary or Common Potato Scab.

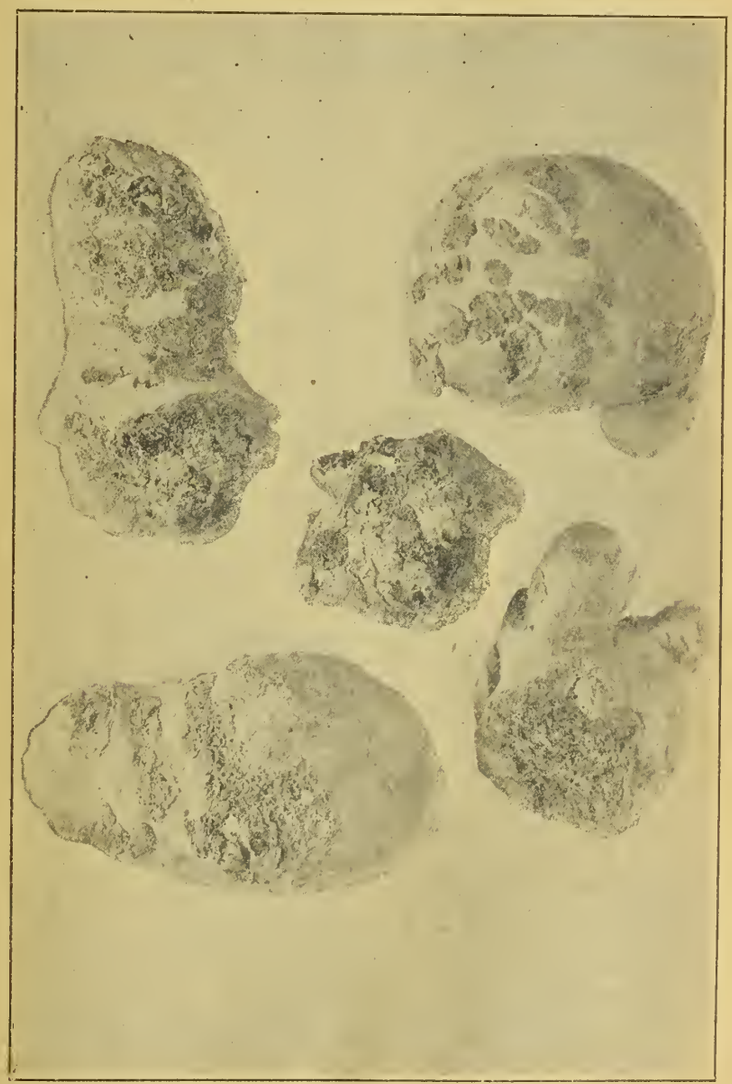
MEANS OF SPREADING.

Inspection work in the Province brought to notice several districts where the use of a hired potato planter on a number of farms appeared to be responsible for the spread of the disease. In one district over twenty farms along one road showed more or less infection, not generally amounting to more than two or three per cent. One farm was found where nearly seventy per cent. of the potatoes showed Powdery Scab spots. A hired planter has been used for two years on this farm and on all the others where the disease was found. This seemed to point to the badly infested farm as having been the seed ground from which the disease spread to the others. It was further learned that, as all were growing the same variety of potatoes, it was a common practice when planting was finished on one farm, to carry whatever seed was left in the hopper of the machine on to the next farm. To emphasize more strongly the spread of the disease in this way, three farms were found in the midst of the infected area where a private planter had been used. This planter had never been used on other than the three farms or with other than the seed grown on those farms. No scab spots were found on the potatoes on these farms.

Several cases were found where the infection could be traced back to the purchase of seed from a farm where the disease was present or from a district where the disease was known to be prevalent.

Several cases were traced to a possible source in the use of old potato bags sent out from potato warehouses where diseased potatoes had been handled. These bags were sent to the farms and used to "bag-up" the potatoes in the cellars, giving a good chance for the spores to be shaken off the bags uoon the potatoes intended for seed.

An examination of the scraps being obtained by a farmer from a city hotel for pig feed revealed numerous Powdery Scab sori on the potato peelings, a possible cause of any infection that may appear on that farm.



Powdery Scab of Potatoes, showing the advanced stages of this disease.

One outbreak in an isolated district was traced to a possible source through the young men helping in the potato harvest in infected districts and carrying back to their homes large specimens or specimens of new varieties for seed.

A number of packages of diseased potatoes were found at exhibitions and seed fairs. These were placed beside numbers of packages, and visitors would pick up and handle both the diseased and the clean tubers sometimes putting them back into the wrong packages. If the potatoes exhibited were sold for seed or taken back to the farm for seed they would constitute a possible source of infection.

Some of the important features about the disease may be summarized as follows:

1. The disease in its mild stages causes unsightly scab spots on the skin of the potato.

2. In the severe stages the disease causes the production of deformed and sori-bearing potatoes that are practically unsaleable.

3. The spores of the disease remain virile in the soil for at least nine or ten years and will start an infection in crops of potatoes on the land within that time.

4. The disease once established in one field is spread by succeeding potato crops to other fields until the whole farm becomes infected.

5. The presence of the disease in the soil of any farm depreciates the value of that farm for any system of agriculture that involves the growing of potatoes.

6. The presence of the disease on one or two farms in a district depreciates the value of all the other farms in that district for the growing of export potatoes or seed potatoes.

WHAT TO DO IF YOU HAVE POWDERY SCAB ON YOUR POTATOES.

1st. Get rid of all the potatoes you have. There is no chemical remedy for Powdery Scab.

2nd. Obtain seed from a farm where you are sure the disease has not appeared; if possible, from a district where it has not been found.

3rd. Handle the seed potatoes in barrels, bags or baskets that have not been used for potatoes before.

In the centre is Common Scab o Potatoes; right and left show Powdery Scab in early stages.

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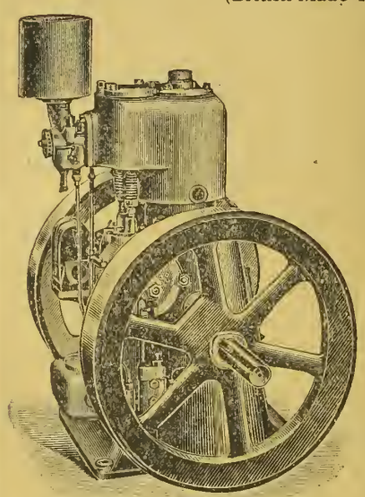

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4th. Plant the clean seed on land that has not grown a crop of potatoes for two years. Use clean implements.

5th. Clean your cellar thoroughly. Clean out and burn all rubbish. Whitewash the walls and ceiling and spray the bins and floor with a strong copper sulphate solution, 5 lbs. copper sulphate to 25 gallons of water.

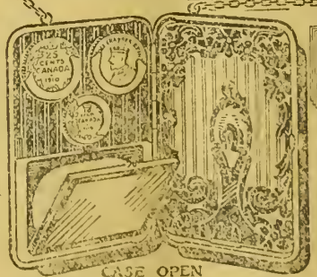
6. Use the fields where the diseased potatoes were grown for other crops, preferably a crop that you will not need to cultivate with the same implements you use on your potato field.

WHAT NOT TO DO IF YOU HAVE POWDERY SCAB ON YOUR POTATOES.

1st. Do not plant any seed potatoes from your own stock. Even though the tubers appear clean they may carry spores of the disease

FREE This handsome Vanity Case and a set of your personal Calling Cards

— A PERFECT COMBINATION — VANITY CASE, COIN PURSE & CARD CASE



CASE OPEN

Mrs John Brown
Brantford

LADIES and GIRLS! Here's the very thing you have been looking for and admiring in the jewelry stores and thought you couldn't afford to own. We have changed all that and are placing within your reach the most useful as well as the most attractive vanity case ever offered, and 25 of your own personal calling cards as well.

LOOK AT THE ILLUSTRATIONS and note the different advantages this handsome combination case shows. The outside of the case is beautifully engraved just as the illustration shows. Inside you have spaces for quantities of coins, the three sizes, quarters, dimes and nickels. Below this is a first class mirror which opens downward revealing a dainty powder puff behind it and plenty of space for a week's supply of powder. Opposite these is the card case where your calling cards are held in place by a gentle spring clip, or you can carry a handkerchief or many other necessities. These beautiful vanities are of the latest design, having all the appearance of the most expensive sterling silver cases that sell for $25.00 and more. They will give years of service and satisfaction, and we give you free with every case 25 fine English calling cards bearing your name and address and day put them if you wish.

HOW TO GET THEM FREE—Just send us your name and address and we will send you by mail just 30 of Yvonne's Hearts of Flowers, the latest Parisian perfume to sell among your friends at only 10 cents each. Eight different odors—White Rose, Lily of the Valley, Lilac, Wood Violet, Heliotrope etc. No trouble at all to sell; everybody wants two or three. You will sell them all in an hour. Then return our $3.00 and you will receive at once by mail, postage paid, the handsome combination vanity case, coin purse, and card case and the 25 cards with your name on each. Write to day before you forget.

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It is always the same in quality, dissolves evenly, gives a delicious flavor — and makes the butter keep.

USED BY ALL PRIZE WINNERS.

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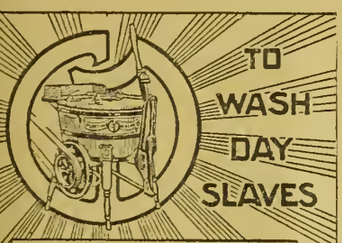

TO WASH DAY SLAVES

Women were slaves once. Some of them have never gotten over it, particularly on wash day.

If YOU are still bound and shackled by wash day slavery, investigate the "Playtime" Washer. Do not confuse it with the old-fashioned Washers that you have heard of. As a power machine it is specially adapted for the country where gas, gasoline, steam engine or windmill power is available.

See the "Playtime" at your dealer's or send to us for full information.

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RAW FURS

Our specialty is CANADIAN RAW FURS. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

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N. Hallman, Manager, 4 years with John Hallam; E. J. Hagen, Treas., 11 years with John Hallam; J. L. Jewell, Buyer, 6 years with John Hallam; G. Hagen, Secy., 7 years with John Hallam.

from having been in contact with the diseased tubers.

2nd. Do not plant potatoes on the fields that have produced a diseased crop within ten years at least.

3rd. Do not use for clean potatoes old bags, barrels or crates that have held diseased potatoes.

WHAT TO DO IF YOU HAVE NO POWDERY SCAB ON YOUR POTATOES.

1st. Select every year for seed, the best potatoes from the best producing rows you have; tubers that are clean, of medium size and regular in form. Pick these out in the fall when digging and store them apart from the crop that is for sale. This will keep your potatoes up to the standard and you will not need to change seed.

2nd. Avoid every possible source of seed or soil contamination.

Keep your farm free from the disease

CAP. XXIV.

(Passed 20th March, 1913.)

An Act to Prevent the Introduction and Spread of Insects, Pests and Plant Diseases, Destructive to Vegetation.

Be it enacted by the Lieutenant-Governor and Legislative Assembly, as follows:—

1. This act may be cited as the "Injurious Insect and Pest Act, 1913."

2. In this Act and in any regulation made thereunder, "Vegetation" shall mean any tree, shrub, vine or plant, or the fruit or any other portion of a tree, shrub, vine or plant.

"Inspector" is a person appointed for the carrying out of the provisions of this Act, and the Regulations made thereunder.

3. The Lieutenant-Governor-in-Council may take such regulations as are deemed expedient to prevent the introduction into the Province of New Brunswick, or the dissemination therein of any insect, pest or plant disease, seriously injurious to vegetation.

4. Such regulations may provide:

(a) For the prohibition generally or from any particular country, region or place, of the admission into the Province of New Brunswick, of any vegetable or other matter likely to introduce into the Province any such insect, pest or plant disease.

(b) The terms or conditions upon which any such vegetable or other matter may be admitted into the Province of New Brunswick.

(c) For the treatment and method of treatment to be given to any vegetation, vegetable matter or premises, to eradicate, control or prevent the spreading of any insect, pest or plant disease, seriously injurious to vegetation, and may prescribe whether such treatment shall be given by the owner or by a person appointed for such purpose.

(d) For the prohibition of or treatment prior to the sale of disposal of any vegetation or vegetable matter infected with any such insect, pest or plant disease.

(e) The occupier of the premises on which is discovered any such insect, pest or plant disease, shall immediately notify the Minister of Agriculture, and shall also send specimens of such insect, pest or plant disease to the said Minister.

(f) For the confiscation of any vegetable matter and the container thereof, if any, in respect of which a breach of this Act, or any regulation made thereunder is committed, and generally for any other purpose which may be deemed expedient for carrying out this Act, whether such regulations are of the kind enumerated in this section or not.

5. The Minister of Agriculture may appoint inspectors or other officers for carrying out this Act and the regulations made thereunder, and such inspector or other officers, so appointed, shall act under his direction.

6. Any inspector or other officer so appointed may enter in or upon any place or premises in which there is reason to believe that any such insect, pest or plant disease exists.

7. The Minister of Agriculture, upon the report of any inspector as to the existence of any such insect, pest or plant disease, in any locality defined in such report, may prohibit the removal from such locality of any vegetation, vegetable or other matter, which is likely to result in the dissemination of such insect, pest or plant disease.

8. Any person contravening or neglecting to carry out, or offering any hindrance to the carrying out of any provision of this Act, or of any regulation made thereunder, shall be liable, upon summary conviction, to a fine of not less than twenty dollars, nor more than one hundred dollars, together with costs, and in default of payment, to imprisonment for a period of not less than ten, nor more than thirty days.

9. The Lieutenant-Governor-in-Council may, by order, direct the inclusion in the provisions of this Act or any insect, pest or plant disease seriously injurious to vegetation.

10. Every Order-in-Council and regulation made under this Act, shall be published in the Royal Gazette in two consecutive issues.

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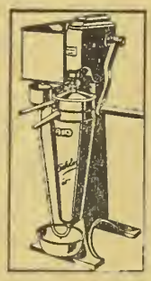

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HORTICULTURE.

The Scab Disease of Apples.

A Bibliography by Prof. Errett Wallace was published at the Agricultural Experiment Station of Cornell University last summer, on the "Scab disease of Apples." This little book covers the subject in a most exhaustive manner, and a magazine article on the principal points brought out should be of interest to the readers of the Maritime Farmer, who have not had the most perfect results in their endeavour to grow clean fruit. The experiments cited refer more particularly to the State of New York, but their conditions are so like our own that the conclusions arrived at should apply with equal force to either Ontario or Nova Scotia.

In 1904 a study was made of 564 orchards containing 4881 acres. The average net gain from spraying three times was $40.23 an acre. Another count was made including only those orchards that were otherwise well cared for; the net profit in this case was $74.23 an acre. This is what should be expected since trees properly cared for are better able to produce a large quantity of fruit than those not well cared for. Ordinarily the reduction in quality of scaby apples is considered to be the main cause of loss, but this, however, is only one of the several factors, early scab infection, if not controlled in some years almost entirely prevents the setting of fruit, and also reduces the size of individual apples It was noticed in two epidemic years of scab, that apples from unsprayed trees were uniformly smaller than those from sprayed trees. Another important factor is in the keeping quality of the fruit, and in the devitalizing effect on the tree after a case of severe leaf infection; this prevents the formation of fruit buds for the following year, and hinders the normal wood growth which is the basis for future crops.

Apple growers have believed for years that cold wet weather during the blossoming period, is the cause of failure of fruit to set; there is ample evidence to prove, however, that in some years (as in 1913) the scab occurs on the blossom stems and causes the blossoms or young fruit to fall. It is even claimed by one authority that cold rains at blossoming time are not a factor in the setting of fruit. In a bulletin published in 1895 Prof. Baily says : "The immediate cause of most of our apple failures the last few years, is undoubtedly the apple scab fungus. And again, "The qest proof that the apple scab fungus is the immediate cause of the greater part of the apple failures of Western New York, is afforded by the fact that thorough spraying with Bordeaux Mixture is usually followed by a great increase in the productiveness of the orchard." While Prof. Baily does not say just how the disease so greatly injured the crop, there is no doubt the decrease was brought about by the occurance of scab on the stems of the blossoms of young fruit at an early stage, causing them to fall.

Another authority, Selby in 1910, states, that scab often causes the young fruit to fall, and that often this falling or failure of the fruit to set, which is attributed to frost injury or poor polination, is really due to scab.

The spores that carry the disease over the winter exist in little sacs in the dead leaves on the ground, and only begin to mature at or about the time the apple blossoms are ready to open. Mature spores were first found at Cornell on May 4th in 1908, and in 1910 on May 1st, the blossoms were about to open in each case. These spores do not all mature at one time, as the ripening process may continue for about a month. The description given by Prof. Wallace of the method of studying this spore discharge is most interesting; glue coated slides were placed in an inverted position over moistened leaves containing the spore sacs. A study was made as to how many would be discharged in a given time from a given area of leaf surface; how soon after wetting the leaves the discharge would begin; how long it would continue, and how long a single sac would continue to discharge spores. The most spores were caught on the slides placed only one half a centimeter, or about one-sixth of an inch above the leaf. From a fragment of leaf one centimetre square 5630 spores were discharged in forty-five minutes. From this it is estimated that if the surface of the ground beneath trees set 40 by 40 feet apart were covered with old leaves, there might be 8,107,000,000 spores discharged from each tree in three quarters of an hour. of wet weather. This ought to be enough to account for any early infection. The discharge of spores began within five minutes of the time the trees were wet, showing that spore shooting begins almost as soon as rain begins, and if kept continually wet it was found that a single leaf would continue to throw off spores for about ten days. It is probable that in nature some leaves would be found that would continue even longer than this, and the fact that from some leaves operations would begin earlier than from others would lengthen the period still more.

Prof. Wallace artificially inoculated leaves to see if he could learn the time of development. On leaves inoculated May 16th scab first appeared on May 24th, on May 23rd no scab was visible. On May 28th many infections showed on each leaf, while only a few spots could be found on any uninoculated leaf. From the inoculation on May 26th scab first showed on June 12th. The period of inoculation would then be from eight to fifteen days. At Cornell in 1908 the first natural infection appeared on May 22nd; as the mature spores were found on May 4th, they assume that some infection occured during the rains of May 7th, 8th and 9th, since these furnished the most favorable conditions for infection after the spores had matured. This gives a period of inoculation of thirteen to fifteen days. Favorable weather for infection also occured on May 13th and 14th; in this case the period wonld be from eight to nine days, which corresponds with experiments made earlier in the season. At Sodus in 1910 spores began to mature about May 1st; rain fell on April 29th, and on May 2nd and 3rd there were three quarters of an inch inch of rain, with good condition for scab infection. Scab first showed on the leaves on May 12th, giving a possible incubation period of from nine to thirteen days. There were weather conditions that would permit infection earlier than this date, but there are two reasons why the experimenter does not believe that any occurred before May 1st. First, no spores were mature before May 1st, and second, no scab appeared on foliage sprayed on April 29th.

As the first spot showed on May 12th, secondary infection could take place at the first favorable time after this. On May 24th rainfell heavily followed on the 25th by cloudy misty, weather; scab appeared abundantly on June 7th, showing an incubation period of about thirteen days duration. The amount of rainfall is not necessarily the important item in determining whether or not a certain rain permits infection; a more important factor is the length of time the trees remain wet. The ideal condition of infection, is a gentle continued rain, followed by cloudy calm weather and a saturated atmosphere, in which case the spores are kept wet for a long time while in one position. Any condition, such as poor air drainage, or dense foliage that prevents prompt drying out of the trees after rain has ceased, is most favorable to scab development.

The following table should be carefully studied to understand at what stage of the development of the buds scab infection is likely to occur.

Correlation of the first appearance of scab due to primary infection and the date on which the infection probably occurred, with the development of spores and of fruit buds.

Year	Date of first appearance of scab	Condition of buds at date of first appearance	Probable date of infection. Wet weather	Condition of buds at probable date of infection	Date when mature spores were first found
1908	May 22nd.....	Petals falling	May 7th te 9th	Almost opening	May 4th
1910	May 12th.....	Mostly in bloom	May 2nd to 3rd	Ready to open	May 1st

Prof. Wallace believes that leaves and buds are susceptible to infection as soon as they are exposed, but that infection does not occur until the spores have matured, or until the first appearance of weather conditions favorable for infection following the maturity of the spores. According to his experience, from three years observation, the spores do not reach maturity until the blossoms are either opening or just ready to open, and therefore that there is little danger of infection before this time. In Nova Scotia this last season, infection took place much earlier than this, as proved by the experiments of the Government Horticultural Station at Kentville. Spraying on May 8th, just as the leaf buds were unfolding giving practically perfect results, while where the application was deferred until May 20th just before the blossoms opened twenty percent. of the apples were spotted. As everyone knows this was a most exceptional season, for on account of cold, backward weather, the time between the opening of leaf buds was nearly twice as long as the average.

Many have noticed that the leaves of blossom buds become scabbed earlier than the leaves of leaf buds. These leaves are the first to open in the spring; they are exposed to the earliest infection, while those from leaf buds do not appear until later (ten days) and thus escape it. The leaves from fruit buds are exposed to both first and secondary infection, while those from leaf buds are, for the most part, subject only to the secondary attack. The first spore infection, however, is often not severe in itself, but it is the original

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source of the secondary infection which is usually much more abundant, and which causes most of the scaby fruit as well as the greatest leaf infection.

From his experiments, Prof. Wallace came to the following conclusions: Early infection is caused entirely by the wintering spores on the dead leaves, and may appear during the first period of weather favorable to infection occuring after the spores have matured; usually not until blossomiug time or a little before. There is little danger that infection will occur much earlier, not because the leaves are not susceptible, but rather because the spores are not ripe.

The period of incubation may vary from eight to fifteen days, and after this period has elapsed a second crop of spores is produced, which may cause infection again or fifteen days after weather conditions favorable to their development; this generation may, in time, produce another, and so on throughout the season. However, the various infections do not always occur in successive jumps at intervals of eight to fifteen days as might be inferred from the foregoing. The first crop of spores do not all mature and discharge at the same time; they begin to ripen at about the time indicated above, and furnish a constant source of infection for a month or more. Thus individual infections belonging to the first generation may be started at several different dates, and produce their first crop of spores at different times.

After finishing the study of the life history of the scab Prof. Wallace takes up the most important subject of control. He says: "While there will always be enough fallen leaves exposed to permit infection, still if the orchard is plowed late in the fall or early in the spring, it is probable there will be much less danger from the early infection occurring about blossom time."

A striking demonstration is cited bearing on this point. Two MacIntosh orchards were under observation for several years; both were seriously effected with scab each year, and the loss from this cause was about the same in each; both orchards were in sod. About the middle of April, a fire started from a sugar camp, and swept over the entire area of one of these orchards. Not a scab spot could be found in this orchard the following summer, while the disease was quite common in the other orchard.

Pruning is also an important factor in controlling scab; the denser the foliage of the trees the more slowly it dries out after a rain, the better is the opportunity for the spores to germinate and cause infection. But it is certain that notwithstanding all the precautions that can be taken, by destroying dead leaves, correct pruning, etc., clean fruit cannot be grown unless the trees are properly sprayed.

The problem is to find the best fungicide, and to learn how and when it should be applied. The best authorities now agree that to control scab, lime-sulphur and bordeaux are equally efficient, but lime-sulphur has the advantage in other ways, as it does not russet the fruit and is easier prepared. When to spray is now the most important question, and to know when infection occurs is to know when to spray, for the fungicide must be applied first in order to prevent it. As we have shown, infection usually occurs when the blossoms are about to open, so spraying to be effective must commence a little before this, or when the buds are first beginning to show pink. Two applications, one immediately after the petals fall, and another two or three weeks later are necessary to prevent attacks from the secondary infection. The grower should watch, not only the condition of his fruit buds, but also the weather, and attempt to get the spray on ahead of general storm periods if possible. Some growers delay the spraying until after the rain is over if rainy weather happens to be threatening at the time, thinking that the rain will wash off the spray. No worse mistake than this can be made, for it is during wet weather that the spray is needed to protect the tree from infection. The spray will not wash off so easily as is supposed; if if it has twenty-five minutes in which to dry before any washing rain occurs, it will adhere well. In wet seasons, an application about August 1st may be necessary to prevent late infection.

Prof. Wallace does not find any evidence to prove that a dormant spray of lime-sulphur has any effect whatever in controlling scab. In two different years experiments, it was impossible to detect any difference on sprayed and unsprayed trees, using a strong lime-sulkhur wash.

The importance of making each application at the proper time is emphasized very strongly. Any grower having from fifty to one hundred acres of mature apple orchard, who expects to do all his spraying with a single outfit, will find it absolutely impossible to comply with this requirement, since as can be seen, the time limit for the most effective application of each spraying usually does not exceed from four to five days. Every grower, therefore, should have equipment to spray his entire orchard within this time. The spray may entirely fail to control scab if delayed one or two days too long, thus permitting the infection to occur before the application is made. The effect of continued spraying from year to year is most important, and seems to have a cummulative effect on the vigor of the tree, and thus enables them to set a larger crop of fruit. The foliage being protected remains healthy and vigorous, and consequently the trees are able to produce a larger number of strong fruit buds. This bibliography, "The Scab Disease of Apples," should be carefully read by every grower of apples.—Manning K. Ells.

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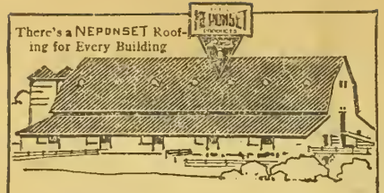

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Some Practical Suggestions on Soil Cultivation.

Continued on page 502

as, on some of the land there that was not underdrained it was nearly a total loss. Besides, hauling roots and grain off land that is wet caused a great deal of damage to the physical texture of the soil. In fact, it is very hard to estimate just what this loss may mean to us in dollars and cents.

I am sorry that the time at our disposal will not permit us to go into the details as to the benefits to be derived from underdrainage. Successful crop production is the basis of agricultural prosperity and uniform moisture supply is the most important factor in crop production. This evidenced from the fact that often the poorest soil on the farm may produce a better crop in a suitable season than the richest piece in an unfavorable season.

Generally speaking the variations in seasons is largely a variation in moisture conditions and as has been stated before heat and air are controlled to a very great extent by the amount of moisture in the soil.

Now we can control the moisture contents and thereby increase the production of the soil. If the spaces of the soil is filled with water, air will be kept out, heat will not be produced so readily and excessive moisture has been shown to be injurious. Underdraining will withdraw the excessive amount of moisture, air will be allowed to circulate and heat will be produced. Bacteria will become more active and chemical changes will take place more rapidly, hence, plant food is produced more rapidly for the immediate use of the plant. Underdraining prevents the baking and cracking of the heavy soil, such as clay and loam.

When the heavy soils like clay are saturated with water they swell, then when they dry out they shrink and if this soil has been wet for some time then worked becomes sticky. On drying and shrinking this clay will eventually cement together and when the heavy strain comes on the surface even deeper cracks open. Now if this land is underdrained, the water will be withdrawn from it before it has time to become saturated and it loses its sticky puddly effect, when worked. Underdraining enables the plant roots to go deeper into the soil and thus procure moisture from deeper soils, when the supply near the surface is low. Then, too, they feed from plant food that is stored down deep in the soil. The fact that soil is underdrained increases its water holding capacity after a heavy rain and yet be in a better condition for working than the undrained soil. In the case of the undrained soil the excessive amount of water generally runs off along the surface carrying with it a great deal of the richest and finest soil. Whereas, in the case of the underdrained soil the water percolates through the soil slowly for as the space in the soil is filled with air before the rain comes on it must escape before the water can enter the soil by passing out through the underdrains allowing at the same time the rain water to be taken up and shortly after the soil can be cultivated and a mulch formed to conserve the moisture for the plants. Time will not permit me to say more about the importance of underdrainage and its beneficial effects.

We conclude then that to insure productiveness in any soil we must have, in addition to plant food, lots of humus, sufficient moisture, considerable heat, plenty of pure air and repeated cultivation at the right time."

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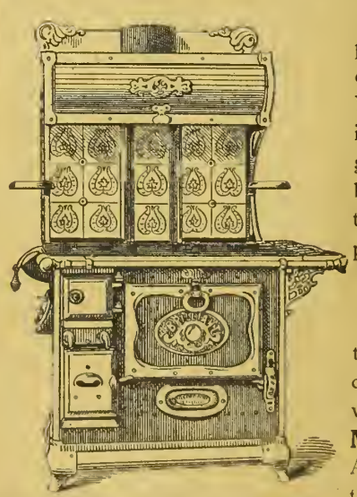
Amherst, - - Nova Scotia

STOVE ECONOMY



There is no saving in having a poor stove. It burns up fuel without giving the right kind of heat. You cannot regulate it for cooking purposes either. It takes a good stove to turn out first class bread, cakes or pastry all the time. You will not be disappointed in choosing a

RECORD BRILLIANT RANGE

to cook with, to heat with. You can have it with or without reservoir, any style of warming closet,

MADE FOR WOOD & COAL

Ask for our catalogue and see the other various styles.

Record Foundry & Machine Co., Moncton, N. B.

$100 TO $200 PROFIT PER MONTH

Selling Farmers What They Need

Every farmer in Canada needs and uses our kind of goods. Over 2,000 men are making big money selling Rawleigh Quality Products, Household Remedies, Extracts, Spices, Soaps, Toilet Articles, Stock Remedies, Poultry Supplies, etc. Every article of the highest quality, well known and reliable.

We want a man at once in every locality to represent the greatest Buying, Manufacturing, Distributing and Selling Organization in North America. Established 19 years. Capital and Resources over Two Million Dollars. References, Dun's, Bradstreet's, or any bank in Winnipeg.

We offer you the opportunity to

Get Into Business For Yourself

With little competition. We are the only concern of our kind who own and operate a factory in Canada. No duty. Freight services prompt.

We want men of good standing in their community, who can furnish satisfactory bondsmen, and team for the conduct of the business. No experience required. We teach you how to handle the goods successfully and stand back of you with the services of our giant organization.

If you can meet our requirements, write for particulars of our matchless offer.

The W. T. Rawleigh Medical Co.
90 Henry Street
Winnipeg, Man.

Renfrew Machinery to Extend Business

The Renfrew Machinery Company is the latest Ontario concern to give more attention to trade in the Maritime Provinces. The company has been represented on th s ground for some years, with the Maritime branch office at Sussex, N. B. It is now proposed to strengthen up the sales end of the Eastern Branch and with this end in view Mr. E. H. Vickers, took over the management of the territory. Mr. Vickers has lost no time in getting down to business and is equipping warehouses, etc., at Sussex which will enable his company to carry all their lines in quantities which will permit them to meet all orders promptly. In addition to this the Renfrew Machinery Comaany feels that the change has been rendered necessary by the large increase which the business has been showing during the past few years. Mr. Vickers, who is a brother of the general manager of the company, is a hustler and is out to make Renfrew wares still better known in the east. At the Sussex warehouses, it is proposed to carry full lines of Standard cream separators, Renfrew Standard gasoline engines, Renfrew truck scales, and other staple machinery for which the concern is noted.

Why Not Keep the Better Kind.

Just as long as a dairyman knows only the production of all his cows, just so long will he be without the necessary incentive to take steps for herd improvement. But when he knows his cows individually as to production and cost of feed, then he can retain the abundant and economical producers.

The general results as applied to a district are full of suggestion. In one lot of 422 cows belonging to 42 men, the average yield last year was found to be 4,494 pounds of milk, the cost of feed $32.90; thus, simply taking the cost of feed into consideration, leaving a net profit of $14.28. But a slight investigation showed that the 100 best cows produced milk to the value of $7,137.00 the 100 poorest cows produced only $3,200.00 or much less than half as much.

The best cows were fed at an average cost of $38.42, leaving a clear profit above the cost of feed of only $1.74 each.

It thus is evident that each one of the 100 best cows made as much clear profit on the milk produced as that given by eighteen of the poorest.

Why not keep the better kind? It pays to find out which kind are in your herd. Milk and feed records may be obtained free on application to the Dairy Commissioner, Ottawa.

Test 3.0 or 4.8—Which ?

One of the chief reasons for testing cows not simply once in a while, but at regular intervals, is found in the fact that they are known to vary so greatly and often so inexplicably. Apart altogether from what are termed normal variations from milking to milking, besides the variations between morning and evening, and the variations between the fore milk and the strippings, careful observers have noticed in two days a variation in the test of almost two per cent of fat in the milk of individual cows, for which no reason has been assigned.

Obviously then it would be quite unfair to judge any cow on any one isolated test when it might be 3.0 one day and 4.8 another day. Which could you take? A fair and just way is to take samples regularly and test a composite sample once every month. Then there will be credit given where it is really due, not necessarily to the one that is supposed to be a high tester, because she is of fancy name or fancy price, but frequently to some tacitly despised individual which is really the queen of the dairy. It will pay to select those cows that are known, not supposed to yield milk rich in fat.

Selling Good Cows Cheap.

The following is a sample of what is discovered by the simple weighing of milk and testing of samples. A four year old cow gave in one month $20 pounds of milk containing 35 lbs. of fat. In the same herd a five year old gave only 330 pounds of milk and 19 pounds of fat. Thus the first cow gave more than the other two combined.

This further fact is interesting; this particular cow was sold by a man absolutely ignorant of her value or dairy capacity. The present owner, through keeping individual records, knows her better and would not sell her for less than thirty dollars more than he paid for her.

Another fact is worth careful attention; the total of the herd yield for a day or a month will never reveal these good individual. What the owner needs to know for certain is obtained only from a record of each cow he keeps. You can save labor and good feed by bestowing them on cows that you know are worth keeping; you will then be in a position to keep your best cows, and will not lose money by selling good cows cheap.

A Great Producer and Breeder.

The four-year old Holstein cow, Iola Piebe De Kol, owned by S. A. Baird & Son, Wisconsin, has had four living calves in 14 months, and made a semi-official yearly record of 17,390 lbs. of milk, making 699.92 lbs. butter.

The primary object of painting is **protection** and the paint that protects a house the longest and most effectively is the paint to use.

Brandram-Henderson's "English" Paint

because of its composition - 70% of Brandram's B. B. Genuine White Lead and 30% Pure White Zinc as a base for white and tints - has the quality of lasting wear to the highest degree. Investigate the facts concerning buildings that have been painted with B-H "English" Paint, and you will find that it lasted longer than any other paint, hence, in buying it, you get most for your money.

Made in a great range of colors.

Many things you should know about Paint in a Booklet that is free for the asking.

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Montreal-Halifax-St.John-Toronto-Winnipeg

IT'S WASHDAY IN THE MORNING!

What does it mean to you? Is it a burden—a toil—a weary round of drudgery? Get a

Maxwell

"HIGH-SPEED CHAMPION" WASHER

and laugh at washday. Just put the clothes in. The washer does all the hard work. Clothes come out clean and white—better than if you spent hours scrubbing over a steamy tub. The Maxwell washer works with crank handle at side as well as top lever. Use which you like. Either way's just as easy.

Ask your dealer to show you the Maxwell High-Speed Champion. Also enquire about our Washers for Water, Electric or Gas Engine power.

MAXWELLS LIMITED
ST. MARY'S - - ONTARIO

5

Fertilizer Analysis.

In reply to E. H. B., we would say that A. McGill, Chief Analyst, Dominion Department of Agriculture, Ottawa, will analyse samples of Muriate of Potash and Nitrate of Soda, bought for fertilizing purposes when submitted to him through the proper channels.

THE HORSE.

Wounds in the Knee.

In the case of injured knees the rendering of "first aid" is of considerable importance, because what is done, even more than what if left undone, often very materially affects the subsequent progress of the case, the manner in which the wound is repaired, and the extent of the blemish Much the same remarks apply to those minor cases of injury which are the subject of domestic treatment. Wounds of the knee are of very varying degrees of severity, and thus the popular term "broken knees" covers a very wide range, and embraces several varieties of wound. In it are included the "graze" that has no more serious consequences than a temporary loss of hair (the later blemish from which may be so slight as to defy detection by any but the most careful observer), the seriously torn and lacerated skin, the penetration of the sheaths of the tendons, and the worst injury of them all, and the most difficult to deal with so far as treatment is concerned, the open joint.

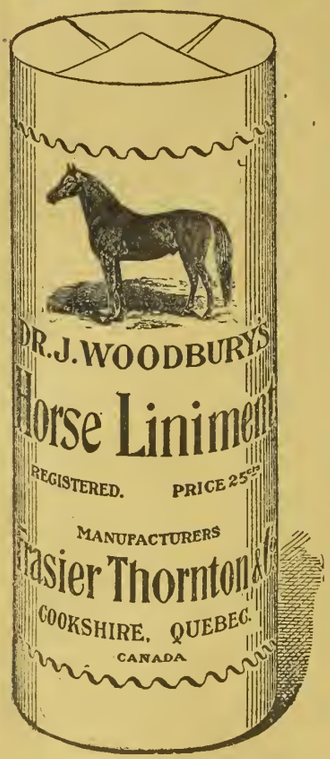
TREATMENT.

In all cases it is a first essential to remove all dirt and foreign bodies, and to render and keep the wound aseptic. Too much hot fomentation or subsequent poulticing is not desirable, for wounds so treated make a bad repair, and the usual result is a "bumpy" knee, because the heat and moisture induce soft and profuse granulations. It is a good plan immediately after the accident to foment with warm water, to remove all foreign matter, but this is quite a different matter from free and frequent bathing with hot water, such as is commonly practised, as part of the treatment of broken knees. Wounds of the front of the knee are commonly of the lacerated and contused variety, and in such cases great care should be exercised in examining the wound to see if any foreign body is present. Very often hard bits of stone or dirt are driven into the wound, and unless removed, they prevent healing, or if it should heal it breaks out again. During the exploration, or as part of it, the wounds should be carefully and patiently fomented with warm water containing some antiseptic. The addition of carbolic acid in the proportion of 1 to 100 of water is useful. The ordinary plan of fomentation, or what is generally so described, is practically useless for cleansing wounds of the front of the knee. The method known as irrigation should be employed. A soft, clean sponge should be used, and the carbolised water applied above the wound, so that the fluid trickles down through it, and this should be done not only with the foot placed plane upon the ground, but with the knee slightly bent so that all parts of the rent are cleansed. Half an hour of this irrigation not only removes all foreign matter, but removes pain and stiffness.

Wounds of the front of the knee may, without the use of technical designations as to variety, be roughly divided into six kinds: (1) Simple abrasion, commonly called a "graze", with loss of hair. In such cases no treatment is required; indeed, the popular plan of healing with such an injury—by hot fomentations, bandages, or the application of stimulating liniments or hot "oils"—is calculated to do more harm than good. There will be only a little oozing of blood, which may be sponged off with clean cold water, and the surface painted over with friar's balsam, or a little of the compound tincture of benzoin applied on a pad of cotton wool. This is merely a solution of several aromatic gums—benzoin predominating—in spirits of wine, and the spirit in drying off leaves a thin film covering the surface that protects it from the air. A spirituous solution of the shellac or French polish answers a similar purpose. (2) When the knee is badly bruised, but not cut—Bruises are really contused wounds where the skin has been ruptured. There may be considerable solution of continuity of the parts under the skin, subcutaneous haemorrhage, etc., which may result in such a case the head should be tied short to a high rack to prevent the horse lying down, and movement, as far as possible, discouraged, for the skin may be so injured that only a little additional pressure would cause it to slough, and if there is any sloughing of the skin there is sure to be a permanent blemish. The treatment required beyond the preliminary fomentation which will do much towards reducing the pain and preventing swelling, is to sponge lightly several times a day with a mild astringent lotion, such as two drachms each of powdered alum and acetate of lead in a pint of distilled or rain water. (3) When the skin is cut we have the lacerated and contused wound, which it is most important to cleanse thoroughly from all dirt and foreign matter, and to render and keep aseptic. Rarely, if ever, are stitches to be inserted in lacerated wounds, for the surrounding tissues and skin are generally so weakened in vitality and structure that sutures would not hold, and in the case of lacerated and contused wounds of the front of the knee there is the additional risk of sutures being torn out of the bending of the joint. The stitches are only a source of irritation, and where they tear out, or the skin sloughs, there is an increase in the permanent blemish. The hair should be carefully trimmed from the edges of the wound, and the divided skin brought into opposition, and so kept by means of strips of plaster placed longitudinally, and so disposed as to admit of free drainage. Even under the most favorable conditions suppuration, and it is most necessary

DR. J. WOODBURY'S HORSE LINIMENT

WILL BUILD UP



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SOLD ON IT'S MERITS ALL DEALERS PRICE 25c.

Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

IRON AGE 100 Per Cent Planters

often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "100 Per Cent Potato Planting" and copy of Iron Age Farm and Garden News.

The Bateman-Wilkinson Co., Limited. 435 Symington Ave., Toronto, Can.

The Best Built Roller

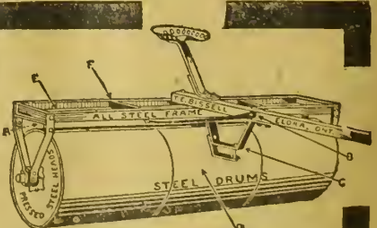
is the "Bissell," with Drums of heavy steel plate, hard in temper, riveted up close, having pressed steel heads.

With AXLES of 2 inch solid steel revolving on cold Rolled Roller Bearings.

With the MALLEABLE CAGE in one piece, holding the Roller Bearings in line on the axle.

With DRAW BRACKET under the Pole, making the Draught down low.

With the FRAME all of steel and the improved steel plate bottom.



You may be told that other Rollers are like the Bissell--but there is only one original Bissell Roller and to save our customers disappointment, we put our name on every Roller we build. Look for the name "Bissell" and write our Dept. M for catalogue.

Several styles and a variety of widths to choose from, 6 ft. up to 12 ft. Grass Seeder Attachment also furnished if required. 73

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DR PAIN KILLER FOR THE HUMAN BODY

Gombault's

Caustic Balsam

IT HAS NO EQUAL

For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.

A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

REMOVES THE SORENESS—STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.

Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.

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RIDER AGENTS WANTED

everywhere to ride and exhibit a sample 1914 Hyslop Bicycle with coaster brake and all latest improvements.

We ship on approval to any address in Canada, without any deposit, and allow 10 DAYS' TRIAL. It will not cost you a cent if you are not satisfied after using bicycle 10 days.

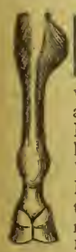
DO NOT BUY *a bicycle, pair of tires, lamp, or sundries at any price* until you receive our latest 1914 illustrated catalogue and have learned our special prices and attractive proposition.

ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you Free Postpaid by return mail. Do not wait. Write it now.

HYSLOP BROTHERS, Limited
Dept. R TORONTO, Canada

You Can't Cut Out

A BOG SPAVIN, PUFF or THOROUGHPIN, but



ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

will clean them off permanently, and you work the horse same time. Does not blister or remove the hair $2.00 per bottle, delivered. Will tell you more if you write. Book 4 K free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments. Enlarged Glands, Goitres, Wens, Cysts. Allays pain quickly. Price $1.00 and $2.00 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F. 124 Lymans Bldg., Montreal, Can.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't imitate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists,
41 Church Street, Toronto, Ont.

"My little son had a severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all dealers.

to keep such wounds well drained and aseptic. There is a large amount of agents possessing the required antiseptic properties, but for wounds of the front of the knee we have found nothing so suitable as chloride of zinc or a solution of Burnett's Fluid.

"PROUD FLESH."

In healing by granulation, the granulation if profuse, and soft, may quickly fill up the wound and overtop the surface, forming a fungoid growth, popularly known as "proud flesh," which has to be repressed or kept back by caustics. A lotion of chloride of zinc of a strength of one drachm to the pint of distilled or rain water is most useful. Dress healing must be by granulation or with this tiwce a day, by allowing it to gravitate into the wound from above downward, or irrigate with a small glass male syringe. Treated in this way there is no foetid discharge no burning or cauterising of profuse growths that overtop the surface of the wound, but a rapid even repair, that leaves the least possible blemish. Should the granulations be very profuse it is a good plan to rub them back with a lump of sulphate of copper or bluestone. The disfiguring "bumpy" knee is the result of neglect of this precaution.

SERIOUS CASES.

The other three forms of wound of the front of the knee—exposure of the tendon and opening of its sheath, laying open of the joint, and exposing the bones, and open joint with fracture of one or more of the small bones entering into its formation—are not cases for domestic treatment, and in such cases it is best to seek professional aid without delay. In rendering "first aid" the animal should be got into the nearest shed, box or stable, the head tied up, and the wounds well irrigated with some antiseptic lotion, such as carbolic acid solution recommended above, an nothing more should be done pending the arrival of the veterinary surgeon. When, after cleaning and a careful examination of the injury, it is decided that the case is one for home treatment, it will be well to consider the advisability of giving a dose of physic. This, in many cases, seems to have a magical effect, and tends to prevent and reduce any swelling of the part consequent on the injury. The corn should be dropped, and the animal fed on bran mashes, carrots, and hay. In the majority of cases very little attention is paid to preventing movement, and yet it should be obvious that movement is not favorable to repair. Rest is most essential, but not the kind of rest obtained by turning the animal into a field to walk for a living. Horses with recently injured knees are often kept at work, and when we see a horse working in knee-caps we always wonder what is underneath them. The best plan is to confine the animal to close quarters, discourage movement, and put a "cradle" on the neck to prevent gnawing, rubbing or other interference with the wound. This gnawing often causes considerable blemish, which is above all things to be avoided in the healing of broken knees, because the greater the blemish in the shape of a bumpy knee, irregular repair, and loss of hair, the greater depreciation in commercial value. Exercise or turning out to grass may be beneficial later on, or when the wound has ceased to discharge, but in the case of recent injury rest should be provided for and movements discouraged. In very bad cases splints to the knee and slinging, to relieve the limb of the weight of the body, are advisable.

GROWTH OF THE HAIR

A question that generally exercises the mind of the owner of the broken kneed horse is. What will make the hair grow? But it is one that can rarely be answered satisfactorily, and more rarely still can the desire of the owner be realized as quickly as he hopes or expects. The amount of the blemish left after cicatrisation depends on the amount of damage done to the true skin. Where skin has been cut away, or has subsequently sloughed, and the hair follicles are destroyed there is no agent that can reproduce the growth. We cannot make hair grow, although there are some agents that have a stimulating effect on the hair follicles. Even in slight wounds the hair often grows the wrong way, and leaves a roughness that a careful examination will not fail to detect. Under such circum stances it is usual ro shave both knees, and to apply a mild blister—perhaps the best method known of preventing the detection of a slight injury. Some blister a badly broken knee as soon as it is healed, for the double purpose of exciting the absorption of superfluous material brought to the spot in affecting the repair and stimulating the growth of hair. Sometimes the hair grows white over a contused knee, and here there is no remedy except to dye it, or, if the surface is not extensive, to pull out individual hairs with a pair of fine tweezers. Diluted mercurial ointment stimulates the growth of hair, and if this is stained with a little lamp black or with lamp black and a touch of Armenian bole, to match the color of the "points" it serves a double purpose —stimulates the growth of hair and, in the meantime hides the blemish.—F. & H., Vet., England.

Your poor horse needs DR. WILSON'S DERBY CONDITION POWDER. Buy him a tin today. It will pay you and please him. Two sizes, 25c. and 50c.

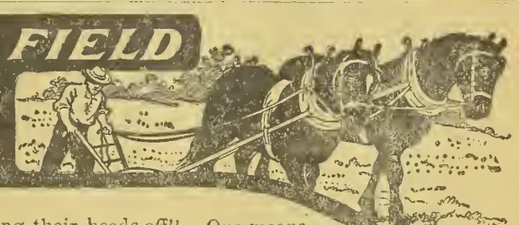
DR WILSON'S DERBY CONDITION POWDERS IMPROVED

FOR HORSES CATTLE SHEEP AND PIGS

These powders should be given in all cases of Worms, Bots, Want of Appetite, Hide Bound, Coughs, Horse Ail, Colds, Heaves, Epizootic, Stoppage of Water, Inflammation, Etc.
They purify the blood and improve the general appearance of the animal. Prevent Scratches.

THE BRAYLEY DRUG CO. LIMITED ST. JOHN, N.B.

IN THE FIELD MAKING MONEY—



or in the barn, "eating their heads off". One means profit—the other means loss. When a horse goes lame—develops a Spavin Curb, Splint, Ringbone—don't risk losing him through neglect—don't run just as great a risk by experimenting with unknown "cures". Get the old reliable standby—

KENDALL'S SPAVIN CURE

Mr. F. Winters, Fort William, Ont., writes—"I have cured one spavin with your Spavin Cure, and am now trying it on another with good results". Be ready for emergencies, keep a bottle of Kendall's in the barn. Then, if a horse goes lame you have the remedy on hand to cure the trouble quickly. $1. a bottle—6 for $5. at druggists. Ask yours for free copy of book—"Treatise On The Horse" or write us direct. 76

Dr. B. J. KENDALL CO., - - ENOSBURG FALLS, VERMONT, U.S.A.

BRUCE'S SEEDS

BRUCE'S GIANT FEEDING BEETS—The most valuable Field Roots on the market, combine the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the Mangel. We offer in two colors, White and Rose. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 10 lbs. $3.00.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The best of all field Carrots. ¼ lb. 40c, ½ lb. 70c, 1 lb. $1.20, 3 lbs. $3.00.

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BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking: handsome shape, uniform growth, purple top. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 5 lbs. $1.50.

BRUCE'S GIANT KING SWEDE TURNIP—An improvement on Jumbo, or Elephant Swede, tankard shaped, large, good quality, heavy yielder, and good keeper. ¼ lb. 12c, ½ lb. 20c, 1 lb. 35c, 5 lbs. $1.50.

Prices are here—Add for Postage, if to be mailed, 5c for ¼ pound, 10c a pound.

Bruce's Giant White Beet, Bruce's Mammoth Intermediate Carrot and Bruce's Giant King Swede led all the others in the experimental tests, Ontario Agricultural College for 1913.

FREE—Our handsomely illustrated 112-page catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1914. Send for it.

John A. Bruce & Co., Limited., Hamilton, Ontario. Established Sixty-four years.

Meeting of Poultrymen at Fredericton.

Some weeks ago a delegation of New Brunswick poultrymen called on Hon. J. A. Murray, Minister of Agriculture, at Fredericton, and talked over the matter of giving more encouragement to poultry exhibitions, with the Minister and Mr. Daggett, the Secretary of the Department. After cpnsiderable discussion the Minister advised the delegates present to hold a meeting and draw up an agreement that would be acceptable to each Association. Mr. Murray assured the delegates that he would give this every consideration, and give a reply as soon as possible. After Messrs. Murray and Daggett with drew the delegates held a meeting with Mr. Seth Jones, Poultry Superintendent, in the chair.

It was decided that in order to strengthen and create interest in the poultry industry that a Provincial Poultry Association be formed and the following officers were duly elected. ...

Honorary President—Hon. J. A. Murray.

Honorary Vice-Pres.—Mr. J. B. Daggett.

President—J. V. Jackson, Moncton, N. B.

Vice-Pres.—A. E. Crowley, Fredericton, N. B.

Secretary—George H. Seaman, Moncton, N. B.

Board of Directors—Dr. R. D. Hagerman and Chas. Shaw, representing the Carleton and Victoria Poultry & Pet Stock Association; A. D. Thomas and Philip Cox, representing the York and Sunbury Poultry and Pet Stock Association; F. M. McCready and R. W. Whitlock, representing the Charlotte County Poultry & Pet Stock Association; S. E. McKie and Samuel Steeves, representing the Westmor:and Poultry and Pet Stock Association.

Rules and regulations were drawn up to govern the different local associations and a uniform prize list arranged to be submitted to the department for approval.

A resolution was passed asking the Honorable Minister of Agriculture to purchase 300 regulation size galvanized poultry coops and 25 larger size for geese and turkeys. A request was also made that no restriction be placed as to the number of classes on which the Department would pay a percentage of the prize money, the association agreeing to adopt the graded prize list and pay all prizes on bantams and pet stock. A full report of the meeting together with the proposed prize list and classification of breeds was forwarded to the Department and the association expects a favorable reply in a few days The delegates were very much pleased with their reception by Mr. Murray, and expect that with his assistance, the local associations will be in a better position than ever before to continue their efforts to encourage the breeding of purebred poultry.

Biddy as a Boarder.

When one attempts to follow the systematic work done by practical poultry keepers, and note the records made under practical if scientific rules of care and feeding, he is forced to the conclusion that there is a wide gap somewhere to be closed before we shall get rid of the boarders. At Storrs, Conn., in the third yearly contest, where fifty flocks of ten hens each are being tested, there are a number which have not laid an egg since Nov. 1. Now it costs very close to $1.58 yearly to keep a hen, and if, for six months, she doesn't surrender an egg, she must hustle tremendously the rest of the year to get inside the cost limit.

Bear in mind that the system of feeding is the very best that science and experience can evolve, so good that I want to reproduce it here for others to try.

It is not only necessary that we have good breeding stock which will produce good hatchable eggs, and that they be hatched in a good incubator which will give strong, vigorous chicks, and that they be well brooded, but they must be so fed as to grow continuously from hatching time to maturity. Here is the feed formula used by the Storrs Experiment Station:

Grain Ration	Parts by Weight
Cracked wheat	15
Cracked Corn	15
Pinhead oats	10
Broken rice	3
Wheat bran	2
Corn meal	1
Sifted ground oats	1
Daisy flour	1
Beef or fish scrap	1

This scheme offeeding is virtually what was used by the station last year.

In this test, it is a pen of white Wyandottes which leads, by more than one hundred eggs, all the rest. and strange as it may seem, they are owned, and were grown, by the same English gentleman as won the past two years with his Leghorns. Thus far in the twenty-one weeks, this pen has yielded up 785 eggs, where one pen of R. I. Reds has produced but 88, a pen of W. Leghorns but 40 these being the most notable failures. The test is bringing out some valuable lessons for every poultry keeper, and many o f these centre about the feed box and caretaker. One thing is certain, the time has come to eliminate the boarders everywhere and make certain a balance on the right side of the ledger from every animal kept on the farm.—Dr. Twitchell, in Maine Farmer.

To Improve Flocks Choose Good Layers.

The best and cheapest way to improve a flock is to select the best and most vigorous layers and breed these to a strong, active, well-bred male and then save the eggs for hatching.

Fowls whose offspring is worth keeping should be marked with leg bands, and if possible a record should be kept of their production, according to J. G. Halpin of the College of Agriculturei University of Wisconsin.

After selecting the most prolific birds in the flock, he would have 15 or 20 of them in a separate coop and large yard with the male during the few weeks of the breeding seasan. By limiting the number of hens to each male, most of the eggs he believes would be fertile, and nearly all of them hatch out strong, active healthy chicks. Keeping the male away from the remainder of the flock improves the market quality of those eggs which are not to be used for hatching purposes.

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Strongly made and closely spaced—making it a complete barrier against large animals as well as small poultry. Top and bottom wires No. 9—intermediates No. 12 wire—made by the Open Hearth process which time and other tests have proven to be the best material made for the manufacture of wire fencing. Send for literature. Ask about our farm and ornamental fencing.
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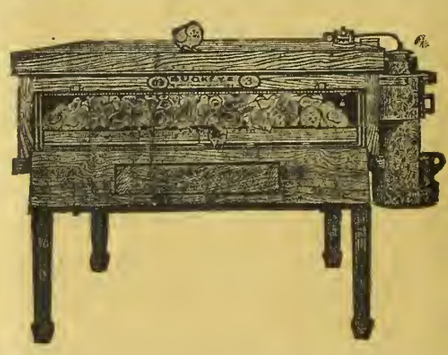

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We have prepared a book for you entitled "Money In Eggs," if you would be interested in learning how other women like you are making independent incomes from the sale of eggs and plump chickens. Experience is not essential. We are practical poultry raisers ourselves and will furnish you all the information necessary to make your chickens pay you handsome profits.

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PEMBROKE ONTARIO CANADA

Eggs for hatching should never be saved from a hen that is sluggish and hangs around the roost in a sleepy and inactive fashion. The hardy types which lay best are preferable for breeding purposes. These are the ones with full crops, red combs and bright eyes, and the first to leave the roost in the morning, roam long distances in search of food, and are among the last to go to roost at night.

While the Leghorns and other small active breeds, 20 females can safely be mated with one male bird, with the heavier breeds 15 hens or less should be used in order to insure fertile eggs. It is best to limit still more of the number of females to be bred to old male birds.

Using these meehods of selection and mating does away with the possibility of the worthless hen stealing her nest and rearing a brood of inferior "brush pile roughers."

Prevent Hens Eating Eggs.

A friend of mine has a couple dozen Rhode Island Reds and White Wyandottes. He has taken the very best care of them, but only now and then an egg; didn't know but he had chosen the wrong breed. He said they were looking fine and singing away as happy as a country church choir—but no eags.

Something set him to thinking that perhaps they were eating eggs. He called the attention of a neighbor to it and learned that darkening the nests would stop it. So he went out and nailed on a curtain in front of the nest box. While he was there a little red pullet jumped up on the box, cocked her eye up at him, sat down on the nest and in a minute it was all over. He reached out his hand to gather in that egg when in went three or four heads after it. The next morning he got seven eggs, day follow ng nine. He says those confounded hens are so blamed cross from having their lunch cut out they will not look him in the face.—N. L. H.

One of the greatest losses to the poultry trade, so a manager of a large poultry packing house declares, is from poorly fattened chickens that come off the farms. The packers call these "ranger" chickens. Of all poultry breeding places the farm should not be the one to put out such a loss—a place where feed is plenty. The farmer who sends "rangers" to market should be ashamed of himself.

If you breed for a purpose, and never breed except from your strongest birds, inbreeding is not dangerous; that is, breeding from you own flock year after year; because in a large flock many are bound to be too distant in relationship to make inbreeding a menace to all. It is breeding indiscriminately, w th no regard to selection for strength and difference in relationship, that works disaster.

One can keep a pen of the same geese for ten years. At 10 years old the goose looks young and is still producing strong goslings. Sometimes a hurt of some kind on foot or wing has been knawn to make her rest over one season without laying, but the next she is likely to be as good as new. A goose certainly pays for itself ten times its patronage, corn and housing bill in the eggs, the goslings and the feathers it gives you to turn into hard cash.

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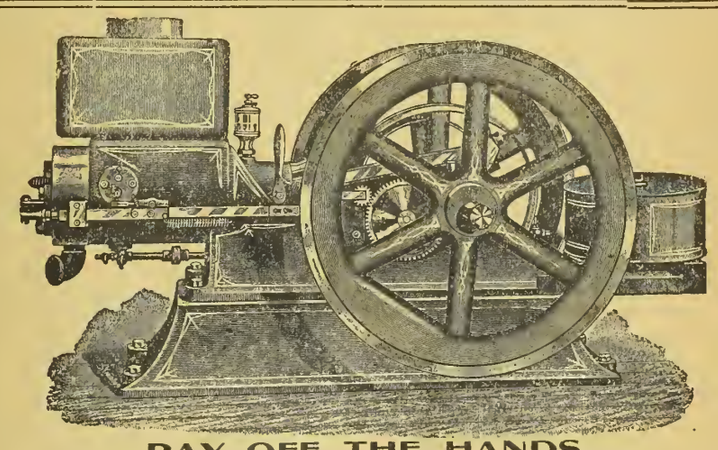

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David Copperfield.

By Charles Dickens.

(Continued.)

I was so filled with the play, and with the past—ior it was, in a manner, like a shining transparency, through which I saw my earlier life moving along—that I don't know when the figure of a handsome well-formed young man, dressed with a tasteful, easy negligence which I have reason to remember very well, became a real presence to me. But I recollect being conscious of his company without having noticed his coming in—and my still sitting, musing, over the coffee-room fire.

At last I rose to go to bed, much to the relief of the sleepy waiter, who had got the fidgets in his legs, and was twisting them, and hitting them, and putting them through all kinds of contortions in his small pantry. In going towards the door, I passed the person who had come in, and saw him plainly. I turned directly, came back, and looked again. He did not know me, but I knew him in a moment.

At another time I might have wanted the confidence or the decision to speak up to him, and might have put it off until next day, and might have lost him. But, in the then condition of my mind, where the play was still running high, his former protection of me appeared so deserving of my gratitude, and my old love for him overflowed my breast so freshly and spontaneously, that I went up to him at once, with a fast-beating heart, and said:

"Steerforth! won't you speak to me?"

He looked at me—just as he used to look, sometimes—but I saw no recognition in his face.

"You don't remember me, I am afraid," sa d I.

"My God!" he suddenly exclaimed. "It's little Copperfield!"

I grasped him by both hands, and could not let them go. But for very shame and the fear that it might displease him, I could have held him round the neck and cried.

"I never, never, never was so glad! My dear Steerforth, I am so overjoyed to see you!"

"And I am rejoiced to see you, too!" he said, shaking my hands heartily. "Why Copperfield, old boy, don't be overpowdered!" And yet he was glad, too I thought to see how the delight I had in meeting him affected me.

I brushed away the tears that my utmost resolution had not been able to keep back, and I made a clumsy laugh of it, and we sat down together, side by side.

"Why, how do you come to be here?" said Steerforth, clapping me on the shoulder.

"I came here by the Canterbury coach to-day. I have been adopted by an aunt down in that part of the country, and have just finished my education there. How do you come to be here, Steerforth?"

"Well, I am what they call an Oxford man," he returned; "that is to say, I get bored to death down there periodically—and I am on my way now to my mother's. You're a devilish amiable-looking fellow, Copperfield. Just what you used to be, now I look at you! Not altered in the least!"

"I knew you immediately," I said: "but you are more easily remembered."

He laughed as he ran his hand through the clustering curls of hair, and said gaily:

"Yes, I am on an expedition of duty. My mother lives a little way of town; and the roads being in a beastly condition, and our house tedious enough, I remained here to-night instead of going on. I have not been in town half-a-dozen hours, and those I have been dozing and grumbling away at the play."

"I have been at the play, too," said I. "At Covent Garden. What a delightful and magnificent entertainment, Steerforth?"

Steerforth laughed heartily.

"My dear young Davy," he said, clapping me on the shoulder again, "you are a very Daisy. The daisy of the field, at sunrise, is not fresher than you are! I have been at Covent Garden, too, and there never was a more miserable business. Holloa, you sir!"

This was addressed to the waiter, who had been very attentive to our recognition at a distance, and now came forward deferentially.

"Where have you put my friend, Mr. Copperfield?" said Steerforth.

"Beg your pardon, sir?"

"Where does he sleep? What's his number? You know what I mean," said Steerforth.

"Well, sir," said the waiter, with an apologetic air. "Mr. Copperfield is at present in forty-four, sir."

"And what the devil do you mean by putting Mr. Copperfield into a little loft over a stable?" retorted Steerforth.

"Why, you see we wasn't aware sir," returned the waiter, still apologetically, "as Mr. Copperfield was anyways particular. We can give Mr. Copperfield seventy-two, sir, if it would be preferred. Next you, sir."

"Of course it would be preferred," said Steerforth. "And do it at once."

The waiter immediately withdrew to make the exchange. Steerforth, very much amused at my having been put into forty four, laughed again, and clapped me on the shoulder again, and invited me to breakfast with him next morning at ten o'clock—an invitation I was only too proud and happy to accept. It being now pretty late, we took our candles and went upstairs, where we parted with friendly heartiness at his door, and where I found my new room a great improvement on my old one, it not being at all musty, and having an immense four-post bedstead in it, which was quite a little landed estate. Here, among pillows enough for six; I soon fell asleep in a blissful condition, and dreamed of ancient Rome, Steerforth and friendship, until the early morning coaches, rumbling out of the archway underneath made me dream of thunder and the gods.

CHAPTER XX.

Steerforth's Home.

When the chambermaid tapped at my door at eight o'clock, and informed me that my shaving-water was outside, I felt severely the having no occasion for it, and blushed in my bed. The suspicion that she laughed too, when she said it, preyed upon my mind all the time I was dressing; and gave me, I was conscious, a sneaking and guilty air when I passed her on the staircase, as I was going down to breakfast. I was so sensitively aware, indeed, of being younger than I could have wished, that for some time I could not make up my mind to pass her at all, under the ignoble circumstances of the case; but, hearing her there with a broom, stood peeping out of the window at King Charles, on horseback, surrounded by a maze of hackney-coaches, and looking anything but regal in a drizzling rain and a dark-brown fog, until I was admonished by the waiter that the gentleman was waiting for me.

It was not in the coffee-room that I found Steerforth expecting me, but in a snug private apartment, red-curtained and Turkey-carpeted, where the fire burnt bright, and a fine hot breakfast was set forth on a table covered with a clean cloth; and a cheerful miniature of the room, the fire, the breakfast, Steerforth, and all, was shining in a little round mirror over the sideboard. I was rather bashful at first, Steerforth being so self-possessed, and elegant, and superior to me in all resperts (age included); but his easy patronage soon put that to rights, and made me quite at home. I could not enough admire the change he had wrought in the Golden Cross; or compare the dull, forlorn state I had left yesterday, with this morning's comfort and this morning's entertainment. As to the waiter's familiarity, it was quenched as if it had never been. He attended on us, as I may say, in sackcloth and ashes.

"Now, Copperfield," said Steerforth, when we were alone, "I should like to hear what you are doing, and where you are going, and all about you. I feel as if you were my property."

Glowing with pleasure to find that he had still this interest in me, I told him how my aunt had proposed the little expedition that I had before me, and whither it tended.

"As you are in no hurry, then," said Steerforth, "come home with me eo Highgate, and stay a day or two. You will be pleased with my mother—she is a little vain and prosy aboat me, but that you can forgive her—and she will be pleased with you."

"I should like to be as sure of that, as you are kind enough to say you are," I answered, smiling.

"Oh!" said Steerforth, "every one who likes me, has a claim on her that is sure to be acknowledged."

"Then I think I shall be favorite," said I.

"Good!" said Steerforth. "Come and prove it. We will go and see the lions for an hous or two—it's something to have a fresh fellow like you to show them to, Copperfield—and then we'll journey out to Highgate by the coach."

I could hardly believe but that I was in a dream, and that I should wake presently in number forty-four, to the solitary box in the coffee-room and the familiar waiter again. After I had written to my aunt and told her of my fortunate meeting with my admired old school-fellow, and my acceptance of his invitaion, we went out in a hackney-chariot, and saw a panorama and some other sights, and took a walk through the Museum, where I could not help observing how much Steerforth knew, on an infinite variety of subjects, and of how little account he seemed to make his knowledge.

"You'll take a high degree at college,'j said I, "if you have not done so already; and they will have good reason to be proud of you."

"I take a degree!" cried Steerforth. "Not I! my dear Daisy—will you mind my calling you Daisy?"

"Not at all," said I.

"That's a good fellow! My dear Daisy," said Steerforth, laughing, "I have not the least desire or intention to distinguish myself in that way. I have done quite sufficient for my purpose. I find that I am heavy company enough as I am."

"But the fame—" I was beginning.

"You romantic Daisy!" said Steerforth, laughing still more heartily; "why should I trouble myself that a pack of heavy-headed fellows may

A WOMAN'S MESSAGE TO WOMEN.

If you are troubled with weak, tired feelings, headache, backache, bearing down sensations, bladder weakness, constipation, catarrhal conditions, pain in the sides regularly or irregularly, bloating or unnatural enlargements, sense of falling or misplacement of internal organs, nervousness, desire to cry, palpitation, hot flashes, dark rings under the eyes, or a loss of interest in life, I invite you to write and ask for my simple method of home treatment, with ten days' trial entirely free and postpaid, also references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by this method. Write to-day. Address: Mrs. M. Summers, Box. 109 Windsor, Ont.

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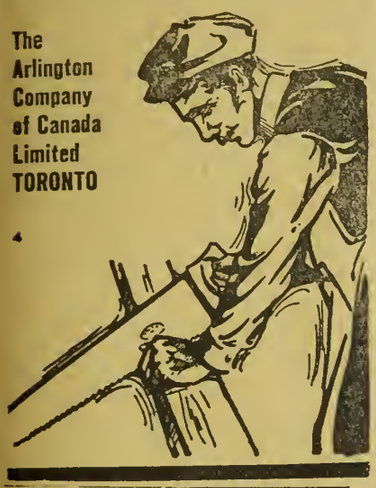

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"I met Smithson."

"Well, that is no reason why you should be an hour late getting home to supper."

"I know, but I asked him how he was feeling and he insisted on telling me about his stomach trouble."

"Did you tell him to take Chamberlain's Tablets?"

"Sure, that iswhat he needs."

Sold by all dealers.

gape and hold up their hands? Let them do it at some other man. There's fame for him, and he's welcome to it."

I was abashed at having made so great a mistake, and was glad to change the subject. Fortunately it was not difficult to do, for Steerforth could always pass from one subject to another with a carelessness and lightness that were his own.

Lunch succeeded to our sight-seeing and the short winter day wore away so fast, that it was dusk when the stage-coach stopped with us at an old brick house at Highgate on the summit of the hill. An elderly lady, though not very far advaoced in years, with a proud carriage and a handsome face, was in the doorway as we alighted; and greeting Steerforth as "My dearest James," folded him in her arms. To this lady he presented me as his mother, and she gave me a stately welcome.

It was a genteel old-fashioned house, very quiet and orderly. From the window of my room I saw all London lying in the distance like a great vapour, with here and there some lights twinkling through it. I had only time, in dressing, to glance at the solid furniture, the framed pieces of work, (done, I suppose by Steerforth's mother when she was a girl), and some pictures in crayons of ladies with powdered hair and bodices, coming and going on the walls as the newly-kindled fire crackled and sputtered, when I was called to dinner .

There was a second lady in the dining-room, of a slight short figure, dark, and not agreeable to look at, but with some appearance of good looks too, who attracted my attention; perhaps because I had not expected to see her; perhaps because I found myself sitting opposite to her; perhaps because of something really remarkable in her. She had black hair and eager black eyes, and was thin, and had a scar upon her lip. It was an old scar—I should rather call it, seam, for it was not discolored, and had healed years ago—whfth had once cut through her mouth, downward towards the chin, but was now barely visible across the table except above and on her upper lip, the shape of which it had altered. I concluded in my own mind that she was about thirty years of age, and that she wished to be married. She was a little dilapitated—like a house—with having been so long to let; yet had, as I have said, an appearance of good looks. Her thinness seemed to be the effect of some wasting fire within her, which found a vent in her gaunt eyes.

She was introduced as Miss Dartle, and both Steerforth and his mother called her Rosa. I found that she lived there, and had been for a long time Mrs. Steerforth's companion. It appeared to me that she never never said anything she wanted to say, outright; but hainted it, and made a great deal more of it by this practice. For example, when Mrs. Steerforth observed, more in jest than earnest, that she feared her son led but a wild life at college, Miss Dartle put in thus:

"Oh, really? You know how ignorant I am, and that I only ask for information, but isn't it always so? I thought that kind of life was on all hands understood to be—eh)"

"It is education for a very grave profession, if you mean that, Rosa," Mrs. Steerforth answered with some coldness.

"Oh! Yes! That's very true," returned Miss Dartle. "But isn't it, though?—I want to be put right, if I am wrong—isn't it, really?"

"Really what?" said Mrs. Steerforth.

"Oh! You mean it's not!" returned

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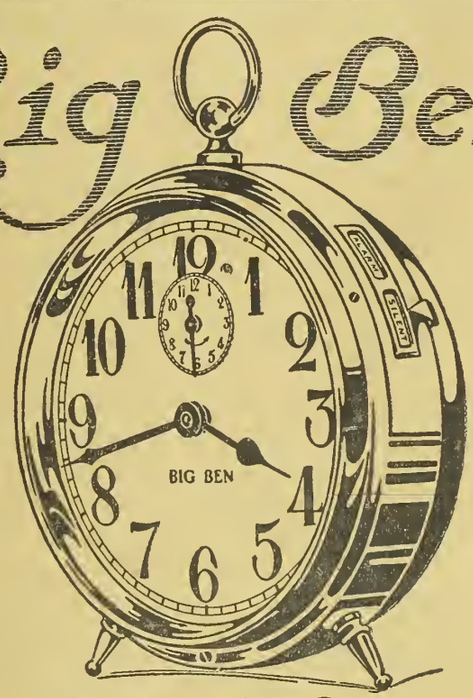
Big Ben



He's Big All Over And Good All Through

Big Ben is built for *endless* service. He has no "off-days," no shut-downs. His four years of existence have been one long record of on-the-dot accuracy. 7,000 Canadian dealers say that he does more *efficient work* for less pay than any other clock alive.

A Big Ben battalion, over 3,000 strong, leaves La Salle, Illinois, every day. Their sparkling triple nickel-plated coats of implement steel; their dominating seven-inch height; their big, bold, black, easy-to-read figures and hands; their big, easy-to-wind keys—all make Big Ben the world's master clock.

In return for one little drop of oil, he'll work for you a full year. From "Boots on" to "Lights out"—365 times—he'll guarantee to tell you the time o'day with on-the-dot accuracy.

He'll guarantee to get you up either of TWO WAYS—with one long, steady, five-minute ring if you need a good big call, or *on the installment plan*, with short rings one half-minute apart for ten minutes, so you'll wake up *gradually*, and he'll stop short in the middle of a tap during *either* call if you want to shut him off.

Big Ben is a mighty pleasant looking fellow. His big, open honest face and his gentle tick-tick have earned him a place in thousands of *parlors*.

The next time you go to town call at your dealer's and ask to see Big Ben. If your dealer hasn't him, send a money order for $3.00 to his makers —*Westclox*, *La Salle*, *Illinois*—and he'll come to you prepaid.

It Pays to Advertise in the Maritime Farmer.

For Colds, Sore Throat, Croup. For Aches, Pains and Wounds,

JOHNSON'S ANODYNE LINIMENT

is the never-failing remedy. Keep it in your home and be ready for both internal and external ills.

IN USE 103 YEARS

25c and 50c everywhere

I. S. JOHNSON & CO., Inc.
Boston, Mass.

Parsons' Pills
relieve constipation and headache

Miss Dartle. "Well, I'm very glad to hear it! Now, I know what to do! That's the advantage of asking. I shall never allow people to talk before me about wastefulness and profligacy, and so forth, in connection with that life, any more."

"And you will be right," said Mrs. Steerforth. "My son's tutor is a conscientious gentleman; and if I had not implicit reliance in my son, I should have reliance on him."

(Continued next issue.)

The Young People's Club—Its Possibilities.

Editor The Maritime Farmer:—

Young people whethet in the city, town, village or rural community demand some form of social life. The lack of organized social activity among young men and women invariably leads to moral and physical and spiritual disaster. The questionable forms of amusement all owe their existence to the fact that those who would lead young people into right avenues of activity for mind and body do not recognize, or refuse to recognize that man is a social animal and life and activity must express themselves in some way.

Social enjoyments foster refinement and the advantages accruing from young peoples clubs are even greater than those which accompany the clubs for older women. The pleasure from companionsnip should be even greater and the club itself has the possibilities for a larger achievement. Those interested in the matter of organization should see the preceding paper for full particulars.

WHAT TO STUDY

This is always the leading question for a new club to decide. It is wise to begin with a subject about which every member knows something. A club should avoid scholasticism. Subjects of human interest will weld the members more than any other thing. Every member should answer the roll call and every member each evening be given a definite opportunity to take part in the discussion. These are axioms for the successful club for young people.

READING CLUBS.

Ruskin tells us to read a good book every day. It may be a little poem or a choice bit of prose, but it opens up avenues for thinking and acts on the life and character. There is much to be gained by the solitary studyof a book which cannot be gained in any other way. Young people differ in temperament. Some young people can plan a course of study and carry their purpose to a conclusion regardless of other attractions; others find that they can accomplish greater results under the stimulus of companionship. We all need the social influence to draw out the best in us and keep us from being narrow and unappreciative of the human atmosphere and environment Reading clubs for young people supply these needs especially in small communities where the stimulus of a large circle of intimate friends is lacking.

SIMPLE READING CLUB.

In a small town the teacher discovered that the boys of her class were loafing about the streets and gaining access to papers and books of a most harmful nature. She suggested that the boys spend one evening each week at her home and read some good books with her. Most of the boys responded to the invitation. They chose a play and she assigned a part or character to each member of the class. The history of the period covered by the play was read also. Gradually the group of young fellows began to gain an intelligent grasp of the true meaning of educative reading. The student instinct was awakened and new talents developed. Much latent ability was discovered and an eager spirit of enjoyment in an entirely new realm of life made possible. The boys were permitted to bring a friend—boy or girl—and the study period was always followed by a few minutes of social enjoyment. This particular club was carried on for a number of years and as the members moved to other communities other clubs were organized and proved just as beneficial.

The program followed in this instance was as follows:

The first year they read "The Merchant of Venice." Lee's Life of Shakespeare and William Winter's "Shakespeare's England." Selections from Irving's Sketch Book, Stratford on Avon. The teacher procured picture post cards of all the points of interest. Sets may be secured from the larger book dealers made especially for this purpose if desired may be used with the reflectoscope. A synopsis of the plot and an analysis of the chief characters were emphasized in the stuhy. A set discussion was held one evening as to "The Hero of the Drama." At the close of the first season one of the boys was overheard expressing himself as follows: "If the fellows could only be made to feel how interesting Shakespeare's plays are, they wouldn't waste time reading the books they have to hide when their mother is around."

"CANADIAN LITERATURE CLUB"

This club was organized to meet a two-fold purpose'—to acquire a wider knowledge of Canadain literature and to develop the social life of the community. It proved a pronounced success in both departments.

One evening was given to the study of Canadian songs and national anthems. This field afforded an abundant fund of material for a musical evening.

A subject which was also most interesting and full of possibilities was "Wolfe in Canadian Literature." One talk was given on "Wolf in Fiction." Reference was made to Thackeray's "Virginians" and Henty's "With Wolfe in Canada." Special attention was given to Sir Gilbert Parker's "The Seats of the Mighty." "Wolfe in Poetry" was supported by selections from Dr. Jackenay's poems. A closing tribute was found in the magnificent words of Charles Sangster to Wolfe and Montcalm.

"The St. Lawrence and the Saguenay" was another subject, the historic and the romantic being strangely blended. "Canadian Dog Stories" brought to light selections from Marshall Saunders' "Beautiful Joe," and Edgerton Young's "Hector" and the history—simple and pathetic— of "Rab" by Dr. Brown.

This club met fortnightly in the homes of the memebrs, and refreshments were served each evening and a social hour spent.

CANADIAN INDIANS.

The study of the early nations and tribes of Canada is well worth a winter's study. The origin and traditions of tnese peoples are fully treated in McLean's "Native Tribes of the Dominion." Butles's "Wild

"My little son had a very severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was as well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all dealers.

Everything you could ask for—

DAYLIGHT OVEN, if required—with heat-proof glass panels in door.

OVEN THERMOMETER, always reliable, and Thermometer guide.

HEAT ECONOMIZER, that holds oven heat when door is open.

CONVENIENT TOWEL RODS, not in the way.

TRIPLE BODY—rolled steel, asbestos lining, outer wall of polished blue steel plate.

REMOVABLE RESERVOIR, without dampers to interfere with baking.

ROOMY WARMING CLOSET, of blue steel, with detacbable shelves and tea stands.

CONTROLLER-DAMPER, controlling fire perfectly.

GUARANTEE—goes with every Monarch sold.

All in the

ENTERPRISE Steel

Monarch Range

THE Monarch is the "Range De Luxe"—the best you can possibly get. It is made right here in Eastern Canada, however, so that it is very reasonable in price.

Other stoves have some of these features—The Monarch has them all, with others that we cannot list here. You must see a Monarch to even partly appreciate it. When you have used one, you will agree that it's the finest range made.

Write for a free copy of the book we've published about the Monarch, and for the name of our representative in your neighborhood.

Enterprise
FOUNDRY Co. SACKVILLE, N.B.

A SURE CURE FOR WOMEN'S DISORDERS

Ten Days' Treatment Free

ORANGE LILY is a certain cure for all disorders of women. It is applied locally and is absorbed into the suffering tissue. The dead waste matter in the congested region is expelled, giving immediate mental and physical relief; the blood vessels and nerves are toned and strengthened, and the circulation is rendered normal, as this treatment is based on strictly scientific principles, and acts on the actual location of the disease it cannot help but effect a cure of all forms of female troubles, including delayed and painful menstruation, leucorrhoea, falling of the womb, etc. Price, $1.00 per box, which is sufficient for one month's treatment. A Free Trial Treatment, enough for 10 days, worth 35c. will be sent Free to any suffering woman who will send me her address. Enclose 3 stamps and address, MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

To Suffer From Headaches

MAKES LIFE MISERABLE.

It takes a person who has had and is subject to headache to describe the suffering which attends it. The dull throbbing, the intense pain, sometimes in one part of the head, sometimes in another, and then again over the whole head, varying in its severity by the cause which brings it on, purely indicates that there is something amiss with the system. The fact that Burdock Blood Bitters reaches the seat of the trouble is due to its success in relieving and permanently curing the cause of the headache.

Mrs. Andson, 416 15th Ave. East, Calgary, Alta., writes: "For three years I was troubled all the time with sick headaches, and suffered also with constipation, and kept breaking out in pimples and sores on my face. I tried everything till at last a friend told me of Burdock Blood Bitters. I took two bottles, and my skin is as clean and pure as a baby's, and I have never been troubled with the headaches since."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

APPLY

POTASH

EARLY

The time is fast approaching when ***fertilizers*** should be applied if full benefit is to be obtained during the coming season. If you have not ordered your materials do so at once.

The Potash and Phosphate materials should be applied as soon as possible to get on the land.

Nitrate of Soda should be applied at seeding time or at commencement of growth. Other nitrogenous materials can be applied earlier with Potash and Phosphate.

Many letters of appreciation and thanks are daily received by us from readers of our valuable bulletins. Write for these bulletins at once. These include:—

"Artifical Fertilizers; Their Nature and Use"
"Fertilizing Orchard and Garden"
"Fertilizing Grain and Grasses"
"Fertilizing Hoed Crops"
"The Potato Crop in Canada"
"Farmer's Companion" etc.

GERMAN POTASH SYNDICATE

1102b Temple Bldg. Toronto, Ont.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Northland" contains a picturesque narrative of travels in the forests in the days of the Fur Trade. "The New North" by Cameron describes a journey to the North by water to the mouth of the McKenzie River. The paradise of the mountain climber is pictured in Wilcox's "Canadian Rockies." Prowse's "History of Newfoundland" is a thoroughly accurate history of the early inhabitants of that island Dominion. Dr. Grenfell treats the coast peoples in his own unique manner.

BOOKS WHICH LEND INTEREST TO CANADIAN HISTORY.

Some people acquire their knowledge of history merely by studying facts, while others long for the blending of narrative or fiction rather than a bald statement of events and dates. For those whoare fond of studying the history of Canada through the avenue of fiction, the following list of books will supply material for more than a winter's reading for any club.

Parkman tells the story of early Canadian life. "Old France in the New World" by Douglas is a survey of the history of Canada in the 17th century. The romantic story of Quebec is graphically told in Doughty's "Cradle of New France." "Canadian Types in the Old Regime" by Colby groups various aspects of French colonization around such characters as Champlain, Laval and Frontenac. The story of the French settlements on the shores of the Bay of Fundy is told by Hannay in the "History of Acadia." Wood's "Fight for Canada" is an accurate account of the long conflict between England and France in the New World. Bourinot's "Canada Under British Rule" emphasizes the political history of Canada from tne early days to the present. Laut's "Canada, the Empire of the North" is devoted to the romance of Canadian history. Probably the best survey from the time of the conquest to the war of 1812 is contained in "The History of Canada" by Lucas. A work by the same author, "Canadian War of 1812" is the most reliable history of the war from the Brisish side. Bradley's "Canada in the 20th Century" and Morgan's "Canadian Life in Town and Country" describes Canada today.

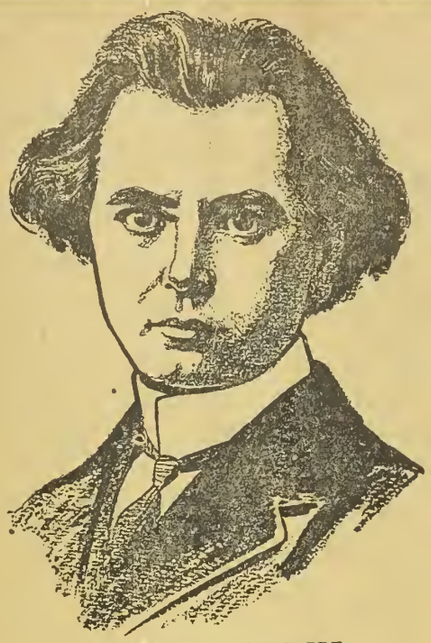
CANADIAN FOLK LORE

The character, legends and folk lore of the people of Quebec are sympathetically treated in Nicholson's "The French Canadian" and Frechette's "Christmas in French Canada" and Greenough's "Canadian Folk Life and Folk Lore."

The story of Murray Bay and the Seigneours associated with that vicinity is told by Professor G. M. Wrong in his "Canadian Manor." Lisgar in his "In the Day's of the Canada Company" describes the settlement of Upper Canada. Dawson's "The Saint Lawrence" is an exploration of Eastern Canada; Burpee's "Search for the Western Sea" explores the West.

WESTERN FUR TRADE

The dramatic story of the western fur trade is told by Launt in his "History of the Great North-West," and Bryce's "Romantic Settlement of Lord Selkirk's Colonists," gives us a reliable account of the origin and history of the Red River Settlements. MacBeth's "Making of the Canadian West" embodies the reminscences of a western pioneer and covers the period of the Riel Rebellions. Begg's "History of British Columbia" contains a summary of British Columbia to the year 1844. Mories" "Northern Interior of British Columbia" throws new light on the history of the Indian fur trade and gold mining.—Marion Dallas.



JAN KUBELIK
WIZARD OF THE VIOLIN

The eminent Bohemian Violinist who has used the NEW SCALE WILLIAMS PIANO during his last two Canadian concert tours, writes as follows:

Messrs Williams Piano Co. Nov., 12, 13.

Gentlemen;—

I very much appreciate the splendid New Scale Williams Player Piano so kindly sent me to my hotel. Its tone and simple machanism were a real pleasure. The piano used at my concert was entirely satisfactory and blended perfectly with the violin.

With best wishes I am,

Yours sincerely.

Jan Kubelik

Makers,
The Williams Piano Company Limited, Oshawa, Canada

We sell direct from factory where not represented.

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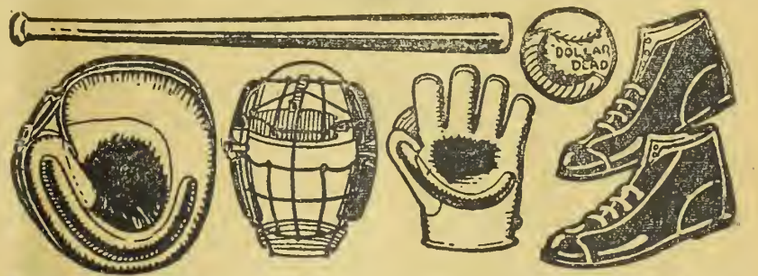

FREE

BOYS—Don't pay **$5.00** for a baseball outfit. Here is your 1914 Big League outfit absolutely free. It contains this dandy solid leather catcher's decker, chrome tanned, web thumb, and raised heel, fielder's glove, new 1914 steel catcher's mask, full sized base ball fine slugger bat and there's a dandy pair of baseball shoes for every boy who earns an outfit.

Simply send to day for **32** sets of Regal Beauty Pins, the fastest **10** cent sellers ever brought out. Just think how easily you can sell a pair of handsome gold-plated Beauty Pins on a fine card for only **10** cents a pair. Every lady needs these handsome Beauty Pins and takes three or four sets on sight. Return amonnt of **$3.20** when the goods are sold and the fine baseball outfit is yours. Show it to your friends when you get it, have only three of them sell our goods as you did and these fine rubber soled baseball boots guaranteed to fit and give satisfaction are yours also. No extra goods to sell. Write at once. 76

Address:— **REGAL MANUFACTURING COMPANY DEPT. BB 86 TORONTO, ONT.**

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COULD NOT STRAIGHTEN UP
For Lame Back.

Women are coming to understand that weak, lame, and aching backs from which they suffer are due to wrong action of the kidneys.

The kidneys are overtaxed—given more work that they can do, and when the back aches and pains it is almost impossible to do her housework, for every move and turn means pain.

On the first sign of any weakness in the back Doan's Kidney Pills should be taken, and thus do away with any suffering from kidney trouble.

Mrs. A. J. Lalonde, Kingston, Ont., writes:—"I am writing to tell you what a wonderful cure Doan's Kidney Pills did for me. I was suffering with a lame back, and for about seven days could hardly straighten up for the pain. I had used quite a few of other kinds of pills, and received no relief. Just then my sister came and told me about Doan's Kidney Pills, and what they had done for her, so I decided to try them. I used three boxes, and I am completely cured, and I do not hesitate to recommend them."

Price, 50c. per box, 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

If ordering direct specify "Doan's."

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Growing in Efficiency.
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NEXT TERM OPENS APRIL FIRST

Full information given on application, address

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PRINCIPAL
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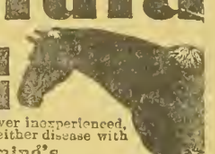
Fistula and Poll Evil



Any person, however inexperienced, can readily cure either disease with

Fleming's Fistula and Poll Evil Cure

—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

Fleming's Vest-Pocket Veterinary Adviser

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated.

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An up-to-date High Grade Bicycle, fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Enamelled Wood Rims, Detachable Tires,* high grade equipment, including Mudguards, Pump and Tools, **$22.50**

Send for **FREE 1914 Catalogue,** 90 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON, 27 Notre Dame St. West, Montreal.

Don't be surprised if you have an attack of rheumatism this spring. Just rub the affected parts freely with Chamberlain's Liniment and it will soon disappear. Sold by all dealers.

New Brunswick Women's Institutes.

ECONOMIZING TIME AND LABOR.

We hear much today about scientific cooking and scientific farming, factories, offices and stores are everywhere using scientific management — that is, everything is planned and arranged so as to get the best results in the shortest time. It is now the households turn to be revolutioned, and this can be done in the same way —by systematizing and planning the work in advance. Of course one cannot lay down a general rule that will apply to all households, because every home and family are different; but, let every housekeeper plan her own work and apply the methods that suit her conditions best.

Every one knows, no matter how well the work is planned, there will be many interruptions, especially where there are children; therefore one should allow for interruptions, just as a storekeeper allows for profit and loss.

It is not because the housekeeper's work is hard or difficult that she finds so little time for rest or recreation, but because of the endless little things that have to be crowded into each day. The woman or mother, today, who works from the early morning until late at night, taking no time for rest or mental or moral culture, is neglecting the most essential part of her work as a homemaker. But, you say, "How can we find time with so much to do and so many to work for?" Only by leaving something undone.

"Labor with what zeal we will
Something still remains undone;
Something unaccomplished still
Awaits the rising of the Sun."

Make up your minds to do first, only the things really worth while. Find out what can be left undone without really affecting the comfort or happiness of your family: Suppose there was no Sabbath; would not the housekeeper find just as much to do with seven days to work in as she now does with six? And again, suppose there were two Sundays instead of one in each week, the work would have to be arranged so as to rest two days out of every week. Therefore, if the housekeeper would think it extremely necessary to take an hour for rest each day, or an afternoon or two each week for social intercourse, the work and the world would go on just the same. Everything that lightens our work and gives more time for recretaion and rest, is an economy—then let us think of a few ways in which we can economize "Time and Labor."

The most important part of the woman's work is the cooking and getting meals. The parlor may go undusted and no one grumble, but let a crowd of hungry children, or what is worse, a hungry man, come in and find no dinner ready—that is a different story! Economize space whenever possible, especially in the kitchen. The nearer the kitchenette, or pantry, stove and table are together, the less steps and work it requires to cook and get a meal. Have castors on the kitchen table and move it near the stove, sink or window, as it suits your special work best. There are so many inexpensive utensils one can get for lessening of the work in the kitchen. Have everything to work with, but no more than necessary. ...As the more one has, the more there is to keep clean and in order. Alternations can be made in almost every kitchen, making it feasible for more convenient work and many of these can be made by the housewife or the man of the house himself. A rack nailed against the wall over the table or sink will hold all the kitchen knives so one will not have to sort over a

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Sixty Thousand trappers send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada. Write to-day

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A book of 96 pages, fully illustrated. Game Laws revised to date—tells you how, when and where to trap, bait and traps to use, and many other valuable facts concerning the Raw Fur Industry, also our "Up-to-the-minute" fur quotations, sent ABSOLUTELY FREE for the asking.

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Book for Men, Free

8,000 Words, 30 Illustrations

TO MY READERS:

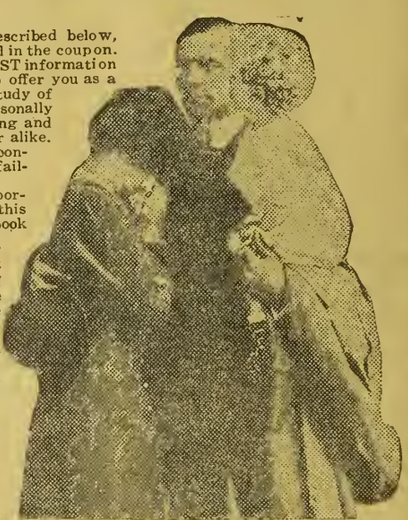
Of the little illustrated advice book described below, which I gladly send free to all men who fill in the coupon. I beg to say that it represents the very BEST information of a private nature which I am able to offer you as a result of over 30 years' observation and study of my subject, during which time I have personally interviewed many thousands of men, young and elderly, single and married, rich and poor alike, who came to me in confidence with their confessions of debility, lost nerve force and failing strength.

It is, reader, this vast and unusual opportunity which has enabled me to compile this very popular and valuable little free book (over a million of which have been sent everywhere to men who wrote me for them), and in a manner to reflect the exact living, breathing experiences and needs of real men who sought information as to the newer ways of self treatment without the use of drugs.

Remember, this book of over 8000 words and 30 illustrations will come to you by return mail in reply to your request, and in a perfectly plain, sealed envelope, for it is no one's business but your own what the envelope contains. There is absolutely no obligation on your part to buy anything or pay anything, and merely the receipt of this book which does not mean in any way that you are to use one of my VITALIZERS (see description below) and, in fact, only a portion of the book has any reference to the VITALIZER at all. Primarily it is a compendium of useful information for private reference, which you and all other men may easily profit by through life.

Therefore, please use the coupon, or if nearby, I should be very glad to have you call.

SANDEN, AUTHOR.



MANLY MEN MOVE THE WHOLE WORLD

It is a fact, reader, which you and I must recognize and admit, that the whole world admires and is fascinated by strong, vigorous, husky, manly manhood, and we must also admit that it is this same manhood and this alone which is back of the real leaders and producers in every walk of life. No matter where we go, we find it to be the manly, vigorous, vital fellow who forges to the front, who fascinates men and women of his community, who does the really great things. An unmanly man merely means nature's laws gone wrong, for it is he who halts and hesitates, who takes the back seat, who does not fit into the picture in a way that a manly, vital nature should. And yet, reader, it is my firm believe that any man, no matter what his past, no matter what dissipations or follies may have left their mark upon his physical and mental being, I say to you that such a man, unless there be some unusual reason, may hope for a complete return of his strength, vigor and self confidence, if he but go about his self restoration in a natural commonsense way.

I make a little appliance which we will call a VITALIZER, because I think that is the best word to describe its strange power. I don't want you to think of getting one of these VITALIZERS just now, but I would like you to investigate my claims as to what I believe can be accomplished by almost any weakened man who uses this VITALIZER faithfully for a few weeks. I speak, of course, of him who is willing to give up dissipation and lead a decent, conservative life, not only while using the VITALIZER, but for the future. The other kind of man, the dissipated, can hope for nothing from any treatment, no matter what it may be, hence such a man is eliminated from my consideration.

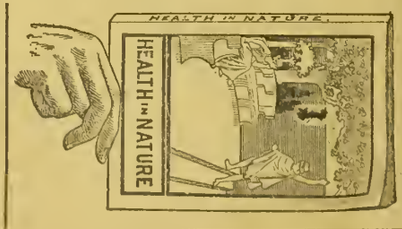
This little VITALIZER is made to wear upon the body all night. It weighs only several ounces and is no more unhandy than any ordinary belt, yet it generates a great FORCE that I call VIGOR, which flows into your blood organs and nerves while you sleep. Men say it often takes any pain or weakness out of the back in one application, and that 60 to 90 days' use has been sufficient to restore manly strength and to put men in the "never felt better in my life" class. Special attachments carry the FORCE of the VITALIZER to any part of the body, for the use of women as well as men in cases of rheumatism, kidney, liver, stomach, bladder, disorders, etc.

Over two hundred thousand of these VITALIZERS have been used or are now being used by men all over the world.

You had better learn more of this VITALIZER. It is fully described in my free book. If you live near me, why not call and test the VITALIZER yourself.

WHAT THE FREE BOOK TELLS

The free illustrated advice booklet mentioned above is meant to be a single declaration of certain important truths that every man in the world should know. The day has gone by when men are kept in ignorance of the real problems pertaining to these private subjects, and this illustrated advice booklet, which I send to men sealed, by mail, gives certain important facts relating to sex, just as these facts are. The booklet also fully describes my VITALIZER and you are told how you may get one for your own use if you decide that you want one. Please use coupon below, or call. Hours 9 to 6.



DR. M. F. SANDEN,
140 Yonge St., Toronto, Ont.

Dear Sirs,—Please forward me your book, as advertised, free, sealed.

NAME .....

ADDRESS .....

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There is no case so old or bad that we will not guarantee

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Spavin and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound. Indexed and Illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists,
41 Church Street, Toronto, Ont.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

whole box full to find that particular paring knife one wants. Racks for dishes, sauce pans, etc., are also convenient. Old chests can be converted into boot boxes or drawers to hold kitchen towels, aprons, etc., and will serve as a seat besides.

Did you ever stop to think how many unnecessary steps and movements one makes in setting and clearing the table? So many will make trip after trip from dining table to kitchen, carrying a few plates or saucers at a time, while all might be piled neatly together and carried out on a tray, one trip taking them all. Did you ever stop to think how many unnecessary movements one makes in washing dishes if the draining tray is on the right of the dish pan? For instance, you take the dish to be washed in your left hand, with dish washer in your right; you wash the dish, lay down the dish-washer, take the dish in your right hand and lay it on the tray, while if the tray were on the left side only one movement would be necessary. All this seems of small account, but when you think of doing it three times a day and 365 days in the year, it means a lot of lost energy.

Then next to cooking comes the washing and ironing. This is something that cannot be left undone. There are so many labor-saving devices that lessen the work of washday, that even it can be made interesting. Perhaps the first of these to be considered is the washing machine and of these there are many kinds on the market. Perhaps the revolving kind is the most used. But there is also the steam washer, the suction and vacuum washers—all of which are satisfactory and so inexpensive are within the reach of all homes. But any machine that will wash a whole tub full of clothes at one time, doing away with the time it takes to wash each piece separately, is an economy of not only time, but money. In order to get the best results from any washer the clothes must be sorted and soiled spots treated with soap, and put to soak, and the washing powder or soap used plays an important part. By using Naptha soap one can do away with the boiling of clothes and thus save much time and steam.

A high stool is a great comfort to many housekeepers. One woman utilized a high chair with an arm off for this purpose and found it saved her feet so much, especially when ironing So many things need not be ironed. The sheets, pillow cases, underwear, etc., can be neatly folded and are fresher and more healthy if not ironed. Besides these labor saving devices there is the dustless dusters and the sweeping powder that will eliminate all dust. The vacuum cleaner is also getting to be within the reach of the modern home. Every housekeeper can clean, scrub and dust but the main thing is to keep things clean after you get them clean. Clean as you work—Have a place for everything and see that everything is kept in its place. Teach your children and other members of your family to do the same, but above all, arrange your work so as to have more time for rest and to be sociable not only to your own family but to your neighbors. Have an interest outside of your own home and thus broaden your ideas, for—

"Rest is not quitting the busy career,
Rest is the fitting of Life to its Sphere."

Written by Mrs. Chester Keith, president of the Cornhill Branch of the New Brunswick Women's Institute

YOURS TO ENJOY

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35¢-40¢-50¢ Per Pound

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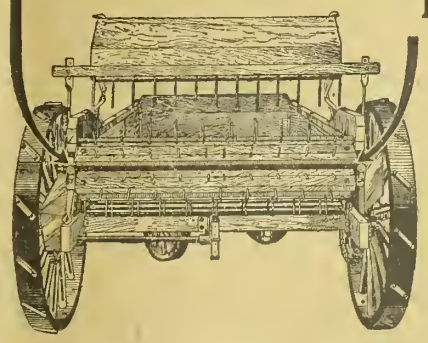
A MASSEY-HARRIS SPREADER on your farm will enable you to apply the manure when it will do the most good, even if help is scarce, for it is a great labor and time saver. -:- -:-

It spreads manure over more acres, because it is so thoroughly pulverized that all of it is available as plant food and need not be applied so thickly as would be necessary with hand spreading. -:- -:-

It makes possible the top dressing of field crops, which is usually the most effective method—the first rain carrying the fertilizing elements down into the soil. -:- -:- -:- -:- -:- -:-

On meadows and pasture lands it makes it possible to apply the manure so as to be of the greatest possible benefit—renewing the fertility without losing the use of the land for a time. -:- -:-

The Spiral Beater
Ensures
Even Spreading



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Have You Seen Our Electric Flash Light Premium

FLORICULTURE.

H. P., writes: "Tell me what to get for climbers for Hampton house.'

Dorothy Perkins, Shell Pink; Crimson Ramblers, crimson. The Dorothy Perkins is as easily grown as the Rambler, and is a beauty. All on their own roots and perfectly hardy, the above are the cream of the roses for our climate.

Amherst, N. S., writes: I have a large plant of Hyderanges that has been in the cellar all winter. About a month ago it was brought to the light as it had started badly. It was not repotted as it is in a large tub now. For a few weeks it developed finely, the leaves having a fine healthy green and developed splendidly; but the last few days some of the leaves are turning white about the edges shriveling. It is hard to keep wet enough and sometimes wilts a little at night. Would it hurt to let a little water stand in the pan that I keep under it? Will it have to be repotted? If so, will it hurt it after the buds are formed.

This plant will probably have to be repotted. The difficulty in keeping it moist shows that the tub is full of roots. It would be almost sure to injure the plant seriously to allow the water to stand in the saucer or pan. In repotting, do not disturb the roots and pack the soil firmly about the sides. If impossible to repot, use liquid manure or a prepared plant food, but repot the plant if at all feasible.

Fredericton, N. B., writes: Please tell me, as soon as possible, the season to procure and plant the bulb of the elephant's ear, Begonia, Gladioli, and should hardy Lilacs be all planted in the fall. Will Gladioli bulbs stay in the ground all winter.

The Caladium or Elephant's Ear, tuberous-rooted Begonias and Gladioli, tubers and bulbs, can be obtained and planted in boxes or pots any time now. Hardy Lilacs, such as Auratium, Rubrium, Speciosum, and the Tryridiac, can be planted in the spring with good results. Gladiolus bulbs do not winter successfully in this climate. Better dig them up in the fall, dry them off and plant in pots at this season.

For early bedding out, plant seeds of Asters, Stocks, Sweet Alyssiums, and Mignonette now in shallow boxes in a window. Cigar boxes make a very good box to grow seeds in the house. These seedlings should be

This Advertisement is Worth

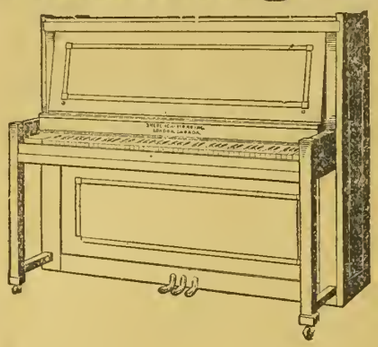
A HUNDRED DOLLARS TO YOU

Clip out this ad., write your name and address on the margin of it and mail it to us at once. You will promptly receive our After-Easter Sale Offer that will save you One Hundred Dollars on the purchase of as fine a piano as anybody in your county owns or can buy. But you must act quickly—the number of pianos at this special price is limited.

Sherlock-Manning 20th Century Piano

Canada's Biggest Piano Value

Every piano in this sale is brand new, straight from our modern factory, and warranted in every detail. The reduction of $100 from the regular price is bona fide. Thus this advt. actually represents a saving of $100 to to you.



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You, or any musical expert, can test the piano in any reasonable manner before you buy it. You can take it on easy terms, if you wish. You can choose that style and finish you like best. Clip out this advt. and send it now.

Bear in mind that every piano in this sale is absolutely new and perfect—exactly the same Sherlock-Manning Piano that has won so great a fame for exquisite tone, long service and moderate cost. Clip out the advt. and mail it to us at once. You will get full particulars by return mail. Address Dept. 6.

SHERLOCK-MANNING PIANO COMPANY,
LONDON, (No Street Address Necessary) CANADA

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LIMITED

Owners of the Celebrated Robert T. Oulton Silver Black Foxes, and Successors to Robert T. Oulton, Pioneer Silver Fox Rancher of the World

Capitalization: $1,000,000. Present Stock Issue: $700,000
Treasury Stock: $300,000, to be sold only for the purchase of additional animals.

ASSETS Options on 28 pairs highest grade Silver Black Foxes, including 8 pairs of the famous Oulton Breeders and 5 pairs breeders of other standard strains; also 15 pairs young, all of standard strains. 3 pairs of above breeders include this year's young making a dividend probable this year.

We have a long lease of the Oulton ranch at Little Shemogue, N. B. and are negotiating for its purchase with large farm attached.

In addftion to foxes we have purchased 40 pairs Mink, 4 pairs Fisher, 3 pairs Martin, and shall add large numbers of other fur animals as they are available.

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Honorary President—General Superintendent, Robert T. Oulton, Esq. Little Shemogue, N. B. Pioneer Black Fox Rancher of the world.

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Write at once for Prospectus and Full Information, or Send Application to

THE KEIRSTEAD & MERSEREAU FOX AND FUR COMPANY, LIMITED

73 Dock Street. St. John, N. B.

transplanted when second leaf has developed, into another box, space them out two inches apart each way. Grow them in a cool temperature, with plenty of sunshine and they will be stocky and hard, when time to plant out of doors arrives.

In making up your list of hardy stuff, don't forget to order some of Goold's Sussex grown Roses. The Paul Nyron, mammoth roses bloomed twice last year on my own grounds—such big cabbage roses; pink, changing to the American Beauty color as it develops. Such a lot of buds on one bush, measuring from three to four inches across. Also the Mad Plantiro, white; Ulrich Brienner, finest crimson; John Hopper, red; Cardine Marnisse, white; Hardy Single Roses, Rugosa. I have tried all and know they will winter in this climate-

M. A. W., St. John, N. B. writes:—I have a nice pot of Maiden Hair Fern that was presented to me a year ago. It grew beautifully until the last few months. I find that the new leaves are not growing right; they seem to start freely from the earth, but I find, on close inspection, that they are nothing but stems which quickly shrivel and die, the little curly tops being apparently absent. What is the cause of this and what shall I do to prevent it?

This trobble is caused either by a snail or slugs. The new fronds start all right, but this pest is eating the little curly tops as soon as they begin to unfold leaving the bare stem which quickly dies. Look among the stalks and about the surface soil for a small snail with a flat spiral shell or a short fat shell-less snail or slug either one of which is probably doing the damage. A good magnifying glass is a great help in finding them.

Fairville, N. B., writes:—I have a rose bush in a large pot. It is a fine plant with many branches and the leaves look firm but the buds are covered with small cob-webs. The hard part of the bud has some little fine red specks on it. Will these hurt the buds? They seem to open very much slower than they usually do. Will a Mauranda vine grow from seeds and will it flower the first year it is grown?

The trouble with the rose buds is a little red spider. If the plant was badly infested the foliage would look rusty and the leaves quickly fall. A thorough spraying with clean water or the holding of the tips under a water tap will destroy these insects. The foliage of roses should b? frequently sprayed especially if in a warm room or a bright sunny window. Do not spray on a cloudy day or when the foliage will not dry before night, or they will mildew.

The Maudanda vine is easily grown from seed and will bloom the first year, if healthy.

All pot-bound plants should be repotted soon.

Geranium cuttings may be taken from now on. Use a light, sandy soil to root them in.

A sharp knife should be used to take cuttings, so that the bark will not strip up the stem of the cutting.

Never allow cuttings to become dry nor do they require any sunlight until rooted, simpiy a cool light place with fresh air.

Shamrock, St. John, N. B.— The leaf sent is a Genuine Shamrock. There are quite a number of varieties of this plant, differing somewhat in appearance. The trifoliate leaf being their distinguishing mark.

H. N., Hampton: What shall I plant my Pansy seeds in. They are a mass of young plants, so thick. They should be transplanted into boxes in the house, then again transplanted into hot beds or cold frames in the early spring. They thus make large plants for May blooming.

Another Successful Year Closes at N. S. A. C.

The formal closing of the Agricultural College took place Thursday afternoon, April 16. Several distinguished visitors were present, beside a large number of normal College students and a deputation from Pine Hill College, Halifax.

The interesting proceedings of the day opened with a spirited and most encouraging address by Principal Cumming to the students. This was followed by the presentation of diplomas and cups won in the different classes.

Out of a Senior class of 44 there were 38 who successfully passed all tests and exams, and some were very severe, and graduated from our N. S. A. C.

TheSeed-Judging Cup was awarded eo James Bremner, Chatham, N. B., and the premier Murray Cup for Live Stock Judging went to W. R. Shaw, St. Catherines, P. E. I.

Principal Cumming then called upon Mr. Justice Longley who responded kindly to the call for an address to the students, regretting that of late he had not been able to keep in with the work of the College but he found that hhe real progress far surpassed all his expectations and he gave the highest praise to the institution and showed appreciation of what it stood for. Judge Longley's address was exceedingly encouraging and his many old-time friends were delighted to have him in their midst again.

Then followed a fine speech from Hon. R. M. McGregori M. P. P. representing the Nova Scotia Government. He expressed the regret of the premier on being unable to be present. While proud of those who honored Nova Scotia by success abroad, Mr. MacGregor accords more honor to those who stay at home in a humbler sphere and improve conditions there. To the graduates he said: "You have a better chance than your fathers and neighbors and you owe it to the people of Nova Scotia, who have made this training possible for you, to be good citizens as well as good farmers."

Principal MacKinnon of Pine Hill, extended a cordial invltation to the students to visit the College, expressed on begalf of himself and the students their pleasure in visiting the College. By very apt agricultural illustrations, Dr. MacKinnon demonstrated to his audience what is expected from the students whose faculties are trained to make the best of their opportunities in this province.

Then came a good address from Dr. James, adviser to the Agricultural Department, and chairman of the Government Commission to inquire into the high cost of living. Dr. James defined the problem he is interested in as being the means of reducing the distance between two great groups, that of the consumer and the producer. He gave parts of an address "The Romance of Agriculture" and showed that in what seemed a most prosaic occupation, the history of some branches contains elements of romance. It was a capital speech.

After the good wishes of Principal ents, proceedings closed with God Cumming were extended to the stud- Save the King.

We congratulate the successful students on their proud position today; and any who did not come up to the high marks required for the N. S. A. C. Diploma, have no cause for discouragement. They have had a grand winter's study and a little further preparation will fit them the better for their's life's profession—the noble work of tilling the soil.

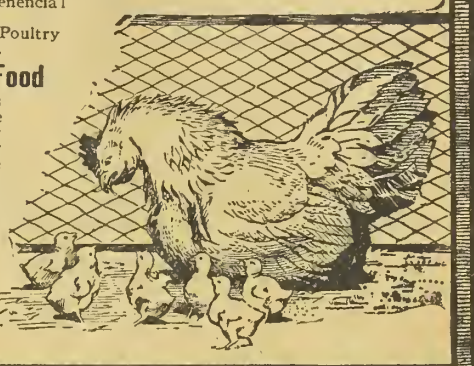
We will miss the gentlemanly N. S. A. C. students from our midst, they have indeed been madel young citizens, and we wish them "good luck" wherever they go.—Truro Daily News.

INTERNATIONAL POULTRY FOOD
Will Just Double Your Profits

There is more than increased egg production for you in International Poultry Food. This wonderful tonic—made from roots, herbs and seeds—is purely medicinal. It keeps the roosters and hens vigorous and healthy, cures and prevents disease and sickness, promotes good health, supplies material for bone, muscle and fibre. It is very beneficial during the hatching season.
Eggs from hens fed International Poultry Food produce fine, vigorous chicks.

International Poultry Food

is good not only for the chickens you have now, but also for those to come. International Poultry Food, Roup Cure, Louse Killer and other Poultry Remedies are sold by dealers everywhere. If not by yours, write us. Every preparation sold on a spot cash guarantee basis to give satisfactory results.



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Mr. N. I. Cluff writes under date of Jan. 26, 1914, as follows:—"Please find enclosed check for $1.77 for repairs on Bull Dog Engine. Everything satisfactory. I have used this engine twelve years and she is good yet."

OPERATED BY EITHER GASOLINE OR KEROSENE

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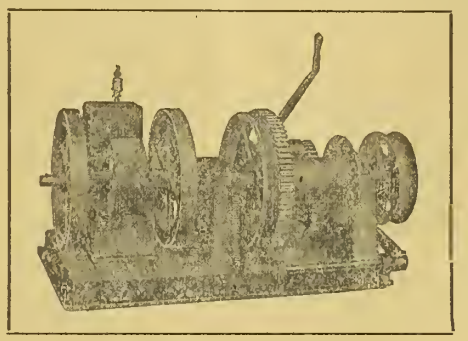

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are made in sizes from 1½ to 16 h. p. and any customer who places an order with us for one of these engines can do so with the full assurance that he is buying apparatus which is standard in every respect and warranted to perform the particular service for which it is designed.

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NOTHING adds greater beauty to a house than a tastefully arranged garden—and nothing detracts more from the appearance of a garden than the barren spots where seeds "refused" to grow.

Why not make a good garden a certainty by using the best **Canadian Government Tested Seeds?** Rennie's Seeds have been recognized as strictly reliable for nearly Fifty Years.

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Regularity

of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

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Carry Your Lantern in Your Pocket

Our Electric Flash Light Premium

Something Quite New

Given Away With Maritime Farmer Subscriptions

These lights are always ready for use. The only safe portable light for barns and outbuildings.

The Maritime Farmer one year and one of our 1½x6½ Tungsten barn lights, handsomely finished, for $1,30 (Light alone sells everywhere for $2.00).

The Maritime Farmer one year and one of our vest pocket lights complete for $1.25 (Light sells everywhere for $1.80).

We have other valuable flash light premiums which we will gladly furnish on application. We can supply them at about half-price, with the Maritime Farmer.

We have secured the agency for the Maritime Provinces for a leading house and can thus supply these premiums at these wonderfully low prices.

If interested write us.

The Maritime Farmer,
Sussex, :: New Brunswick

Dealing With Kickers.

Kicking is a problem with which breeders and owners of horses will always have to contend. In attempting to deal successfully with the habit some horses have of kicking at persons or other animals in the stable, the disposition of the offender must be carefully considered. It will not do to adopt the same plan of procedure, for all cases, as a plan which may be perfectly successful in some cases would be worse than useless in others.

Some horses are not naturally of a vicious or sulky disposition, but have learned to kick solely as a result of bad treatment. This is the most general cause of bad tempered horses, and in order to overcome the habit the proper thing to do is to try to re-establish the confidence of the animal and to make him forget his hostility by consistently kind treatment, combined with frequent attentions, when the horse is in the stable. If the habit is not of too long standing and has not become completely ingrained in the horse, it may be eradicated by these means.

Horses which are vicious by nature or inclined to be so, sometimes get into the habit of kicking at persons without any real provacation and simply as a result either of excessive high spirits or of sheer vice. This is particularly liable to occur with the young horses, and with those which are underworked and kept standing idle in the stable a great deal, while at the same time being highly fed. The fact of a horse being "restive" owing to too little work and too much grain, is very apt to bring out any vicious tendencies which may be latent in his nature.

In those cases in which a natural propensity toward viciousness, or the high spirits and unruliness which are often found in young horses, give rise to the habit of kicking, drastic measures must be taken in dealing with them, if the habit is to be overcome. The offending animal must be treated with great firmness and requires to be kept in complete subjection. Whenever he kicks, or offers to do so, he should be sharply called to order, and the offence must never be allowed to pass unnoticed, as to do that merely encourages the horse to repeat it. Unless the animal, in such cases, is kept well under control and is firmly treated, he is most apt to take increased liberties, the habit gradually growing worse, and it may finally become so ingrained that eradication is impossible.

PUNISHING KICKERS.

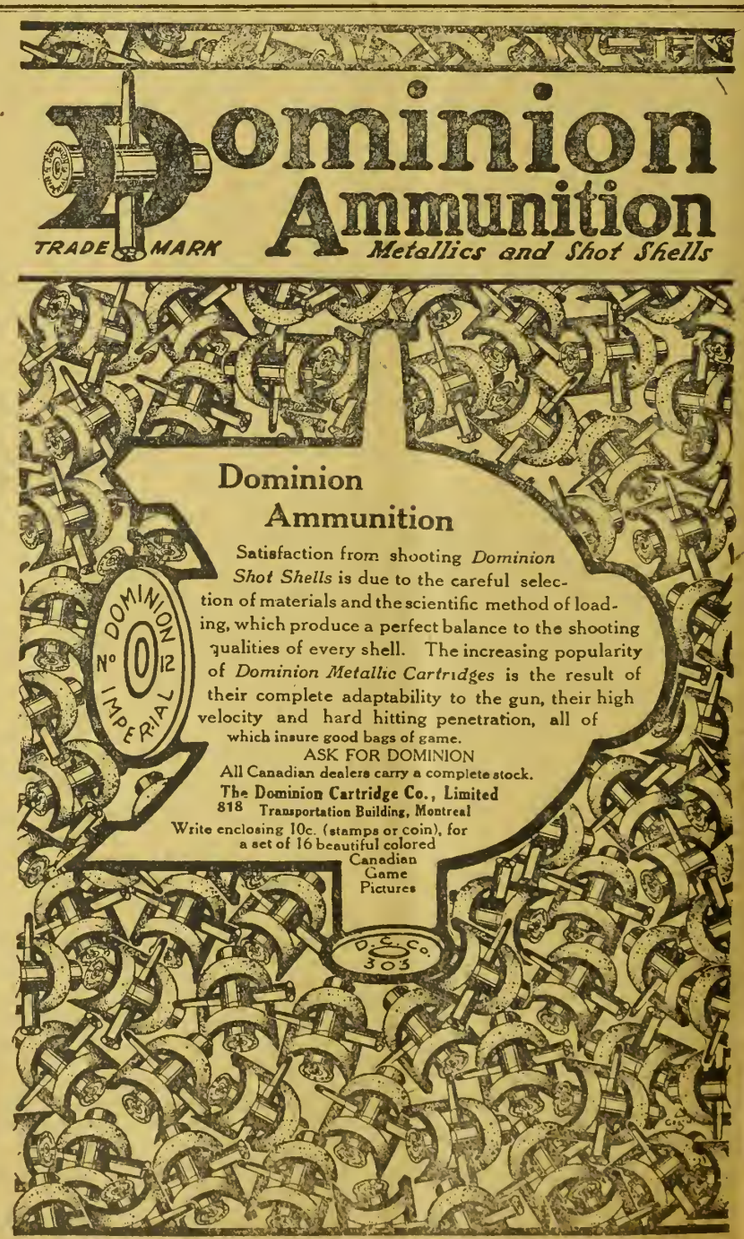
As to punishing horses in these cases when they kick, this depends entirely upon circumstances, and due discretion must be observed. In many cases actual punishment would certainly make matters worse and serve to aggravate the habit instead of counteracting it. To hit horses in the stable with a whip is very often a sure way of making them kick, and a horse can be turned into a pronounced kicker in this manner. In some cases, however, the infliction of punishment on an incipent kicker by means of a cut with a whip whenever the animal kicks is attended by satisfactory results and helps to stop the habit. It depends upon the disposition of the horse whether it is advisable or the reverse to inflict punishment in the stable in dealing with vice or youthful unruliness. In any case great discretion must be exercised in regard to this question, and in the majority of cases punishment will be out of place and harmful. With many horses which are unruly in the stable, and evince their unruliness by kicking, plenty of hard and regular work is all that is needed to renher them more amenable and better behaved and to stop the undesirable habit, says a writer in "Indiana Farmer." In breaking a horse of any vice it is necessary always to take advantage of the limitation in his mind that makes him reason almost wholly from experience, and to convince him that after all your will is superior to his and that he has no alternative but to obey you, and to do so gently and quietly. Show him that it is in your power not only to handle him as if he were a toy, but to handle him very roughly, if you so desire.

These Honest, Time-Tried Ingredients— are the bulwark of RAMSAY QUALITY

In RAMSAY PAINT you get the most accurate and thorough combination of approved raw materials. Master painters will tell you no better materials exist. Your own good judgment will tell you that scientific machine mixing is superior to guess-work and "hand paddling."

Specify Ramsay for your next big-job—and for the odd jobs you do yourself get the right Ramsay finish. Splendid service from the local Ramsay dealer or write the manufacturers. (2)

A. RAMSAY & SON CO. (Established 1842) MONTREAL, Que.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Satisfaction from shooting Dominion Shot Shells is due to the careful selection of materials and the scientific method of loading, which produce a perfect balance to the shooting qualities of every shell. The increasing popularity of Dominion Metallic Cartridges is the result of their complete adaptability to the gun, their high velocity and hard hitting penetration, all of which insure good bags of game.
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Write enclosing 10c. (stamps or coin), for a set of 16 beautiful colored Canadian Game Pictures
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Women's Institutes in P. E. I. 1913-14

During the past year the Women's Institute Movement in Prince Edward Island has been most encouraging in its work. Interest has been well maintained, many taking up as their special work that of Improvement of the School House, grounds and surroundings. Individual drinking cups as well as new doors and window shades have been supplied. In some instances a fee is paid for the regular cleaning of the room. In addition to the above work such subjects as deal with household economy in its many branches have been discussed. For the coming year special lines of study are being outlined, thus combining the literary, social and educational phases of the work.

There are now twenty-two organizations on the list with an approximate membership of 450, and as the members realize the great importance and scope of the work the enrollment increases.

The Department of Agriculture is planning to carry on extension work this coming summer when requests for meetings and organizations of new Women's Institutes will be granted those in sections not already represented.

The Prince Edward Island Branch of the Canadian Handicraft Association is co-operating in the work of the Women's Institutes and through its valuable efforts the members will be enabled to incidentally introduce into the rural school curriculum the art of plain sewing. In conjunction with the Handicraft work we are in hopes, of having a juvenile contest at the coming exhibition in which plain sewing done by girls between the ages of twelve and sixteen will be received. Should Boys' and Girls' Clubs be formed in connection with the Women's Institutes it will give a broader field for the latter in their endeavors to assist the young people of the community.

The opening of competition in the Annual P. E. I. Floral Show this coming autumn to the members of the Women's Institutes as organizations, with the privilege of entering individually, will be the means of encouraging the members in the study of floriculture and ultimately improving their home and school surroundings.

The question of giving Short Courses to the Women's Institutes is now being agitated and arrangements are under way for holding the first Women's Institute Convention which will probably take place in the early summer.

The Time for Fighting the Warble Fly.

Now is the time. The enemy is snugly nestling beneath the hides of the affected animals, and is completely at the mercy of man. He may be said to be helplessly asleep, and might, with an energetic and general onslaught, be utterly exterminated. In a few weeks from now he will awake, and once more resume his activities without fear of interruption. It is surprising to those who are acquainted with the life history of this tiresome and mischievous pest that no serious effort has ever been made to destroy it. No science or scientific knowledge is required to ensure success; neither is there any necessity to spend a penny on veterinary assistance. All that is required is a little exertion on the part of the cattle owner, directed as follows:— Every head of beast that was exposed during last summer to the attack of the fly should be at once placed in a pen and undergo careful examination by the eye and hand to discover the bots, which are now developed chiefly along the backs of the animals. As they are found, they must be squeezed out with the finger and thumb and stamped to death. Nothing could be simpler than such a process, and nothing more effective. Of course, the mischief has been done to the hide, and the poor animals have suffered much pain of which they have been unable to complain, but the idea is that of prevention for another season; and it is certain that, if every animal was so treated at once there would be no warble flies to harry the cattle in the coming summer, and cause an enormous amount of damage to the value of their hides to say nothing of their comfort and well-doing.

EWING'S RELIABLE SEEDS

Reproduce the Choicest Stock

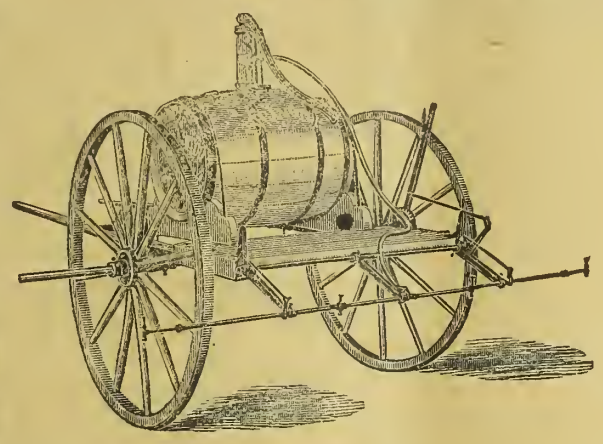
"Like produces like".

Given proper soil and care, Ewing's Seeds will reproduce, in your own garden, before your delighted eyes, the choice, selected vegetables and flowers from which they themselves grew.

Breeding counts in plants as well as in animals, as Ewing's "pure-bred" seeds have been demonstrating by splendid crops for over forty years.

Start right—plant Ewing's Reliable Seeds—and get the most out of your garden. Write now for our Illustrated Catalogue, and if your Dealer hasn't Ewing's Seeds, order from us direct.

THE WILLIAM EWING CO., LIMITED,
Seed Merchants, McGill Street, Montreal. 34



SPRAMOTORS

Here is an Unsolicited Letter from one of Canada's Foremost Authorities

MACDONALD COLLEGE

Ste. Anne de Bellevue, P. Q.,
Jan. 19th, 1914.

The Spramotor Co.,
London, Ont.

Dear Sirs:—

We used one of your model C power sprayers in our 30 acre orchard last year with entire satisfaction. With two lines of hose we had no difficulty in maintaining a steady pressure with the pump running only about two-thirds of the time, each line of hose throwing as much spray as a man could handle efficiently. We could easily have carried an extra line of hose had we needed it.

I might say that this power sprayer was one of the first power sprayers ever used in this Province and from the interest now being taken in spraying, there should be a large number of power sprayers brought in during the next few years, and I feel confident that from our experience with it, your machine will give good satisfaction to anyone using it. Yours very truly,

(Signed) T. G. BUNTING,
Professor of Horticulture.

FREE Write us particulars of what your spraying needs are and we will forward you by return mail a copy of our valuable illustrated treatise on Crop diseases, *without charge*. This puts you under no obligation whatever and secures you useful reliable information that can be got no other way.

In addition we'll send you full details of a *Spramotor* that will exactly fit your needs. You should at least know the facts, so write us today!

The London Spramotor,

1725 King St. E., London, Can.

Bought 20 Years Ago Still Do Good Work!

Twenty years ago takes us back to somewhere around 1894 yet we are constantly receiving letters from men who bought ***Spramotors*** as long ago as that and are still able to write us that their machines are in active and efficient use today.

What does this mean to you men who are thinking of getting a spraying outfit? Simply this:—that you can't buy a better or more durable machine than the ***Spramotor!***

The ***Spramotor*** of twenty years ago was not the advanced machine of to-day, yet the basic principles were right and are proven so by the fact that men are getting good results from our earlier models ***right now***. With the added experience and the various improvements we have been able to effect in all that time, rest assured that in the present ***Spramotor*** you get the utmost in spraying efficiency, durability, convenience and economy.

We want you to know that there is in the ***Spramotor*** line, a machine that will fiill your needs to a nicety. ***If not, we will make one.*** We have a first-class hand ***Spramotor*** selling as low as $6. This will do all the work necessary on smaller farms. Then we have machines mounted on hand carts, others on horse-carts, still others drawn by one or two horses in which the horse does all the work of pumping, and finally we build what is acknowledged to be the last work in spraying machines—our Model "C" Gasoline Power Outfit with every modern improvement and full accessories.

Diseases Mistaken for Hog Cholera.

Ninety per cent. of the losses from disease among hogs are due to cholera, but other diseases are often mistaken for it. This sometimes leads owners to blame serum because they have used it without benefit.

Garbage poisoning is one trouble sometimes mistaken for cholera. It results from feeding hotel and restaurant refuse containing large quantities of soap. The soap causes severe inflammation, and it or other irritating substances produce symptom much like those of cholera.

Worms cause troubles mistaken for cholera by multiplying in the lungs, causing irritation, stopping the air passages and giving rise to a cough and pneumonia. The animal becomes unthrifty and loses flesh, but does not die quickly or show the other characteristic symptoms of true cholera.

Worms in the intestines cause diarrhea, dullness, and lack of thrift, but their presence can usually be detected in the droppings. Cholera is not present if the animal does not show the other symptoms, including fever, redness of the skin, and sudden death. When worms are present the appetite remains good. Loss of appetite is usually an early symptom tom of cholera.

Tuberculosis rarely runs a rapid course in hogs and should not be mistaken for cholera. It occurs most frequently among hogs fed on slaughter house refuse, creamery or other skim milk containing tubercle bacilli, or those following cattle.

If in doubt as to the presence of cholera, have a competent veterinarian examine one or more of the dead hogs, but do not expect serum to protect against any of these other diseases. Hogs entirely immune to cholera may die from one of these other troubles.

The Noted Clydesdale Stallion

"Baron Kelvin"

Reg. No. 12462

will make the season of 1914 at the farm of J. W. Calbeck within one mile of Summerside, P.E. Island, and at Charlottetown. He has an unbeaten record in the show ring both in Scotland and Canada. In 1911 he won the championship at Toronto and Ottawa, defeating the best horses in Canada and in the same year he won first prize and championship at Ogdensburg, N. York, open to all breeds of draft horses. He is a massive horse, weighing about one ton and with superb quality. Service fee $15.00 for the season with return privileges should mare not prove with foal.

Also the trotting and carriage stallion

Capt. Aubrey

(48050)

the fastest trotting sire in Canada. Fastest producing son of "Peter the Great" in America Race record, 2-07¼. Trial 2.06¼. Record at 4 years, 2.15¼ on ½ mile track. Bay stallion 15.3½ hands weighing 1200 lbs., foaled in 1904.

Sire of "Aubrean" 2.17½ at 4 years and several others in the Standard List. Will stand for service at the farm of J. W. Calbeck Summerside, P. E. I. and in Charlottetown.

Service fee $25.00 with return privileges. Further particulars and cards of both the above horses upon application to

C. A. MITCHELL,
School St., Charlottetown.
or the owner,
JOHN RICHARDS,
Bideford, P. E. I.

Thought he had Lost an Old Friend.

Bliss M. Fawcett, one of the progressive farmers of Upper Sackville, N. B., whose name was inadvertently dropped from our mailing list, during his protracted illness and absence in the West writes:

November 14, 1913

The Maritime Farmer,
Sussex, N. B.

Gentlemen.—

"I wonder what I have done that my name has been taken from your list of subscribers. I have not had the "Farmer for a year or more. I wish you would kindly put my name on the roll again and have the paper sent me at once. I can't farm without it. While it has not been coming, I felt as though I had lost an old friend."

The editors of the Maritime Farmer are exceedingly sorry that Mr. Fawcett has been ailing for so long. A man of his cheery disposition and a constitution unimpaired by excesses of any kind is sure to win out in the fight against disease and we trust that ere long he may be able to again mix with his fellow farmers at their annual functions, where his counsel always stands for the uplifting of home and country in its broadest sense.

Peofitable Chester White Gilts.

In August, 1912, Maple Farm of Midlothian, purchased two bred Chester White gilts for $100. On September 27, 1912, one of them farrowed nine pigs. She raised eight, and farrowed again on May 29, 1913, raising ten. On Oct. 12, 1912, the other gilt farrowed ten pigs, and raised them. She farrowed again on May 1, 1913, and raised eleven pigs, and again on Oct. 6, 1913, raising 10 more. From the two first litters we saved six gilts. Of these five were bred and last fall they farrowed the following litters: Sept, 4, eight; Oct. 2, seven; Oct. 6, ten; Oct. 9, ten and Oct. 12, nine. This made a total increase from two gilts of ninety-three pigs in thirteen months. The two original gilts and their six daughters are all due to farrow again next spring.—B. W. Stretch, Cook Co., Ill., in Breeders Gazette.

A Farmer Ad. Accomplished the Task.

Mr. R. O'Leary, farmer, manufacturer of lumber, exporter of canned lobsters and fresh fish, writes:

Richibucto, N. B., Feb. 23, 1914.

The Maritime Farmer,
Sussex, N. B.

Gentlemen.—My ad. in your valuable paper has accomplished its purpose. Kindly discontinue same, and send me the bill. Will send you more business later.

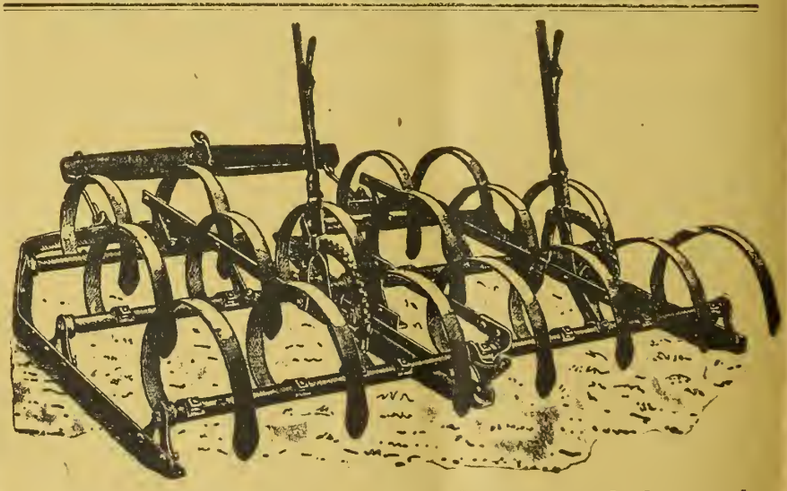
Many sufferers from rheumatism have been surprised and delighted with the prompt relief afforded by applying Chamberlain's Liniment. Not one case of rheumatism in ten requires any internal treatment whatever. This liniment is for sale by all dealers.

Bread like Mother used to make—light, white and palatable—is easy if you use

REGAL FLOUR

Common sense tells you that it is a hopeless task trying to make good bread of inferior flour. You must have the right basis, or baking-day will only produce a batch of failures. Regal Flour is preferred by good housekeepers, everywhere, because its uniformly high quality is a known fact. Get a barrel of Regal from your grocer. If you don't find it all we claim, we'll refund your money.

The St. Lawrence Flour Mills Co., Ltd.
Montreal, Canada



Farmers who know our Lever Harrow and the work it does are buying it and every farmer who uses it talks enthusiastically of its merits.

With the levers the teeth can be regulated to depth in an instant. It will do more effective work than any other harrow and save half your time. Made in sizes:

9 and 11 Tooth, Single Section.
15 and 17 " Double "

The Eastern Steel Co., Ltd.

Successors to The Bailey-Underwood Co., Ltd. & The Brown Machine Co., Ltd.

New Glasgow, - - Nova Scotia

BUTTER PARCHMENT

Mailed direct to your home anywhere in the Maritime Provinces at these wonderfully low prices :

1,000	1 lb.	Printed	$2.00
500	1 lb.	Printed	1.40
1,500	1 lb.	Plain	1.77
1,000	1 lb.	Plain	1.20
500	1 lb.	Plain	.63
1,000	2 lb.	Printed	3.10
500	2 lb.	Printed	1.95
1,000	2 lb.	Plain	1.74
500	2 lb.	Plain	.93

You can easily make up an order for Plain Parchment with your neighbor.

Buying 1,500 one pound sheets you have your wants filled at 59 cents per ream. These prices go into force on and after February 10th, 1914. All goods shipped parcel post.

The Maritime Farmer
SUSSEX, N. B.

EGGS FOR HATCHING

Japanese Silkies, Silver Bearded Black Polish, Golden Spangled Polish, Partridge Cochins, Silver Laced Wyandottes, Silver Spangled Hamburgs, Black Minorcas S. C., $2.50 Setting.

White Plymouth Rocks, Buff Plymouth Rocks, White Leghorn, $2.00.

Barred Plymouth Rocks, Light Brahmas, Rhode Island Reds S. C., White Wyandottes, Buff Cochin Bantams, $1.50.

All exhibition prize winning stock.

ROBERT J. MELVIN,
Yarmouth, N. S.

Big Money-Making Equipped Farm

185 acres ; 8 blooded cows, pigs, poultry, hay, fitted wood, farm tools, seeds, fertilizer and machinery thrown in by widowed owner anxious for immediate sale ; 40 acres rich tillage, cutting 50 tons hay ; pasture for 20 cows and 200 sheep; fine large orchard ; 1 1-2 miles to depot, high school and fine mkts.; low price for everything if taken now, only $2,800, part cash ; for travelling instructions to see this and a 90 acre fully equipped farm for only $1,500, see page 3, "Strout's Spring List of Farm Bargains," just out; choice selections of real bargains at wonderfully low prices throughout N. S. and N. E. States; send today for your free copy. it will show you where to find just the farm you want at the price you wish to pay. E. A. STROUT AGENCY, Box 2612, Boston Mass.

HALF PRICE

During the month of June, we will sell sittings of (15) eggs from the World-Record pens. Barred Plymouth Rocks. Price for eggs from pen No. 1, $5.00. Average per pen last year 245 eggs. From pen No. 2, $3.50. Lady Morley's record last year was 292 eggs, the only sworn to record published. The authenticated World's Record.

W. B. COROWELL,
Morla Poultry Yards, Arcadia, N. S.

ONE CENT A WORD.

FOR SALE—Ayrshire bull from two weeks to two years. One Holstein two past. JOHN A. HUGHES, Petitcodiac, N. B.

ROSE COMB BROWN LEGHORNS for sale after June 15 to make room for young stock. Winners in show room and laying contests. Eggs for hatching $1.50 per 15. Mating list free. ERNEST PRINGLE, Stanley, N. B.

A Paying Proposition.

Dorchester, N. B., Jan. 6, 1914.
The Maritime Farmer,
Sussex, N. B.

Gentlemen.—Enclosed find bank money order to square account for advertising stock for sale. An ad. with The Maritime Farmer is a paying proposition that beats fox ranching all to pieces. May it's shadow never grow less.

Sincerely,
ANDREW McPHERSON.

Setting the Hens.

One should never carelessly set a hen. Some poultry keepers merely chuck the number of eggs they call a "setting" under the hen wherever she happens to have last laid and become broody. On the same old nesting material, under the same system of any hen that wants to lay in with her; then they scold because the eggs break and all manner of disaster beside make it a poor hatch. If the nest be secure and other hens not liable to bother it, let the hen brood the chicks where she laid, but is not, put her in a safer place, and make her brood where you want her to. With the standard bred you can do this, nine times in ten.

Where the hens lay in movable boxes or otherwise, before setting, the box should be thouroghly burned or scalded out. Fresh nesting material must be put in, and it is best to sprinkle vermin powder in this, as, mites are not in evidence, those big lice always are, and it is the nests they always hunt, to worry the hen and help make her break the eggs, for this is often why she breaks the eggs from so much uneasy moving about as she is bound to do.

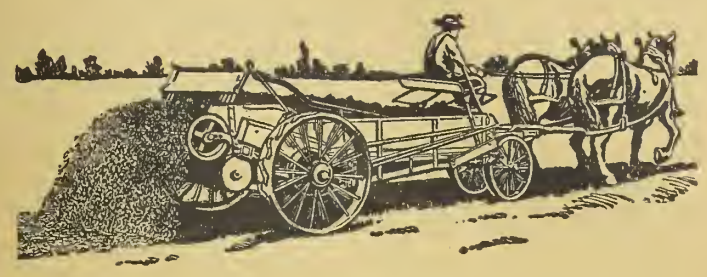
When the nest is ready give the hen a thorough dusting, but don't put in the eggs until you are sure she means business, for often a hen does not at all, or else takes her time to by staying on the eggs well for a day, long enough to start the germ, then she may leave the nest for a day or night, or altogether, if you are not on the close watch, and the eggs are both spoiled for market or hatching—the latter especially, for the start must not be interrupted. When the chick is well started, the hen leaving the nest for several hours may not hurt the chicks in the shell at all.

In about seven days go over the hen again, and this should be the last going over with most vermin powders, as too lete a dusting often results in weak or sore-eyed chicks.

When the hen comes off don't make the mistake of giving her too many chicks to hover. She cannot warm more than a good dozen at any time through cold, damp weather, or even chilly spring nights. Giving a hen too many chicks at such a time simply invites a big loss from chill. Keep her much of the time tight in her coop, whereever it is—that is, at first. If let loose she is too prone to travel, even about a room given over to her, and let the chicks get too cold. If kept in a coop tight she coaxes the chicks to stay close to her, and though they run out in the snow, they soon scurry back to the heat.

The Maritime Farmer was sorry to learn a short time ago, that Mr. Bliss Anderson, Sackville, N. B., who in his younger days was probably one of the best known breeders of Shorthorn Cattle and Clydesdale horses in the Maritime Provinces had passed to his reward. We understand that his son, Laurie M. Anderson, who follows in his footsteps, as a breeder and who is one of the most intelligent and progressive farmers in his district intends to conduct the business under the old firm name of Bliss Anderson & Son. It is pleasing to us to see the young men stepping in and so nobly taking their place. Yet we cannot help feeling a pang of sorrow, when one of the fathers, who whas been instrumental in building up our agricultural resouces, passes away.

International Harvester Manure Spreaders



THE I H C LINE
GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
Hay Presses
CORN MACHINES
Planters, Pickers
Binders, Cultivators
Ensilage Cutters
Shellers, Shredders
TILLAGE
Combination,
Peg and Spring-Tooth,
and Disk Harrows
Cultivators
GENERAL LINE
Oil and Gas Engines
Oil Tractors
Manure Spreaders
Cream Separators
Farm Wagons
Motor Trucks
Threshers
Grain Drills
Feed Grinders
Knife Grinders
Binder Twine

STEEL frame on steel wheels—that is the lasting basis on which International manure spreaders are built. All parts, including box, beater, spreading mechanism, apron, are built by experts, using best materials, from careful designs based on field tests.

Every detail is strong and durable, built for long life and ease of draft. Among the features that will interest you are these: Simple protected beater driving mechanism, all of steel; load carried on rear axle, insuring traction; reversible gear and worm; low, easily loaded box, with ample clearance underneath; end gate, preventing clogging of beater while driving to the field; etc.

All styles are in the I H C spreader line, high and low, endless and reverse apron, and various sizes for small and large farms. Our catalogues will tell you more. Write for them and let us tell you also where you may see I H C manure spreaders.

International Harvester Company of Canada, Ltd
At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

Double The Yield of The Garden

GEM GARDEN COLLECTION

This Complete Collection will stock a moderate-sized Kitchen Garden throughout the Season. $1.00, Postpaid.

½ lb.	Beans.... Dwarf Stringless Yellow Pod.	1 pkt.	Onion.... Early, Slicing.
½ lb.	Beans.... Dwarf Stringless Green Pod.	1 pkt.	Onion.... Early, Boiling.
1 pkt.	Beans.... Dwarf Bush Lima.	1 pkt.	Parsnip.. Long White.
1 pkt.	Beet..... Round Red.	½ lb.	Peas..... Earliest Dwarf.
1 pkt.	Cabbage.. Early.	½ lb.	Peas..... Medium Early Dwarf.
1 pkt.	Carrot.... Intermediate Red.	1 pkt.	Radish... Early Round Red.
½ lb.	Corn..... Early Sugar.	1 pkt.	Squash... Marrow.
1 pkt.	Cucumber. Slicing.	1 pkt.	Tomato... Early Smooth Scarlet.
1 pkt.	Lettuce.. Cabbage Heading.	1 pkt.	Turnip... Round, White Table.

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Also at Toronto, Winnipeg and Vancouver

With Rennies Seeds

SEED OATS

Now landing 6,000 Bushels FANCY SEED OATS. Gartons Abundance, Newmarkets, Banners. The finest selected *Strictly Seed Oats* produced in Canada.

Price right.

C. H. PETERS' SONS, Limited
Peters' Wharf, St. John, N. B.

Order Your Horse Posters From The Maritime Farmer.

A Visit to the Nappan Experimental Farm.

While attending the Maritime Horse Show in Amherst last week, we were pleased to accept the invitation of our friend, W. W. Baird, Superintendent of the Nappan Experimental Farm to visit the farm.

We arrived there just in time to see a fine bunch of Grade Shorthorn Steers, that was stall fed in the farm stables, before they were shipped to supply the Easter market in St. John with prime beef. The steers were a particularly smooth even lot. Their broad loins were well covered. They were sleek and fat and their coats showed no signs of dirt, vermin or other disease. The heaviest steer in the lot tipped the scales considerably over 1600 pounds. The gains made since they were stabled were gratifying to the feeder and the price paid by Kane & McDonald, the St. John meat dealers who were the buyers, was nine cents per pound live weight, which leaves a nice margin for profit after all expenses have been credited.

We also saw several pens of stall fed lambs that Mr. Baird purchased last fall. These lambs were ordinary grades, purchased last fall put on clover, aftermath and later on rape and turnips. When winter set in they were fed clover hay, turnips and a little meal. Purchased for five and one-half cents per pound live weight and averaging about 80 lbs. each they are now going to market at eight cents per pound and averaging somewhat over 100 pounds each. They are thus realizing about double their cost price last fall. They too, will show a nice margin of profit over all expenses. The winter fattening of lambs in not followed very much in Maritime Canada. We see no reason why it would not pay some of our young farmers to do some work along this line. We feel confident that Mr. Baird will gladly furnish any information in this respect that interested parties may desire through the columns of the Maritime Farmer.

We were informed also of the experiment that is being conducted at Nappan in the breeding of dairy cattle. A couple of years ago a small herd of heifers of nondescript breeding was purchased. These heifers were mated to an Ayrshire bull. The heifer calves resulting from this mating were kept and when old enough to breed, were mated to another Ayrshire bull. Their progeny will be again mated to another bull of the same breed. The original nondescript cows were again mated to a Holstein bull and the heifers procured by their mating will later be bred to a Holstein bull, and heifers thus obtained again bred to a bull of the same breed.

Last year the nondescript cows were mated to a Guernsey bull, and when the heifers from this mating are old enough they will be bred to another Gurnsey bull.

In this way the experimental farm is grading up three herds from the original nondescript heifers. Records of milk and fat production of the various cows and heifers is and will be kept and it will be interesting to note the improvements made by the use of pure bred sires and contrast the progeny of the grades of the three breeds under the same care, feed and general condition.

Mr. Eben Craig, of Craig Bros., of Amherst, is now in charge of the poultry and apiary departments of the Nappan Experimental Farm. The bees are wintering well and the poultry are doing nicely. We saw a lot of lusty young chickens in the brooder house. The morning of our visit was one of the most blustery days experienced this winter, so we did not go out to the orchards, but we were

Just Like New

A NEW wagon without a coat of paint would look no better than the old wagon you have right in your barn—it's the bright, fresh, shiny paint on the new wagon that makes it appear so attractive.

Martin-Senour Wagon and Implement Paint

will make your old wagon "Spic and Span", and give the appearance of a new wagon, at small cost. This Paint is equally good for the Plow, the Reaper, the Binder, and all other Farm Implements that should be kept paint protected.

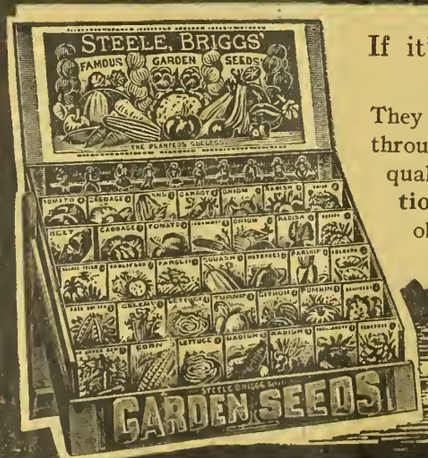
For every kind of painting you want to do around the farm, house, or barn, there is the right grade and shade in Martin-Senour Paints and Varnishes—just the right Finish for every purpose.

Let us tell you how to make things "Spic and Span" —write for "Farmer's Color Set" showing the various Paints and Finishes for farm service—free for the asking. 34

The Martin-Senour Co.
Limited
MONTREAL.

MARTIN-SENOUR 100% PURE PAINT & VARNISHES

GOOD SEEDS FOR GOOD CROPS



If it's anything in seeds you require—ask for **STEELE, BRIGGS' SEEDS**

They are handled by all reliable merchants and recognized throughout Canada as standard seeds of the very highest quality and thoroughly **tested for purity and germination.** Look for the box at your dealer's. You can obtain **Steele, Brigg's Seeds** everywhere. A23

STEELE, BRIGGS SEED CO. LIMITED
HAMILTON - TORONTO - WINNIPEG

informed that Bert Robinson, the horticulturist in charge, has his work well in hand and this important line of farm work is not neglected.

Our genial friend, Robert Donaldson, the forman in charge of the live stock and field operations was delighted with the steer and lamb feeding experiments. He is always on the job and ever ready to show the visitor around and explain the why and wherefore of every operation under his charge.

Although Mr. Baird has been in charge of the Experimental Farm for only a comparatively short period he has a good grasp of the situation, and his years of practical experience and Agricultural College training are being used to the best possible advantage to show the Maritime Province Farmers what they may accomplish by systematically and persistently following the right channels.

Optional Inspection of Stallions.

Editor Maritime Farmer:

I enclose copy of Act relating to enrolment of Stallions, Chapter 9, Statutes of Nova Scotia 1913, relates to Inspection of Stallions (and also replaces Schedule in Enrolment Act by nine other forms. We have no copies of this Act struck off but I am eclosing circular letter which we sent out a short time back. We expect to have copies of Inspection Act printed shortly with amendments of 1914, and will forward you a copy.

"According to the Amended Stallion Enrollment Act of 1913, owners of Stallions in addition to being required to enroll their stallions with the Department of Agriculture, have also the option of having them inspected and having a certificate issued in accordance with this inspection. If, for example, your horse is a pure bred horse, the best certificate you can have is Class I. Enrolled, Inspected and found free from the malformations and diseases named under said act. Class 2, is enrolled, inspected and found to have (names of unsoundnesses attached.) Class 3, is "Enrolled but not Inspected."

The general implication that the public will make if the horse is not inspected is that the owner is afraid to have him inspected by virtue of some unsoundness he may possess, known to the owner. The initial cost of enrollment is $2.00, annual renewal $1.00. Cost of inspection, provided our legislation goes through as expected) will be $2.50. The inspection, you understand, is not compulsory, but if a man has a sound horse he gets the very highest certificate.

"It is important that we should know at once whether you wish to have your stallion inspected and have the highest possible certificate issued in accordance with the inspection.

"We will have to arrange a route for the veterinary inspector and I would like to hear from you at once if you desire your stallion inspected. We will appreciate the fact that this inspection will necessitate a large expenditure so we cannot undertake to send our veterinary inspector over the road more than once. It is important, therefore, that you make immediate application for inspection if you desite it."—M. Cumming, Truro, N. S.

An Island Cow in the Record of Performance.

In the list of Ayrshire cows that qualified for the Record of Performance by completing their year's test, between the dates February 20th and March 20th we find in the two-year-old class the cow, Rose—31884, owned by Roy W. Bulpit, Cardigan, P. E. I., with a record of 10,795 pounds milk, 4.03 p. c. butter fat, yielding 435 pounds butter fat.

CORRECTION.

In a recent issue the records of several Maritime Holstein cows were given inadvertently as fourteen day records. They should have read "seven day records."

RENNIES "XXX" SEEDS

Our "XXX" Vegetable, Clovers and Timothy Seeds are approved by the Dominion Government for Purity and Germination. Ask your dealer, or write direct for catalogue.

WM. RENNIE CO. Limited

Also at Toronto, Winnipeg and Vancouver 190 McGill Street, MONTREAL

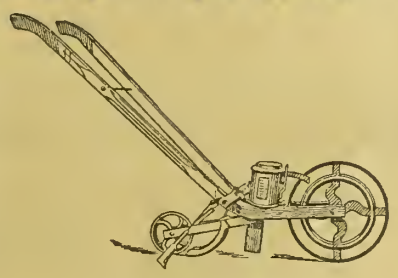
Strongest and Most Stylish-Looking

MARITIME Ornamental Fencing and Gates have *the quality*. There is no gainsaying that. Only *first* quality tubing is used for the gate frames. We could, like many makers, use *second* quality and save *one-third* to *one-half* the tubing cost. We could also use *small* wires and save some more. But we use *large,* strong, stiff No. 9 wire. This wire is more smoothly, thoroughly and *heavily galvanized* than the wire generally used for fence and gate purposes. You know what that means. Strongest, *most lasting,* as well as most stylish-looking. Write for *free catalogue,* showing the different designs, and from them choose a gate you'll be proud of.

NEW BRUNSWICK WIRE FENCE CO., Limited

Moncton - New Brunswick

Garden Seeders and Wood Cutters



"THE BEST BY TEST"

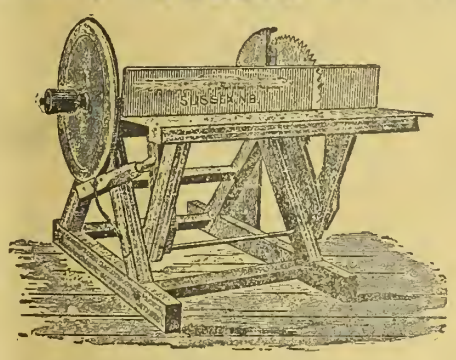
GARDEN SEEDER

Does the work of two men in half the time. Makes the drill, sows, covers and rolls the seed while you walk.

No better seeder can be built for the fast and accurate sowing of turnips, cabbage, carrots, beets, corn and all other garden seeds.

Price $7.50 Delivered at Your Station.

ORDER NOW



SHORT SWING

"The best made" is the users verdict.

Made in four different sizes: Long Swing, Long Swing Improved (with extra long table androller) the Flat Roller Table and Short Swing.

The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1⅝" diam.

Both bearings supplied with compression grease cups and for convenience in handling we are putting skids under our machines this season.

Send for our Wood Cutter catalogue.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

The SUSSEX MANUFACTURING Company Limited, SUSSEX, N. B.

All Agricultural Authorities Will Tell You

that most crops take more POTASH from the soil than Phosphoric Acid.

Now it stands to reason that this POTASH must be returned to the soil to keep up good crops or produce better crops.

We can supply you with

HIGH GRADE

POTASH

FERTILIZERS

or straight Potash, Nitrate of Soda, Acid Phosphate and Basic Slag at lowest prices, which you can mix yourself.

Let us tell you how. Now is the time to buy fertilizers for your spring crops.

A. R. WETMORE,
Clifton, - - N. B.

SPRING TONIC

For purifying the blood and cleansing the system there is nothing just as good as

Gates' Life of Man Bitters and Invigorating Syrup

WHY?

Because no other medicine known to medical skill will extract the water from the blood, removing it from the system in the natural way. They cleanse every organ in the body so that nature resumes her original standing.

Try them and be convinced of their purely vegetable and healthgiving properties.

Sold everywhere and by wholesale and retail druggists.

C. Gates, Son & Co.
Middleton, N. S.

I was cured of Acute Bronchitis by MINARD'S LINIMENT.
Bay of Islands. J. M. CAMPBELL

I was cured of Facial Neuralgia by MINARD'S LINIMENT.
Springhill, N. S. Wm. DANIELS.

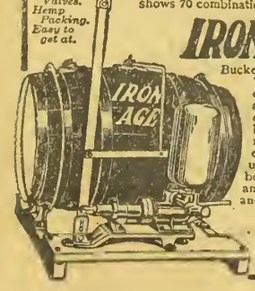
I was cured of Chronic Rheumatism by MINARD'S LINIMENT.
Albert Co., N. B. GEO. TINGLEY.

SPRAYERS Are a Necessity and a Benefit.

They save your crop, increase the yield and improve the quality. Our Spray Calendar shows when to spray and what materials to use. Our "Spray" booklet shows 70 combinations of

Outside Pumps. Bronze Ball Valves. Hemp Packing. Easy to get at.

IRON AGE



Bucket, Barrel, Power and Traction Sprayers for orchard and field crops and other uses. Built complete or in units—buy just what you need. Ask your dealer to show them and let us send you our spray booklet, spray calendar and "Iron Age Farm and Garden News" free.

The Bateman-Wilkinson Co., Limited
434 Symington Av. Toronto, Can.

Varieties of Grain Crops to Grow.

For twenty six years the Dominion Experimental Farms have been experimenting with grain crops at the various farms and stations distributed over Canada trying to learn which varieties give best results in the different provinces. Not only have the best known sorts produced at other places been grown side by side, but at the Central Farm at Ottawa, new varieties have been bred, and when found desirable, perpetuated and distributed to growers.

For the information of the Canadian farmer the more important results of the season of 1913 at the different farms have been put together in summarized form and issued in Bulletin No. 74. There are included in this some recommendations as to varieties to grow and methods of production to follow that should be of great service to growers in all parts of Canada.

Referring to "Marquis" wheat which was bred at Ottawa the bulletin says, "Marquis produces very large crops, has usually good straw and is more resistant to rust than most of the common varieties." A large edition of this bulletin has been printed so that all who desire copies may secure them by applying to the Publications Branch, Department of Agriculture, at Ottawa.

Butter Parchment.

With the introduction of parcel post the Maritime Farmer is able to offer users of butter parchment particularly low prices. We buy direct from the mills in Germany and are able to give our customers practically wholesale prices, with a slight addition for delivery charges. Our prices include all charges to your home post office. We guarantee every sheet of parchment to be absolutely pure—that is parchment which will preserve your butter from all taint. So much imitation parchment has been offered for "pure parchment" that the public is justified in being doubtful of the stuff that is offered for the 'pure' article. The best parchment is made in Germany and it is from there that the great bulk of the world's supply is derived. The Maritime Farmer has sold millions of sheets of parchment and has yet to hear the first complaint as to the quality of the goods we supply. Prices will be found in our advertising columns. We ask our customers to keep quality in mind when buying parchment. Imitation parchment will ruin butter and result in losses to those who use it.

Good Jersey Records.

Josselyn & Young, breeders of pure bred Jersey Cattle, Rose Bank Farm, Silver Falls, N. B., writes:

Our cows entered in the Record of Performance have made the following milk records: Pedro's Gladys, 9,885 lbs.; Hood Farm Khedive Besrie, 9,272 lbs.; Pedro's Blossom, 8732 lbs.; Molly of Rose Bank, 3 years old 8,589 lbs.; Helen of Rose Bank, a two-year-old, 6,849 lbs. We have young bulls from these cows for sale as per our advertisement.

An Appreciation.

That the Maritime Farmer is appreciated, is shown by the following letter from Arthur Brookes, of the Province of Quebec.

"I received the sample copy you sent, and would say that I was greatly surprised to find so much interesting and instructive reading on all subjects connected with farm matters. From now on, you may count your circulation having an increase by one."

That Building you are going to do—

The METALLIC ROOFING CO. LIMITED
TORONTO King & Dufferin Sts. WINNIPEG 797 Notre Dame Ave.
Manufacturers Established 1884

Get the Cost

WRITE TODAY

Safety
Appearance
Durability
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We make :—

"Eastlake" Steel Shingles, "Metallic" Clapboard, Brick and Rock-faced Siding, for houses. "Metallic" Corrugated Iron for outbuildings---" Metallic" Ceilings and Walls for the inside of the home, store or theatre, &c., &c. 20

This oven test means bake-day "luck"

If your baking results vary, you may find the reason in the flour. For there is only one way that a miller can assure you constant success. An oven test must be made.

So we take ten pounds of wheat from each shipment delivered at our mills. We grind this sample into flour. Then the flour is baked into bread.

If this bread proves to be the "lucky" kind—high in quality, large in quantity—we use the shipment. Otherwise we sell it.

You buy luck in flour bearing this name.

No need to merely try your luck.

PURITY

"More Bread and Better Bread" and "Better Pastry Too" 529

GREAT WHITE BURNERS

The Maritime Farmer has been appointed Sole Agent in the Maritime Provinces for this celebrated burner.

WE WANT AGENTS in all parts of Prince Edward Island, Nova Scotia and New Brunswick.

A BIG SELLER---AGENTS MAKE GOOD MONEY

Write Early and get the Best Territory

THE MARITIME FARMER - SUSSEX, N. B.

Get this

LOUDEN

Bird Proof

Barn Door Hanger

and have the barn door hang and run right for all time. This is positively the finest Barn Door Hanger on the market. As its name implies birds cannot build in the track. The track is hollow with closed ends. No ice or snow in winter or trash in summer can possibly get in to clog it. Runs on two strongly braced trolley wheels always smooth and easy running. Hinged so as to make it flexiblo and to allow the door to swing outwards and upwards if occasion requires.

Ask for the Louden Line

—over 47 years of experience and practical experiments go to make Louden goods efficient and reliable. We mako

"Everything for the Barn"

including Cow Stalls, Stanchions, Litter and Feed Carriers, Hay Forks and Slings.

Write for our new Catalogue.

The LOUDEN MACHINERY CO.

Dept. 48 - GUELPH, Ont. 4

Get Acquainted with P. E. Island Black Fox Profits

In 1913 investors in fox enterprises on P. E. I. secured profits amounting to $4,000,000.

A pair of Prince Edward Island silver foxes with their litter of four, sold in 1913 for $51,000.

A pair of high quality breeders sold last year for $32,500.

Four fox pelts from Prince Edward Island have brought $2,900, $2,700, $2,615 and $2,500 on the London market,

The Sirdar Silver Fox Company has FIVE PAIRS of the Island's highest quality, pedigreed silver foxes, chosen from stock of high fur qualiiy and big production records. The capital stock of the company is $75,000, shares $10 each. Write for free prospectus and further information TODAY.

Sirdar Silver Fox Co., Ltd.

Summerside, P. E. I., Canada

Farmer Ads. will Bring Results.

Charlottetown Market Report.

GRAIN—80c. to $1.10 bus.; Oats, white, 36c. bus.; black, 40c. bus.; Barley, 50c. to 60c. bus.; Buckwheat, 60c. to 65c. bus.

FEEDSTUFFS.—Bran, $28.00 to $30.00 ton; Shorts, $28.00 to $30.00 ton; Middlings, $28.00 to $30.00 ton; Oil Cake, $1.90 to 2.15 bag; Cottonseed Meal, $1.80 to $2.00 bag; Gluten Meal, $1.85 to $2.00 bag; Corn Meal, $1.95 to $2.00 bag.

LIVE STOCK—Butcher's Cattle, live, 7c. to 8c.; Stockers, live $18.00 to $60.00; Milch Cows, $28.00 to $50.00; Sheep, 4½c. to 5½c. lb.

DRESSED MEATS.—Beef, (Carcass) 10c. to 13c. lb.; Beef, (retail) 10c. to 18c. lb.; Mutton, (carcass) 10c. to 12c. lb.; Pork, select, 11c. lb., light and heavy, 8c. to 10c. lb.

HORSES—Drafters, Roadsters, Carriage, $125.00 to $225.00. H

DAIRY PRODUCTS—Creamery Butter, 28c. to 32c. lb.; Dairy Butter, 24c. to 28c. lb.; Cheese, 15c. lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 18c. doz.; Fowl, 10c. to 13c. lb.; Chickens, 12c. to 14c. lb.,

FRUIT—Apples, $3.00 to $4.5 bbl.

MISCELLANEOUS—Hay, $12.00 ton; Straw, $6.80 ton; Wool, 24c. lb.; Beef Hides, 10c. lb.; Sheep Skins, 75 c. to $1.00 each.

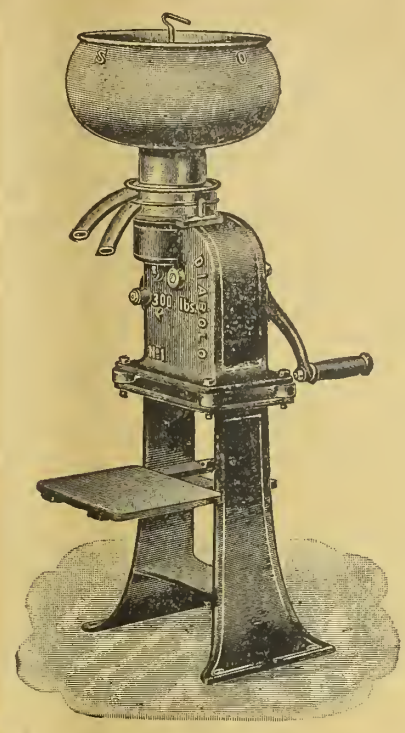
VEGETABLES—Carrots, 50c. to 60c. bus.; Potatoes, 30c. to 35c. bus.; Turnips, 14c. to 16c.; Beets, 45c. to 50c. bus.; Parsnips, $.75 per 100 lbs.

The supply of farm products offering at present is very limited, owing to the condition of the roads. There is considerable oats and hay in store here but very few vegetables, and the prices quoted are only about what they would bring if there were any offering. The same is true regarding poultry. There is some stock still held in cold storage and this is about the only poultry available. Butter is plentiful for the season of the year but the stock of cheese is very limited. Eggs are plentiful and prices are likely to be lower within a few days. Oats are firm and holders are now pushing sales. Hay is dull and the supply is quite sufficient for the market. Loose hay for local use is higher than pressed hay. Meats of all kinds are high. Beef is we think, at a record figure for this market. Pork is easier than it was a short time ago and many think that it will be bought for less money a little later. Reports say that the potatoes have not kept well and that farmers will not have as many for sale as usual.

Rust and Decay

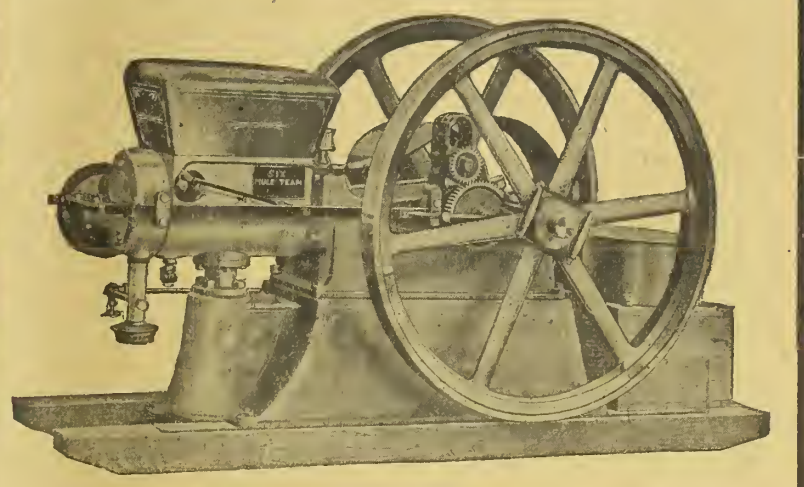
It must be a source of great satisfaction to the farm tool and implement makers to travel round the country in the fall of the year and see that the great majority of the farm wagons and high-priced implements are stored in the open air through all weathers, almost until the snow flies; and then after being well rust covered and rot commencing on the wood work, the tools are housed till needed again, and in the majority of cases are oiled up just before using, and the consequence is broken gears, sweaty horses, and a bill of expense for repairs. A farmer will buy high-grade up-to-date tools and leave them in the barnyard and by so doing shorten their life of usefulness by one-half. The sooner some farmers will learn that paint and oil are cheaper than tools, the sooner they will be in a position to get the full life out of the implements.

THE "DIABOLO" CREAM SEPARATOR



The "Diabolo" Separator is a high grade machine. Its record in skimming capacity has never been beaten. It is simple to handle, easy to clean and light to work. On account of its accurately machined parts it runs noiselessly and smoothly, while wear and friction are reduced to minimum. Fully guaranteed for ten years.

THE "ESCO" GASOLINE ENGINE



The acme of perfection in engine building

Full powered, smooth running, simple construction, reliable for steady work, long lived and low priced. Built by the world's largest makers. We guarantee every engine for a period of five years, and will replace, free of charge, any part which proves defective in material or workmanship during that time.

THE EASTERN STEEL CO., LTD.

Successors to the Bailey-Underwood Co., Ltd. and Brown Machine Company, Limited

New Glasgow, - - - Nova Scotia

ORPINGTONS FOR SALE

I have for immediate delivery the following Pens for sale:

No. 1 Beautiful pen of Blacks, 3 Pullets, 1 Hen and Cockerel, great color, shape and splendid layers. Price $10.00

No. 2, Pen of Whites, 9 Hens headed by a pure white Cockerel of good size and shape, Clover Farm's strain, beautiful head points. You will get layers and winners from this bunch. Prices $12.00.

Pen Buffs, 7 Hens headed by Cockerel, great shape and color. Price $10.00.

I must sell, thus the price.

C. H. WISENER, PICTOU, N. S.

THE KARAKUL SHEEP

IN AMERICA

A BOOK OF 48 PAGES WITH 15 ILLUSTRATIONS

BY

Professor J. Walter Jones, B. A., B. S. A.

Author of "Fur-Farming in Canada"

Price 60 cents, Postpaid

This book gives a thorough going account of the efforts made to introduce the Karakul Sheep into America in order to secure the domestic production of Persian Lamb and Baby Lamb furs and save $10,000,000.00 to America yearly. By means of tables, it demonstrates clearly the present location of the valuable sheep imported in 1913, as well as of the few good ones imported in 1908. The possibilities in this kind of fur farming can be imagined when it is known that a lamb from a Karakul sire and an ordinary Lincoln or Cotswool ewe is worth several times as much for fur as the usual lamb is worth for meat when six months of age. It would be well for fur farmers to read up on the possibility of fur production with animals already domesticated. More Persian Lamb fur is sold yearly than Silver Foxes, Mink, Skunk, and Otter combined.

Send 60 cents for this book of concise information to

The Maritime Stationers

Charlottetown, P. E. I.

Canada.

ROSE BANK FARM

Young Jersey Bulls for Sale

From Cows in the Record of Performance and also from prize winning cows.

JOSSELYN & YOUNG

HIGHLAND STOCK FARM

Pure Bred Berkshire Pigs for Sale

from first prize winners at Fredericton Exhibition, 1913, pairs not akin, ready for delivery after April 1st, 1914, registered. P. O. Address

SHAW BROS., VICTORIA, Carleton Co., N. B.

EGGS FOR HATCHING

White Wyandottes, Columbian Wyandottes, S. C. Brown Leghorns, Black Cochin Bantams. Bred to lay, Good enough to win at Halifax and Amherst, 1913. 13 first, 3 seconds, 1 third, 1 fourth, 1 fifth,

Eggs from Exhibition Matings .....$3 per 15
Eggs from Utility Matings .....$1 per 15
Black Cochin Bantams .....$2 per 13

Satisfaction guaranteed.

Wolfville Poultry Yards

Wolfville, - - Nova Scotia

Cattle and Sheep Labels

Inexpensive, Simple, and Practical

Cattle.....	75c	$2.00
Light Cattle..	60c	1.50
Sheep or Hog.	40c	1.00

No postage or duty to pay. Cattle sizes with name & address and numbers; sheep or hog size, name and numbers.

Get your neighbors to order with you and get better rate. Circular and sample mailed free.

F. G. JAMES, Bowmanville, Ont.

FARM FOR SALE

Containing 400 acres, 56 acres dyke land, 35 upland in high state of cultivation, 15 in bush land to be cleared and the remainder in timber. 2 good houses, 3 barns on farm in fair repair, plenty good water, 5 miles to station, 2 1-2 to steam boat landing, 2 to church ane store, 1-4 to school and Poss Office. Apply owner

W. B. KEIVER,

UPPER NEW HORTON. - ALBERT CO., N. B.

What to Spray the Apple Orchard With and When.

APPLICATION NO. 1.

For the first application use one gallon commercial lime sulphur to nine gallons of water if the spray is applied before the buds burst. It has been found that the winter strength of lime sulphur will not injure partly opened leaf buds say one-quarter to one-third expanded. If therefore, the first application is delayed until the buds are bursting or partially expanded, use one gallon lime sulphur to ten to twelve gallons of water, with 2½ lbs. of arsenate of lead. For apple scab, oyster shell bark louse, tent caterpillars, canker-worms, bud moth and cigar case bearers.

APPLICATION NO. 2.

Use one gallon lime sulphur to 37 gallons of water and 2½ lbs. of arsenate of lead and apply just before the blossoms open and just after the cluster buds unfold. This application is for the apple scab and protects the young leaves and stems of the young fruits, with the poison added for leaf eating insects.

APPLICATION NO. 3.

The same as above, applied when most of the blossoms have fallen and the little apples are still standing upright. Do not wait until the little apples have turned downward, as it is then too late. This is the first application for codling moth and is important in fighting the scab, as it is this application which gives clean fruit.

APPLICATION NO. 4.

Use the same as No. 3, and apply a week or ten days later.

Should there be indications of late infection of scab in August or September likely to result from wet cold weather, use one gallon lime sulphur to 36 gallons of water. It is best to apply all four applications. Some times a fifth is necessary. If only three applications are possible use 1, 2 and 3. If only two applications can be made use 1 and 2.

For full information on the insect and fungous enemies of the apple see Part 3 of Bulletin No. 4. For information on "Why We Spray," "Cost of Spraying," "Cost of Spraying Outfit" "Amount of Spray to Use," "How to Spray" and "General Spraying Directions," see pages 30 to 39 of the Report on Horticulture for 1912, or Bulletin No. 2. All or any of these publications will be mailed free of charge on application to A. G. Turney, Department of Agriculture, Fredericton.

NOTE.—If uncertain as to the amount of spray materials required for your orchard, state number and age of trees, distance apart and whether of normal size for their age. Upon receipt of this information the New Brunswick Fruit Growers' Association will know about how much material you will require and will be glad to supply it. Write to A. G. Turney, Secretary Treasurer N. B. F. G. Association, Fredericton, N. B.

EGGS FOR HATCHING

Brom Bright Highest Class Exhibition Barred P. Rocks. The leading winners of America's largest shows—the Best. The verdict of three world's fair, Cockered and Pullet Mating. Regal W. Wyandottes winners at Kentville Poultry Show of 5 firsts, 2 seconds, 1 third, and 6 Specials. Winner of Silver Cup.

Setting $2.00 per 13.

Kentville Poultry Yards,

KENTVILLE, N. S.

CANADA CEMENT COMPANY LIMITED
PORTLAND
CANADA
CEMENT
MONTREAL
A Concrete Root Cellar
is one of the farmer's greatest money makers. It makes money by keeping produce in good condition until it can be taken to market, or until better prices can be obtained. It maintains a cool, even temperature that
Keeps Produce Perfect
A concrete root cellar is always dry, clean and sanitary. It is proof against heat, cold, water, fire and rats. Although the greater part of it is underground, it cannot crumble or rot away. It is permanent and needs no repairs.
Tell us to send you this handsomely illustrated free book "What the Farmer can do with Concrete." It contains the fullest information about concrete root cellars and other farm buildings that never wear out and shows how you can build them at small cost.
Farmer's Information Bureau
Canada Cement Company Limited
716 Herald Building, Montreal
FARMER CAN DO WITH CONCRETE

BRED - TO - LAY

White Wyandottes

Pen headed by imported Cock, bred from a hen with record of 258 eggs a year. Eggs for hatching $1.25 per 15,

Barred Plymouth Rocks

McDonald College Bred-to-lay strain. Eggs $1.00 per 15. $3.50 per 100.

ORCHARD HILL FARM,

Brown's Flats, - N. B.

FERTILIZERS

We carry the famous

HARAB FERTILIZERS

Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,

Moncton, - - N. B.

KYLES RHODE ISLAND REDS

If you look up our winnings at the Maritime Fall and Winter shows or if you visit our yards, you will see that we are headquarters for the best Rhode Island Reds in the Maritime Provinces. Eggs for hatching at reasonable prices. Let us book your order for delivery at any set date.

Thomas A. Kyle, Sussex Corner, N. B.

EGGS FOR HATCHING

From Rose and Single Comb Rhode Island Reds. Silver cup winners at Amherst Winter Fair. Best pens $3.00 per 15 eggs. Second pens $2.00 per 15 eggs. No mating list. Write for particulars.

W. H. Henry, Shubenacadie, N.S.

MOUNT PLEASANT HOLSTEINS

When you want pure bred or high grade Holstein Fresian cattle let us quote you our prices. We are at present offering several choice bull calves from high producing record stock. Inspection and correspondence solicited. 'Phone 68-4.

JEFFRIES BROS., Mount Pleasant Farm, Sussex, N. B

FOR SALE

1 American Registered Jersey Bull. 1 year old. also 2 American Registered Bull Calves.

C. M. ROGERS,

Draffan Farm, - - Hebron, Yar. Co., N. S.

SPRINGVALE FARM AYRSHIRES

We are now offering for sale three choice young Ayrshire bull calves out of dams that were first prize winners in the 1912 dairy test at the Maritime Winter Fair, Amherst, N. S. Inspection solicited. Write for full information if interested to

F. S. BLACK, Amherst, N. S.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding **The Farmers Most Profitable Cow** should be sent to the Secretary of the Association

W. A. CLEMONS, St. George, Ont.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

REGISTESED TRADE MARK

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, MAY 5, 1914. Number 15.

Meadow Brook Farm, The Home of Good Live Stock

Clydesdales, Hackneys, Shorthorns, Jerseys, and Berkshires

Synonymous with the development of the various resources of the Miramichi Vaalley is the name Snowball. The first Snowball was a developer. The Snowballs of the present day are developers and all the Snowballs in between were developers.

The late J. B. Snowball, one of New Brunswick's best Lieut. Governors was first and foremost in the development of lumbering and agricultural resources of his country and when the needs for better transportation facilities across country from the North Shore to Fredericton, the capital of the province, became apparent he it was who was at the root of the movement and saw it through to a successful finish.

His sons, like him, have carried on the good work and there is hardly a corner of the globe where the products of the J. B. Snowball Co's lumber mills do not find their way. Forth from the dark forests that shade the majestic Miramichi and its various tributaries come millons of feet of lumber each year and as the forests are retreating the development of the rich agricultural areas of Northumberland county is increasing apace. The lumbering and milling operations give employment to a large number of operators and consequently the agriculturists of the county, find a market cose to their own homes, for all the farm produce they can raise at remunerative prices.

We had the pleasure a short time ago of visiting Mr. R. A. Snowball's farm at Chatham, N. B. We had met him frequently at the conventions, exhibitions and fairs. We had seen his well fitted stock, times without number and we had promised John Bennett, the genial Scot, who has charge of the farm and herds to visit him sometime when opportunity offered.

We wended our way from the hotel to the Snowball farm, one mile distant, one winter's afternoon, and had ample time and opportunity to learn a little about the way Meadow Brook farm is conducted.

About forty years ago the site of the present day Meadow Brook Farm was a portion of the green primeval forests. The late Lt. Governor Snowball set men to work at clearing off the woods and converting it into a farm on which he purposed to breed Clydesdale horses and Ayrshire cattle. The former were very essential to him in his lumbering operations. It is now about thirty years since he imported from Scotland "The Duke" his first purebred Clydesdale stallion. Several mares were about that time purchased from Prince Edward Island but the venture did not prove as successful as had been hoped for as very few foals were reared.

The Ayrshires had been purchased merely for experimental purposes and after several years of crossing and recrossing with other breeds not a great deal of advancement or improvement had been affected.

R. A. Snowball and his Prize Winning Hackney Stallion, Model Performer

In April, 1912, a young practical farmer and stockman emigrated from Scotland to New Brunswick. He landed at St. John and carried a letter to Mr. Dunn, then Surveyor General for the province, who got him in touch with the late Governor Snowball, who was glad to accept his services and who put him in charge of his stock. After looking after the stock for one year he was given charge of the whole farm. The young man in question was our genial friend, John Bennett, than whom there is no better stockman in the Maritime Provinces.

Meadow Brook Farm consists of 160 acres five of which are in woods. The remainder is cleared and 60 acres of this area is under cultivation on the four year rotation system of clover, grain, roots and grain seeding again with clover. The clover is left down only one year and it is found to work all right. It gives 30 acres under grain, 15 acres clover and 15 acres roots. Some of the stockmen who visit the Chatham exhibition are well acquainted with the particular brand of clover that is grown on Meadow Brook Farm. We have in mind an occasion when a flock of sheep on their way to the exhibition grounds from the station were lost for a while in the clover aftermath and it required the heroic efforts of some of the Holstein men to rescue them and bring them back again to the fold.

Garton's Regenerated Abundance is the principal variety of grain grown on Meadow Brook Farm and the favorite turnips are Carter's Elephant and Yellow Aberdeen. The Yellow Aberdeen gives good satisfaction. They keep well. They are good for the milking cows and consequently Mr. Snowball likes them better than the Sweedes, as he has kept them until May.

Last fall 8,400 bushles of roots were harvested on Meadow Brook Farm. The turnips are pulled by hand and are left on the field for two or tree days before they are hauled. Mr Snowball finds that by leaving them in the field for a few days they keep better after they are housed. Straw is put through the cutting box and mixed with the pulped turnips for the cattle. This chopped mixture is fed morning and evening. The young stock and cows in milk get a little crushed grain with their chop. A gasoline engine is used for power and the manual work is reduced as much as possible.

Several years ago it was decided to establish a herd of pure bred Shorthorns on Meadow Brook Farm and with this aim in view, the bull calf, Major Lewis, was purchased from C. A. Archibald, Bellevue Farm, Truro, N. S. The heifer calf, Lady of the Lake, was purchased at the same time. The following spring, three cows out of an importation by W. W. Hubbard were purchased at Fredericton.

Two of these cows proved very satisfactory. One of them, "Miss Belle," has given as high as 60 lbs of milk in one day and was fairly persistent. Two cows were also purchased from Mr. Fred Thompson, Fort Lawrence. The progeny of the above mentioned cows and "Major Lewis" turned out to be good stuff.

The next herd leader on Meadow Brok Farm was a son of Miss Belle, the 60 lb. cow referred to. She was carrying her calf, by Darnley Heir, when purchased. This young bull also gave a good account of himself, and as would be supposed, judging the records of his dam, he left some extra good milkers.

The next herd header was Dunrobin Sailor bred by Wm. Elliott, Guelph, Ont The present stock bull is "Gay Archer" bred by Mr. John Guardhouse, Weston, Ont., and he, too, is leaving some extra good calves. The Meadow Brook Shorthorn herd now numbers thirty head.

The Meadow Brook Jerseys are not so well known as their Shorthorns as they are never brought out to the shows; but there are ten pure breds. These were all bred from stock purchased from H. S. Pipes & Son, Amherst, N. S. and there are several good ones included in the number.

The horses on Meadow Brook Farm are pure bred Clydesdales and pure bred Hackeneys. The venture with Clydesdales, as already stated, was not a success at first but gradually the troubles were overcome. Once it was proved to Mr. Snowball's satisfaction that colts could be raised on Meadow Brook Farm he immediately set to work to get some good pure breds. A start was made with pure breds only seven years ago and now the stud numbers twenty-five pure breds, twelve of these at the time of our visit were mares heavy in foal and the younger stock is as promising a lot as one can find anywhere in the Maritime Provinces.

In 1912 and 1913, the Meadow Brook Clydesdales captured the Clydesdale Association Silver Cup for the best showing in the Clydesdale class In last fall's showing, Baron Balgreddan and three of his fillies were included in the winning herd in strong competition, which is a very good recommendation for the progeny of this horse.

Mr. Snowball visited Scotland last fall and there purchased the promising young stallion Baron's Own, by Baron's Pride out of Minnie Ha Ha to follow up the work that has been so well begun by Baron Balgreddan.

Model Performer, the head of the Meadow Brook Hackeney stud, has won more championships and medals than any other horse in the Maritime Provinces.

A quintette of pure bred Berkshire sows adds to the revenue of the farm and makes use of the by-products of the dairy.

To rehearse the winnings of Mr. Snowball's Shorthorns, Clydesdales and Hackeneys in this article would be repeating a lot of ancient history. The herds are so well known that they require no further introduction to our readers. They speak for themselves

A Field of Garton's Regenerated Abundance Oats, on R. A. Snowball's Farm, Chatham, N. B.

and their sleek appearance bespeaks the master hand of a careful master and watchful keeper.

Mr. Snowball advertises in the columns of the Maritime Farmer. The majority of his sales are made through correspondence and it is a good token of intregrity between man and man that not a single complaint has gone back to Mr. Snowball in regard to any stock he has ever sold.

Mr. Snowball takes an active interest in the agricultural institutions of the Maritime Provinces and has filled important positions on the directorate of the Maritime Stock Breeders' Association for many years. He is a busy man in connection with his various industrial operations but he is never too busy to say a good word for farming and stock raising and in this connection he has been particularly fortunate in having such men as John Bennett and Don McIntyre, men who "know how," associated with him on his staff.

Important Relation of Cow Testing to Dairy Herd Improvement.

In studying dairy cattle, we must bear in mind that the catte, as we have them to-day, have to a large extent been brought to that state through breeding and selection by man About the beginning of the eighteenth century, work in systematic breeding was commenced, and the different breeds have originated through selection and the use of strong prepotent sires which have arisen from time to time, and which have had the power of impressing their qualities upon their offspring We must bear in mind that the original function of the cow was to maintain herself and to produce only enough milk to feed her calf. She has been taken out of that natural condition and developed into more or less of a machine—a machine the function of which is to consume food in a crude state and manufacture that food into milk, a highly finished product The dairy cow has, therefore, been raised to a comparatively high state of excellence, and the natural tendency is downward. This tendency must be counteracted by breeding and selection on the part of the farmer.

Any scheme which has for its object the improvement of dairy cattle must provide for a study and record of the performance of the individual cow as well as deal with the management of the herd, including its care and feeding. To be a successful breeder, it is necessary for the breeder, or dairy farmer, to be a good judge of stock in order that he may breed toward a certain type or ideal which he has in mind and toward which he is working. He must be a judge as to the strength of constitution, the feeding capacity, breeding capacity and their conformability to his ideal. But behind this it is essential for him to know just what each and every cow in his herd will produce for the amount of feed she consumes.

As a means of determining the worth of the individual cow, we have a Cow Testing Movement. Every dairy herd is made up of some cows which are better than others. Many herds contain cows which are simply boarders on the farmers' hands. One reason why theh poor cows are not more readily recognized is that the cost of feed grown on the farm has not been taken into consideration. These feeds have a market value and should be charged against the cow. If she will not pay a profit an effort should be made to get cows that will.

Cow Testing Associations.

Such an association is simply composed of men who agree to keep records of their cows. This involves the weighing of the milk from each cow at both milkings on at least three days each month, viz., 10th, 20th and 30th, and the taking of samples at the same time as the weighing is done. These samples are preserved until the end of the month and then tested by the Babcock test for the percentage of butter-fat. Knowing the amount of milk produced and the percentage of butter-fat, it is quite easy to find the number of pounds of butter-fat produced by each cow.

The requirements for testing are simple. Each member must furnish himself with a spring scale, a sample bottle for each cow, a sample dipper and a box for holding the sample bottles. The Dairy Division of the Department of Agriculture, Ottawa, agrees to furnish all record sheets, preservation tablets, sulphuric acid for testing, and to pay for having the testing done, providing it is done by a competent person.

It is quite possible for a farmer to have his own Babcock tester and do his own testing, but it is most popular to have this done by one man for the Association. A cheese or butter factory is a natural centre for an association, but in sections where there is no factory it is quite possible to make other arangements.

It is practically useless for a man to begin this work unless he is willing to continue for the whole year or the whole period of lactation. One year's work simply shows a man where he is standing. Having obtained that knowledge, the farmer is in a position to weed out the poorest cows, those which do not pay a profit, and then carry on a system of improvement through the use of a good pure-bred bull. The sire is truly the head of a herd, and canot be too carefully selected from a strain which has a record for large milk production. It should be borne in mind that we have scrub pure-bred as well as scrub grades. By the use of a pure-bred sire we introduce with each generation more pure blood into our herd, and if this is done with thought and judgment, improvement is bound to follow. It is not enough, however, to purchase an animal with a pedigree, and that brings us to the question of "What is pedigree?"

Pedigree may be said to be the history and blood history of ancestry of the animal in question, which means little in itself unless one knows something of that ancestry. The presence of the paper in itself gives to the animal no additional value, and the purchaser should demand some record of the performance of the ancestry of the animal he is about to purchase. This is not an argument against pedigreed animals but rather an effort to place performance ahead of pedigree.

Breeding fads have to some extent detracted from the utility of animals. Some breeders have been paying rather too much attention to points which may receive attention in the show ring, and have disregarded, in some measure, the productiveness of the animals. In breeding, utility should receive consideration.

During the last few years an effort has been made to get dairy farmers in Canada acquainted with the cow testing work. In some sections considerabe interest has been shown and in cases where this work of selection and breeding has been followed out much improvement has been noted.

Dairy Record Centres.

I have mentioned the cow testing associations. We have also record centres, of which there are two in New Brunswick, at Sussex and St. Josephs. The recorder in charge of such a centre gives his whole attention to record keeping in that section, keeping records of the cost of feed as well as the production and handling of seven hundred cows. He is, at the end of the year able to place some valuable information in the hands of the farmers in that section. While we have two such centres in the province, there is room for more, and the location of other centers will depend upon applications which come from the farmers themselves.

The dairy farmers of New Brunswick would do well to give serious consideration to the offer that is being made by the Dairy Division regarding cow testing work. It is an effort to place in the hands of the farmers that from which they may, by selection, and subsequent breeding and selection, improve their stock and increase their profits. If the work is carefully followed out, the result will not be disappointing. It is a great step toward putting dairy farming on a busines basis, and when this business is carried on as a business, great progress will be made.—H. N. Flewelling, Sussex, N. B., Recorder, Sussex Dairy Record Centre.

Now is the time to get rid of your rheumatism. You can do it by applying Chamberlain's Liniment and massaging the parts freely at each application. For sale by all dealers.

Snowball's Prize Winning Quintet of Clydesdales at the 1913 Halifax Exhibition. Baron Belgreddan heads the list

Economizing Time and Labor

We hear much today about scientific cooking and scientific farming. Offices and stores are everywhere using scientific management, that is, everything is planned and arranged so as to get the best results in the shortest time. It is now the household's turn to be revolutionized, and this can be done in the same way—by systematizing and planning the work in advance. Of course one cannot lay down a general rule that will apply to all households, because every home and family are different; but, let every housekeeper plan her own work and apply the methods that suit her conditions best.

Every one knows, however well the work is planned, there are many interruptions, especially where there are children; therefore, one should allow for interruptions, just as a storekeeper allows for profit and loss.

It is not because the housekeepers work is so hard or difficult that she finds so little time for rest or recreation, but because of the endless little things that have to be crowded into each day. The woman or mother, today, who works from early morning until late at night, taking no time for rest or mental or moral culture, is neglecting the most essential part of her work as a housekeeper. But, you say, "How can we find time with so much to do and so many to work for?" Only by leaving something undone.

"Labor with what zeal we will
Something still remains undone;
Something unaccomplished still
Awaits the rising of the sun"

Make up your mind to do first, only the things worth while. Find out what can be left undone without affecting the comfort or happiness of your family. Suppose there was no Sabbath: would not the housekeeper find just as much to do with seven days to work in as she now does with six? And again, suppose there were two Sundays instead of one in each week, the work would have to be arranged so as to rest two days out of every week. Therefore, if the housekeeper would think it extremely necessary to take an hour for rest each day, or an afternoon or two each week for social intercourse, the work and the world would go on just the same. Everything that lightens our work and gives more time for recreation and rest, is an economy—then let us think of a few ways in which we can economize "Time and Labor."

The most important part of the woman's work is the cooking and getting meals The parlor may go undusted and no one grumble, but let a crowd of hungry children, or what is worse, a hungry man, come in and find no dinner ready—that is a different story! Economize space whenever possible, especially in the kitchen. The nearer the kitchenette or pantry,, stove and table are together, the less steps and work it requires to cook and get a meal. Have castors on the kitchen table and move it near the stove, sink or window, as it suits your special work best. There are so many inexpensive utensils one can buy for lessening the work in the kitchen. Have everything to work with, but no more than necessary; as the more one has, the more there is to keep clean and in order. Alterations can be made in almost every kitchen, making it feasable for more convenient work, and many of these can be made by the housewife or the man of the house himself. A rack nailed against the wall over the table or sink will hold all the kitchen knives so one will not have to sort over a whole box full to find that particular paring knife one wants. Racks for dishes, sauce pans, etc., are also convenient. Old chests can be converted into boot-boxes or drawers to hold kitchen towels, aprons, etc., and will serve as a seat besides.

Did you ever stop to think how many unnecessary steps and movements one takes in setting and clearing the table? So many will make trip after trip from dining-table to kitchen, carrying a few plates or saucers at a time, while all might be piled neatly together and carried out on a tray, one trip taking them all. Did you ever stop to think how many unnecessary movements one makes in washing dishes if the draining pan is on the right of the dish pan? For instance, you take the dish to be washed in your left hand, with dish washer in your right; you wash the dish, lay down the dish-washer, take the dish in your right hand and lay it on the tray, while if the tray were on the left side only one movement would be necessary. All this seems of small account, but when you think of doing it three times a day and 365 days in the year, it means a lot of lost energy

Then next to cooking comes the washing and ironing. This is something that cannot be left undone. There are so many labor-saving devices that lessen the work of wash-day, that even it can be made interesting. Perhaps the first of these to be considered is the washing-machine and of these there are many kinds on the market. Perhaps the revolving kind is the most used. But there is also the steam washer, the suction and the vacuum washers—all of which are satisfactory and so inexpensive are within the reach of all homes But any machine that will wash a whole tub full of clothes at one time, doing away with the time it takes to wash each piece separately, is an economy of not only time, but money. In order to get the best results from any washer the clothes must be sorted and soiled spots treated with soap and put to soak, and the washing powder or soap used plays an important part. By using Naptha soap one can do away with the boiling of clothes and thus save much time and steam.

A high stool is a great comfort to many housekeepers. One woman utilized a high chair with an arm off for this purpose and found it saved her feet so much, especially when ironing. So many things need not be ironed; the sheets, pillow-cases, underwear, etc., can be neatly folded and are fresher and more healthy if not ironed. Besides these labor saving devices there is the dustless duster and the sweeping powder that will eliminate all dust. The vacuum is also getting to be within the reach of the modern home. Every housekeeper can clean, scrub and dust, but the main thing is to keep things clean after you get them clean. Clean as you work—have a place for everything and see that everything is kept in its place. Teach your children and other members of your family to do the same, but above all, arrange your work so as to have more time for rest and to be sociable not only with your own family but to your neighbors. Have an interest outside of your own home and thus broaden your ideas, for

"Rest is not quitting the busy career
Rest is the fitting of life to its sphere."

—Mrs. Chester Keith, President of the Corn Hill Branch of the New Brunswick Women's Institute.

FOR HOME AND COUNTRY

The Maritime Farmer has been asked to open its home columns as common mouth piece for the Women's Institutes of the Maritime Provinces..The request has been granted and Miss Fraser, Miss Winter and Mrs. A. E. Dunbrack, Supervisors of the movement in Nova Scotia, New Brunswick and Prince Edward Isand have consented to contribute artices, reports, etc., for the benefit of the home makers of Maritime Canada.

Results of Spraying in 1913

Mr. President, Ladies and Gentlemen:

As some of you know,I am more or less a beginner in the art of raising apples, so that I feel considerable diffidence in speaking on the subject before the members of the N. S. F. G. A., some of whom have taught me most of the little I know about apples and apple growing.

Fortunately for me, however, I was only asked to say a few words on my methods of spraying, etc., and the steps followed to obtain the crop I had last year. This I will endeavour to do to the best of my ability.

Of course, I can only attribute the fact that I was fortunate enough to have fairly clean apples last year to spraying but spraying, like the smell thereof, covers a large amount of ground and I may say that I began my last year's spraying three years ago and began it with an axe. That is to say, my trees were too cose together for spraying properly, being twenty feet apart each way and all grown in to one another. I therefore, cut out practically every other tree in every other row and then headed back a lot of old trees that were too high. These two preparatory measures not only made the trees much handier to work among but also let the sun and air to the trees and soil.

I, so far, have always managed to get my orchards ploughed in the fall, using for this purpose a sulky plough and I plough in strips leaving the trees standing in a strip of sod about five feet wide which, apparently, allows the trees lots of feeding room and at the same time cuts down the cost of plowing very considerably. It is not a pretty method but, though there is a lot of pleasure in growing apples, few of us raise them merely for fun or ornament.

One reason why I like fall ploughing is that it buries most of the leaves and with them a lot of black spot, I imagine. It also gets the cover crop rooted in time for next year's growth of the trees.

The ploughed land is kept regularly cultivated from early spring to the beginning of July

My pruning has been done rather severely, as I am convinced that good apples cannot be grown without lots of sunlight all over the trees and, moreover, it is a much easier task to spray thoroughly when a tree is fairly open and one can see what one is doing

May I say here, that in my opinion, the so-called spraying does not get all the credit it deserves because a great many growers merely spray when they should wash their trees. The former is, of course, all right with the Bordeaux mixture but I am convinced that, except for waste, it is impossible to put too much Lime and Sulphur on a tree As to waste, it is more profitable to waste Lime-Sulphur than apples. Spot can grow on a sprayed apple unless all parts of the apple are covered and, if it grows on the stalk early, will cause apples to drop. For fertilizer, I use about 400 or 500 pounds slag per acre every year, put on in the middle of winter and sow one bushel per acre of vetch the first week in July. This not only gives me a most satisfactory cover crop, as it apparently grows well in any weather, wet or dry, but also furnishes an abundant supply of nitrogen when ploughed under in the fall. The young trees get practically the same treatment with the addition of a few forkfuls of barnyard manure to each tree. My land, I had better explain, is fairly heavy and does seem to need any potash at present.

In order to secure pollenization of the blossoms I keep a few colones of bees and intend to keep more as they are very little trouble.

So much then along general lines and I will now, with your permission, say a few words about last year's work in particular

In 1912, I came to the conclusion that I could not get the results I wanted with a hand pump so I bought a power machine with a 2½ h p. engine and 200 gallon tank which is easily handled by two horses and enables me to do the work not only much more satisfactorily but in much less time and with much less trouble.

Working this pump at a pressure of 160 to 175 pounds makes it possible to drive the spray thoroughly into the trees and soak them well.

As you will remember, trees came along very slowly last year, so much so, that I was afraid to wait for my first spray as long as I might have otherwise done for fear lest a warm wave should open the buds suddenly. I accordingly put on my first spray fully ten days before any of my neighbors and had quite a long rest from this work before the blossoms fell. For the first spray I used one gallon of lime-sulphur to thirty gallons of water.

The second spray was put on at the usual time, that is to say, each variety was sprayed when practically all the blossom of that variety had fallen. Strength of spray, 1 to 40. A third spray, 1 to 40, was put on about ten days and, in view of the wet weather and consequent danger of spot, I put a fourth spray, about three weeks after the third, on such varieties as Gravensteins, etc, that I thought most likely to be infected. No poison was used with the fourth spray With the other three sprayings I used neutral arsenate of lead at the rate of 2½ pounds to 40 gallons of spray solution. This was, I think, hardly strong for the tri-plumbic arsenate and, previously, I had used the same quantity of Swifts aresnate and may say that I never seen any injury done to apples by spray russetting.

I do not count on spraying so often every year but you will remember that conditions last year were peculiarly favourable to fungus development. I was determined to test the effectiveness of spraying as fully as possible and to give it every chance and it was indeed fortunate for me that I did so. It was a very significant fact that the best crops, in both quality and quantity, per acre in my neighborhood were obtained by men who had power sprayers. Hand sprayers brought fair results and men who did not spray at all did not have to buy many barrels for their apples. Moral, spray hard.

There are a few points I should like to mention in favor of spraying though I imagine that, after last year's experiences, very few men will have any doubts as to its advantages

First, I heard a great many complaints of poor foliage during the season but my own experience was that I never had such fine, healthy, dark green eaves on my trees before, so much so that I felt more like thinning the leaves than the apples.

Second, I had a very striking proof that my crop last year was due almost entirely to spraying On the west side of one of my orchards I have three rows of Ribston trees which stand in a rather damp place. Owing to the softness of the ground at the time of putting on the first two sprays I was not able to take my machine round the two further rows and only the first row got sprayed. The ground was equally damp round the first row but I was enabled to bring the machine near enough to take the hose round the first row with the result that I had here one row of trees heavly laden with fine, large, clean fruit and the other two rows had practically no apples and what there were, were poor, misshapen and very badly spotted. Most of us have cause to know that a good many of the early apples were lost last year from not keeping after being put in the warehouse; but I have noticed in our warehouse that the best sprayed apples kept far better than those not so well sprayed.

(Continued on page 536)

THE MARITIME FARMER.

And Co-operative Dairyman
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Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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MAY 5, 1914.

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May 5-26
June..... .....9—23

DRAINAGE

Well, we have had a good old fashioned winter; It came early and stayed late. We heave a sigh of relief as we see the last dregs of snow and ice disappear from the fence coroners. By the time this issue of the Maritime Farmsr reaches its readers we trust the weather man will have warmed up both air and soil so the farmers can get busy preparing the soil to receive the seeds. Farmers who did not rush their work last fall and get the most of their ploughing done will be handicapped very materially in getting their crops started in good season. Again, some fields will be ready for sowing or planting many days before other fields on the same or adjoining farms are ready. In nearly every case lack of drainage is the real cause of this tardiness. It would be a good idea for you to mark the wet spots in your fields when you are working them and later in the season, when work slackens somewhat and you are looking for some job to keep you out of mischief, just open up a few drains through these marked areas. It will pay you handsomely to do so and when you are again obliged to operate in these fields your work will not be hampered by springy spots.

THE POWDERY SCAB

We would again call the attention of our readers to the articles in this and preceding issues of the Maritime Farmer on the question of powdery scab. The hearty co-operation of every reader of the Maritime Farmer is asked for in the fight for the eradication of this potato disease from the Maritime Provinces. You can do a great deal for this movement by complying with the rules laid down by the respective departments of agriculture. You can also assist by taking an interest in your neighors' attitude on this question. Talk it over with them and use your best influence in showing them that it is to their own best interests to give the eradication movement their heartiest co-operation. Man can not live to himself alone in this question. Each and every one must go a step beyond his own borders in order to accomplish the results that those who have the best interests of the farming populace of our provinces at heart. This is a case where it pays one handsomely to obey and do what he is asked to do. There are a great many little foxes that eat the vine. Powdery scap is one of the big foxes that cut down the farmers' profits. Do away with it.

If you are free from it now watch the various avenues of affection as you would watch for an enemy. Do not let it get a foothold on your property. If you are unfortunate enough to be one of the farmers on whose farm the scab has already found a footing, do not rest until you can say "I have conquered it. I have driven it from my premises." You can do so if you obey those who have made a study of the question and now have the work of eradication in their charge.

THE COMMON SCAB.

The common Scab of the potato is unsightly and while it does not cause the damage that is attributed to the Powdery Scab it depreciates the selling value of your potatoes. No one wishes to buy scabby potatoes. If you do not grow scabby potatoes you will have not scabby potatoes for sale. The scab of potatoes is a fungous growth which shows itself in a rough and cankerous appearance on the surface of the tubers. A great amount of work has been expended on this disiase and still no preventive is known if the land is inoculated with the trouble.

Of a large number of methods used for treating the seed potatoes, soaking them in a solution of formalin, one pound to thirty gallons of water for two hours, is the most effective. Soak the potatoes before cutting them, and if they are not planted at once spread thinly to dry. This treatment will kill the disease on the seed, but scab can live in the soil for many years without a known host, Lime, wood ashes and barnyard manure aid the growth of scab, while sulphate of ammonia, muriate of potash, acid phosphate and dissolved lime render the soil less favorable to the disease. If you have never treated your seed potatoes for scab do so this year and watch results. You will be delighted with the smoothness of the tubers. If you have used the treatment once we know you will do so again.

GET RID OF SMUT

Do you remember the number of black smutty heads that appeared in your grain fields last year? Did you ever stop to think of the precentage of your grain that is yearly damaged by smut? Did you ever stop to think of the great reduction smut-thus makes in the income from your fields and labors? Did you ever stop to think that these losses could be avoided by a little extra inexpensive efforts on your own part?

You ask how can I do it? Well, here you are; this is the way other readers of theMaritime Farmer handle the proposition and why not you. Now is the time to do it before you sow your grain.

This is the time of year to ensure against smut in grain. There is no reason why smut losses should be the case if the seed is properly treated.

The best known and most widely used substance for treating seed grain is formaldehyde. This can be bought in drug stores at a moderate price. One pint is put into forty gallons of water, and the seed grain is then dipped in the mixture in such a way as to wet the outside of every kernel. Or the formaldehyde solution may be sprayed onto the grain, while spread upon the floor-- it being raked or shovelled over frequently and then covered with old sacks.

A few precatutions should always be observed.

(1) Formaldehyde varies in strength and, if there is doubt as to its quality, a sample of it should be sent ts the chemist of the Experimental Farm, in order to determine its exact strength.

(2) The sacks in which the grain is treated should first be cleansed by boiling in water, or by washing in a strong solution of formaldehyde.

(3) Everything which the grain touches after having been treated, sacks, seeder, etc., should be very thoroughly cleaned with a strong solution of formaldhyde (1 pint to 10 gallons of water.)

(4) If the seed is kept for some time after treatment; do not let it sprout or mold; do not let it freeze while swollen after treatment; allow for the swelling of the seed, if you sow the grain soon after treatment, by planting more per acre.

This formaldehyde treatment will prevent stinking smut of wheat, covered smut of barley, and smut of oats. It also prevents flax-wilt if the treated seeds is sown on land which has grown no flax for five or six years.

SHEEP DIPPING.

Do you dip your sheep? If not we dare say at shearing time you found your sheep infested with vermin. Did you ever watch a vermin infested flock of sheep and see how restless they act? How they rub themselves against fences, feed racks etc! How they bite at their side and bull the wool until in some cases, they become almost denuded! How they suffer! Suffering, as they do, they cannot thrive, and spring finds them in an emanciated condition. The loss at lambing time is greater than it would be if the ewes were strong and giving a bountiful supply of milk. Why not dip your sheep this summer and thus give both ewes and lambs a chance to thrive? The process is quite simple. If you follow the following rules you cannot go wrong in this respect. See that the preparation is properly mixed and the correct quantity of water is added. Don't guess at it.

Never hurry the dipping, always take care that every sheep is kept in the bath full time; never less than one minute nor more than two minntes.

Have the bath well and regularly stirred up from the bottom always before beginning to dip, and whenever any stoppage occures.

1. The best time for dipping is from one to three months after shearing.

2. The sheep should not be over heated or thirsty at the time of dipping.

3. If the sun is very hot, it is better to have the draining pens under shade.

4. If the nights are cold the dipping should always be stopped soon enough to allow the sheep some time to dry before sunset.

Never allow drippings from the sheep to fall on anything they are likely to eat. If rain comes on before they are dry, keep them off pasture until after it has ceased.

When dipping twice, allow an interval of not less than twice or more than eighteen days between the dippings.

Unweaned lambs should be kept apart from dipped ewes for a few hours after dipping.

All wash that is left and anything wetted with wash should be kept out of reach of all animals.

If there is only a small flock, expensive preparations are not necessary. A large hogshead cut in two will answer the purpose of a dipping tank very well and there are so many sheep dips on the market, all of which are quite effective and carry directions on their containers so that one cannot make a mistake if he is at all careful.

Brain Versus Brawn in Improved Agriculture.

Editor the Maritime Farmer:—

The difference between the farmer of the past and the farmer of the present day, is every year becoming more marked. The farmers of thirty years ago were men who prided themselves on the fact that they relied on nothing but their brawny arms. It is true that at times they might get an idea from their neighbors, but such were looked upon with suspicion. All improvements were thougt to be frivolities and unfit for the consideration of practical men.

In those days the brawn was the chief requirement of the farmer. But the man who would be a succesful farmer of the present day wil require a far greater supply of brain power than of anything else.

The case of two brothers who had charge of a farm in this county would well illustrate the difference. The younger brother traveled over nearly all the States and Canada working at nearly everything from lumbering to farming, always acquiring a fund of information and experience. He also saw that it was the man who had the brains and used them that commanded the highest wages. The men who simply used the arms were those who got the smalest pay. Among the farmers he saw that ways and methods were changing and that the men who used pure bred stock were the men who seemed most contented with their lot.

After some years he decided to return to the farm. He found his brother in the same place, following the same methods, and using the same cattle as did his father before him. He plowed his land with a single plow, harowed it with the old style clog harhow and sowed his grain by hand. Such methods were sure to bring nothing but failure or at the best, but very poor results. The cattle were but scrubs of every shape,, form and coloring. They fed on sun-parched pastures among stumps and rocks and like their owner they seemed to have lost all interest in the things of this world.

The younger man thought that if he had the management of the farm he would be able to handle things better After a while the older man gave over the farm to his brother and went to the nearest town to work in the mines. Here he received about fourteen dollars per week which he said was better than farming. And no doubt in his case it was as some men are born to lead and others born to be led, so also are some men born to farm and others to work for a boss.

When the yonger man took over the farm he found everything in the same condition. The hog houses were veritable "pig pens," leaky and unfloored; the yards were covered with mud and water a foot deep The poultry roosted in a corner of the cow shed.

But in a year's time what a change had been wrought in the appearance of the farm. Instead of tumble-down heaps of rails, the fences were of wire, neatly stretched on concrete posts. The dweling house had received a coat of paint and the addition of a verandah greatly added to its improvement. The old collection of barns and outbuildings of every description were torn down and modern and up-to-date buildings substituted. A barn, 40x90 feet was the accommodation for cattle, storage of hay, etc., was built and alongside two concrete silos were put up. One of these he keeps for helping out the summer pastures. It is built slightly different to the other which he fills for feeding during the winter months. The summer silo is taller and of less diameter than the other. In summer the silage exposed to the air will spoil far quicker than in winter, thus the smaler surface of exposed silage in the narrower silo means a smaller loss from rotting.

We were seated on the verandah of his house while he talked to us of his crops and rotations and catle. It was evening and the sun was going down; away to the eastward beyond a stretch of pasture and meadow land, the last rays of the sun shone on the tops of a grove of maples like a flood of fire. Truly it was a scene that would bring joy to the heart of any one who should see it. Isaid so to my host; he smiled and said: "my brother, Jim, could see no beauty in it; but no doubt, it was because on this side of the maples was overgrown with scrub spruce.

Mayor Todd

Champion Standard Bred Stallion at the 1913 and 1914 Maritime Horse Shows. Owned and exhibited by Hammond Kelly the well known horseman and trainer, Charlottetown, P. E. I.

"Well I cleared that away and it is first class pasture to-day," he continued. "I am going to have a good sugar bush there in a few years. This year I had five hundred trees taped. I bought an eveporator and metal poles on which the cans hang; they keep out the water and drt. This insures a product as pure as it is possible to have. My outfit has paid for itself this spring. See there," he continued, pointing towards a field of first year alfalfa, "that is something the farmers here do not yet apreciate the value of. I saw it out West and determined to try it here. It looks as if it was doing well." "In what part of your farm do you think the greatest improvement has been affected?" I asked.

"I believe I have done beter in the improvement of the catle than in any other branch. When I first began, the catle were all the poorest of scrubs. I set to work and bought a good Holstein bull. He was registered in the herd books and behind him was a pedigree a mile long. It cost me a pretty stifl price too. The farmers around here laughed at me until their sides ached. But I had seen too many of the results of pure bred cattle to give any attention to their smiles. The next fall I bought two registered Holsteins, two year olds, and a bunch of the best calves I could get among a half dozen herds. There were twelve head in all and they cost me something around one hundred dolars apiece. After this my neighbors began to see Iwas in earnest and they began to ask questions. They saw the amount of milk my cows gave and their size and uniformity. I discarded the whole lot of scrubs and they hardly brought the price of two good cows. I was up to my ears in debt, but the sale of three bulls from my best cows soon got me out of the hole. My herd have paid for themselves ten times over. They are among the best in the province. I believe in feeding my cows all they can eat in winter. I give them a ration something like this: corn silage 30 pounds, mangles 12 pounds, clover hay 8 pounds, straw 6 pounds, and a meal mixture composed of oats, 3 parts bran 3 parts, oil cake, 2 parts, and corn, 4 parts. This is ground up; I feed 4 pounds per cow and one for every 5 pounds of milk she produces. I find it is beter to give this meal a sufficient part of the ration in the morning and afterwards to give the parts which are less nutritious so they will do better when they go to the less inviting feeds as a pasture rather than a duty.

"When on pasture they get an allowance of grain and in July when the dry weather causes a shortage of grass I feed my cows corn silage from the summer silo. I do not feed for extraordinary milk records, as I prefer to raise the average production rather than an exceptional yield from a few individual cows. I always weigh the milk and for this I find no better scale than the dial-faced, spring balanced with movable pointer.

"I raise all my calves. The females I keep till two years of age and what I do not need for building up my own herd I sell at a figure that means a good profit. The man who says there is no money in dairying is the man who has not the ability to make money at anything."

Next morning when he took me over his premises I found the conditions just as he described to me; everything was in apple-pie order. I found his barn with cement floors, modern stanchions and a first class litter carrier installed. Nearby was the sheep barn. It was 40x40 feet, large enough for one hundred sheep. "You see," said my host, "although I have only twenty-five pure-bred sheep now, I have built my barns not only for the present but also for the future." It also was built with an eye to convenience in feeding and cleaning. The feeding racks were so placed that they could be filled from the loft, which was used for storing hay. The doors were wide in order to avoid injury to the ewes in case of their being frightened and stmpeding.

"This building," said my host, as he led the way to the hog house," is the one in which the greatest change from the old type to the new may be observed. It, like the others was built with concrete floors No wood was used in the manger except in the sleeping platforms which were of inch board built and foot from floor. In all I was one of the best equipped and best managed farms in the county; while three years ago it hardly provided a living for one man and his wife.

Such is the difference between the methods of to-day and the methods used by the farmers of the past. Then it was a question of brawn and muscle while now it is the man with the brains that is the farmer of to-day.

The man who believes in modern improvements and labor saving devices and knows how to properly use them is the man who also believes in the superiority of pure bred cattle over grade. This the man who will make money out of a farm that a man who of the old school would fail on. The brawn of yesterday is replaced by the brain of to-day. And the college trained boy of to-day will be the successful farmer of tomorow.—John H. MacDonald Cape Breton County, N. S.

* * *

Editor's Note: The writer of the foregoing article has evolved a dreamy ideal which we would like to see put into practical realization on many farms in Cape Breton. We are not acquainted with the writer but he has given a good story. We should very much like to make the acquaintance of the young farmer referred to. We would be particularly well pleased to see the fields of corn from which the silos had been filed. The editor of the Maritime Farmer is always pleased to hear of progressive movements in the county he knows so well.

The Powdery Scab.

Editor the Maritime Farmer:—

The attention of all those growing potatoes for export trade is called to the immediate necessity of taking some action to prevent the loss of a large part of their export trade. Owing to the discovery of Powdery Scab in different parts of Canada, a quarantine was established against the Dominion by the United States, whose example was speedily followed by Bermuda. Though our principal market has not up to the date of writing taken a similar action, the fear that this might be done will no doubt have a serious effect upon this spring's planting. Growers wil be relieved to know, therefore, and there is a possibility that this embargo may be removed as far as Bermuda is concerned.

A careful inspection to determine the prevalence of this disease in Nova Scotia, has lately been conducted by the Dominion Division of Botany, which shows that it is not at all common in this Province, and in particular Kings, Colchester and Hants Counties are also free from it, the only cases reported being two from Burlington, one from Harborville and one from Black Rock. From the remainder of the Province we have one record from Yarmouth, a number from Cumberland a unmber form Guysborough and one from Antigonish. The fact that the chief potato producing centres of Nova Scotia are practically free from the disease has been brought to the atention of the proper authorities in Bermuda. As a result of the representations made, it is probable that the embargo on our potatoes may be removed under certain conditions. Though not giving a definite decision, they stated that arrangements could probably be made to allow the importation of potatoes from this Province, provided such potatoes were accompanied by a certificate giving a guarantee that each consignment of potatoes for shipment was inspected by a Dominion-or Provincial inspector and were,

(Continued on page 550)

Results of Spraying in 1913.

(Continued from page 533)

Lastly, many of you probably saw at the Windsor Exhibition an exhibit of apples, some of which were sprayed with Lime-Sulphur, some with Bordeaux and some not sprayed at all and you must have noted for yourselves the marked advantages of spraying, especially with Lime-Sulphur. The difference between the sprayed and unsprayed fruit was very marked but by no means exaggerated in that exhibit as I should think most unsprayed apples were far more spotted than those sown.

To sum up then, I attribute the fact that I had a fair crop of fairy clean apples last year to plenty of air and sun among the trees and lots of Lime-Sulphur but I very much doubt whether, in a year like last year, it is possible to secure good apples without a power sprayer except possibly on very young and small trees.

Variety	% of 1's	% of 2's	% of 3's	% of Specls.	% of Culls
Gravensteins	31	19	27	11	12
Ribstons	40¼	26	21½	6½	5
Blenheims	33	31½	27	—	8½
Kings	48½	28½	10	4¼	8¾
G. Russets	68¼	10	7¾	3½	10½
Ben Davis	33¼	20½	20	8	17¾
B. Pippin	65	5	5	15	10
Nonpareils	74¼	10¾	7	2	1½ culls 4½ shrinkage
Baldwins	25¼	18¾	28¼	5¾	22

Barrels were not filled tight in the orchard for fear of bruising the fruit and cullage above accordingly includes a considerable amount of slackage and shrinking.

Above figures are "free run". Some of my Baldwin trees (since cut out) were still to much grown together to spray properly and hence pack was poorer than for any other variety.—Paper read by Lesie Wiltshire, Round Hill, N. S., before the N. S. F. G. A. at Kentville.

Cow Testing at Scotsburn.

Harry R. Brown, Wallace Bay, N. S. the subject of our sketch was only eleven years old when, in 1900, he participated in the MacDonald-Robertson Seed Grain Competition. At the close of that competition in 1903, he continued the work of seed selection in the Canadian Seed Growers' Association, thus becoming practically the pioneer Seed Selector in Nova Scotia. He was also one of the first members of the Canadian Seed Growers' Association to take up the work of potato improvement in the Maritime Provinces.

Mr. Brown graduated from the Nova Scotia College of Agriculture, Truro in 1908 and since then his time has been about equally divided between the home farm and work for the Provincial Department of Agriculture, as a judge of field crops competitions, as judge at exhibitions and as an inspector under the Insect and Pest Act (Brown Tail Moth and San Jose Scale) His work on the farm has been marked with success and he has given the utmost satisfaction in connection with his work for the Department of Agriculture.

Mr. Brown has recently been appointed Inspector for the Cow Testing Department of the Dairy Division, Ottawa. He will have charge of the Scotsburn Record Centre and his headquarters will be at Wallace Bay.

HARRY R. BROWN

The Scotsburn Record Centre is one of the most important in the Dominion. During the month of February, 1914, out of 28 centres reporting it stood first for number of herds, third for number of cows and this number is rapidly increasing. The number of herds is an indication of the general interest that the members of the Scotsburn Record Centre are taking in the cow testing work. It shows the men of that district are alive. With Harry Brown to keep tabs on their work we believe matters will go along smoothly and that the numbers of those who take an active interest in separating the workers from the drones in the dairy will rapidly increase. "Where the didder is there are the diddings."

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Does it Pay to Advertise in the "Maritime Farmer?"

For an answer to the above question just read what B. V. Millidge, the well-known Jersey breeder, St. John, N. B., has to say in a letter dated April 29th, 1914:—

"Some time ago I sent you a post card asking you to take my advertisement out of the Maritime Farmer, as I had sold the heifers. I also requested you to send me your bill. Did you receive it? I am getting letters every day about the heifers and it keeps me busy telling the people that they are sold. I will have another ad. for you soon. The Maritime Farmer is a great advertising medium. I received inquiries from all over New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland. Please send me your bill and cancel the ad."

Editor's Note.—Mr. Millidge's ad. was cancelled as per his request and the subsequent inquiries must have come from readers who preserve files of the Maritime Farmer and order goods from advertisers in past issues.

Summary of Results of Experiments With Forage Plants.

As has been the practice ever since the work with forage plants was undertaken by the Dominion Experimental Farms, the principal varieties of the different kinds of forage plants have been grown during the past year with the object of determining their relative value. During the season of 1913 the tests conducted in duplicate by the Division of Forage Plants at the Central Experimental Farm and the Branch Experimental Farms and Stations throughout Canada consisted of 11 different varieties of mangels, 6 varieties of carrots and 3 varieties of sugar beets. The work with leguminous forage plants and grasses including alfalfa and clover, consisted of breeding for increased hardiness, breeding for high yielding strains of a superior quality and experiments with timothy, orchard grass, western rye grass and some wild grasses. In order to place the more important results of the season's work before the public in a summarized form bulletin No. 76 has been prepared by M O. Malte, Ph.D., Dominion Agrostologist and the Superintendents of the Branch Experimental Farms and Stations. This bulletin of 34 pages is available to all who make application at the Publications Branch, Department of Agriculture, Ottawa.

Cautions for Campers in the Forest.

Forest fires are caused in only too many instances, by campers and tourists who leave their fires unguarded or are in other ways careless about their fires. Many of these holiday makers in the woods would be the last people in the world to wilfully destroy timber in this way, but yet a lack of care on the part of some has often had a most lamentable result.

Occasionally what seem cases of apparently wanton carelessness are met with. A flagrant instance of such neglect was shown some time ago by a party of seventeen campers from Hamilton, Ohio, in the Timagami, Ontario, forest reserve, who broke camp one morning leaving quite a large fire burning. The campers, in their special car, however, were stopped at North Bay, and not allowed to proceed on their journey until they had paid the expense of extinguishing the fire as well as those of their own detention. Such cases are fortunately, rare.

Attention to a few points may save much loss from this cause. No match cigar-end or other burning object should ever be thrown down in the forest until totally extinguished. Camp fires should not be larger than is necessary and should not be left, even for a short time, until one is perfectly sure they are "dead out." Fires should not be built in dangerous places, such as among leaves, near rotten wood or any place where they are likely to spread. Avoid building a fire against a large or a hollow log, for in such a place it is hard to know when the fire has been thoroughly extinguished. In windy weather a hole should be dug down to the mineral soil and the fire confined in this.

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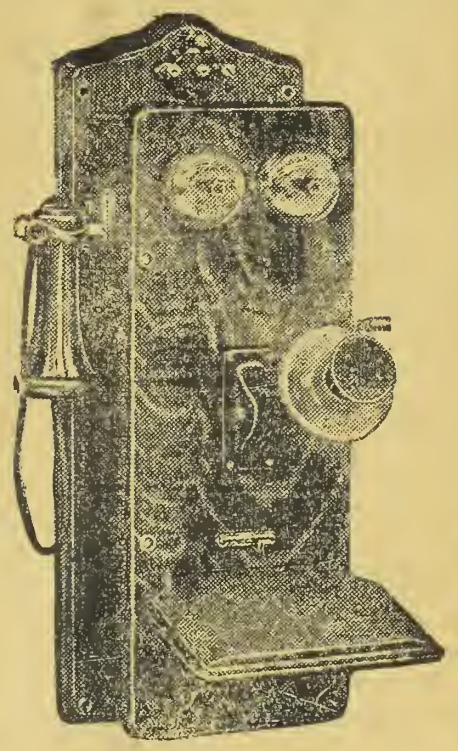

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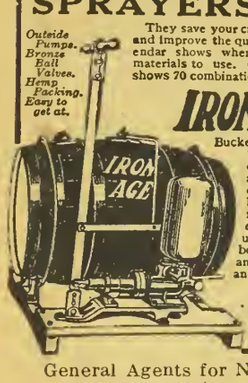

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DAIRYING.

Some Points About Milking.

While not entering into the subject of wet vs. dry milking, there are some other points to which I should like to call attention.

First, the medium pace milker is the best one in my opinion. My experience goes to prove that the cows thus milked (their points in proportion) hold on their milk longer (lactation period) than those that are milked either faster or slower; they are also good as regards the amount of strippings when being milked. Those cows that are regularly milked by a fast milker invariably have a lot of strippings, and this means that at times, when the milker is in a particular hurry, the cows are not milked "clean" and that is bad for the farmer as also for the cow, becuse cows dry off quickly enough, without aiding them in this way.

Of course, the slow milker does not stand much chance nowadays, but for choice, I would rather have the cows milked by a slow milker, than by a fast one. One drawback with the slow milker is that when someone else has to milk his or her cows, if he or she should hapen to be faster, the cows do not apreciate the milker, and, therefore, do not let down their milk so well. I think, however, that the slow milker will compare very favorably with the fast one if the comparison extends over, say, twelve months. But, as I said at the commencement, the medium-pace milker is the best of the lot, and it is always a pleasure to milk after such.

It is always advisable that the milkers should each milk the same cows every day. In training young heifers to be milked, they should be handled, etc., before they calve, thereby getting them used to it. They should be handled carefully at first, firmly, yet not roughly, and as soon as possible should be milked without being given something to eat during the operation. Giving this may be a good practice to start with, but they should be weaned from it as soon as possible, or else they will always look for it. Better still, if they are milked from the beginning without it, as usually when they are eating their tail is swiching and this is a habit that grows on them, and nothing is worse than to have to milk a cow that is forever swiching her tail. Another thing, they should be taught to stand in the right position from the first, and there will not be any trouble afterwards. I have seen good milkers milking a heifer with the leg nearest the bucket a foot or more in front of the other leg. When the heifer is turned over, as someone else's share to milk she insists in standing the same way, and then the rtouble commences, as everybody canot milk with the wrong leg in front, and, besides, it is not right that they shonld.

Lastly, regularity in milking is a great thing; that is to say, as near as possible to the twelve hours for both meals, and this is where buttermakers have the advantage over milk-sellers in my opinion. I see milk-sellers' cows being milked from three to four in the afternoon, and especially during the winter months, as some of them send only their morning's milk to town, and then they cream the afternoon's or evening's milk.

Testing Milk on the Farm.

One of the greatest money savers ever offered to the dairyman is the Babcock tester and the principles which govern its use are very simple. The essentials needed are a centrifugal machine revolving at a high speed whereby the botles containing the milk can be whirled, nad a few simple pieces of glassware. There are several makers of machines, all having their good points. In the long run, the best machine will be the simplest and the same may be said of the glassware. Test bottles are needed for both new and skim milk and for cream, and it will be well to have three of each of these kinds on hand.

Correct results will depend upon having a good sample. In order to get a sample of any kind of milk or cream suitable precautions must be taken, as the fat globules rise rapidly to the top, and unless care is used the sample will not be fairly representative. A good sample of milk can only be obtained by mixing it thoroughly by pouring it from one vessel to another at least three tmes, and five or six would be better. As soon as possible after thorough mixing, the sample should be tak en out by dipping with a small, long-handled dipper of any kind. If the sample is to be carried any distance, the vesel in which it is to be carried should be filled absolutely full, for otherwise some butterfat wil be churned and an acurate test canot be made.

The testing should be done while the milk is sweet. When the milk is thoroughly mixed, insert the lower end of the pipette into the vessel and, with the mouth applied to the uper end, by suction draw up the milk until it is a bit above the mark indicating the correct amount (17.5 c. c.). Then place the dry finger over the top of the pipette and by raising it very slightly let the milk fall to the mark. Allow the milk to run slowly from the pipette into the test bottle, and when all is out that will run, gently blow out the pipette as dry as possibe. In testing heavy cream, weigh rather than measure, if exact results are desired.

Sulphuric acid with a specific gravity of 1.82 is used in making the Babcock test. The acid may be purchased from any dairy company. After the milk has been placed in the test bottles the correct amount of acid (17.5 c. c.) should be carefully measured out into the vesels marked for that purpose and poured into each botle. Great care must be used in doing this or the results will be unsatisfactory. The acid should be poured down the sides of the bottle so as not to entirely close the neck or char the milk. Mix th acid with the milk by shaking with a rotary motion. This mixing should be very thorough. If the acid has been properly added, the mixture of milk and acid becomes perfectly translucent.

If a number of tests are to be made at the same time, which is usually the case, it should be remembered that it is best to mix the acid and milk in each bottle as soon as the acid is added. The proper temperature of the acid and milk is about 60 degrees. If the acid is too strong, a black curd is the result. Black curd is also formed if the milk is too warm. On the other hand, if the acid is too weak, the casein is imperfectly dissolved and white curd appears in the mixture. The bottles are now placed in the tester in such a manner as to balance. Run the machine according to the directions given. The whirling must be continued for five minutes. As soon as the machine stops, take out the bottes and add enough hot water to bring the fluid in the bottles nearly to the top of the graduated part of the neck. Then put the botles in the machine again and whirl for five minutes. When the machine stops examine, and if the division between the fat and the fluid beneath is not clear, whirl again for a minute or so.

Where several tests are to be read, the botles should be placed in a pan of hot water to keep the fat in a melted condition, for if it does not "run" readily, serious errors will result. The test must be read from the extreme bottom of the fat to the extreme top of the fat column. The difference between the lower and upper reading gives the percentage of fat. For reading, a small pair of accurate compasses will prove most useful. Place one point at the extreme bottom of the fat column, the other at the extreme top of the fat column. Leaving the compasses just as they are, move them down the sceale nutil the lower point rests on

"Melotte" CREAM SEPARATORS

The "Melotte" will increase your butter yield 25% besides improving the quality.

Saves time and labour, space and utensils.

Owing to its Suspended Bowl the "Melotte" is the simplest, most easy running and consequently the most durable cream separator made.

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The New Century Hand Washer works quickly and easily. It gushes the water through the fabric, leaving it sweet and clean in a few minutes. It cannot injure the finest garment you possess.

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It never needs painting.

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Sample free on request

The Carritte-Paterson Mfg. Co., Limited

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the lower line in the scale The other point will then stand at the line which indicates the percentage of fat. All the [illegible]re must be kept perfectly clean This will be little trouble if the bottles, etc., are washed immediately after using

A single milking will not give an accurate idea as to the quality of milk given by a cow. The mixed milk for a number of successive milking will be far better. Such tests are known as composite tests. In order to make a composite test for the cows of a herd, a separate jar must be provided for each cow. At each milking pour the milk back and forth as directed. Then take a small sample and put it into the jar. To prevent souring, use a preservative. Bichrmoate of potash answers the purpose. A quantity sufficient to preserve half a pint of milk for a week can be taken up in a 22-caliber shell cut one-half inch long. A sample from each milking for three or four days will be approximately accurate, and the amount taken out at each time should be gauged so that the total amount will be about half a pint. With the use of the Babcock tester and the daily milk record it will be an easy matter to weed out the unprofitable cows and keep up a higher standard with the remainder of the herd.

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The Maritime Farmer
SUSSEX, N. B.

Protect the Cows from Bloat.

With the coming of spring when the catte are changed from dry feed to pasture, to avoid serious loss it is necessary for the farmer to watch carefully for bloat, according to the veterinary department of the College of Agriculture of the University of Wisconsin

Bloat is a form of indigestion due to the excessive formation and accumulation of various gases in the paunch or rumen. The attack is especially apt to occur when cattle are suddenly changed from a dry diet to green clover or alfalfa. It is most often seen during warm, wet weather, or when heavy due or rain moistens the foliage.

The chief symptom of bloating is a sudden distension in the left flank, which swells up and appears as tight, as a drumhead when thumped with the finger. Relief must be immediate, if suffocation is to be avoided, and consists in providing an artificial outlet for the gas by "tapping" the animal. This is best accomplished by inserting a trocar and canula into the most prominent portion of the swelling. To prevent further gas formation administer a drench of two ounces of turpentine in a pint of raw linseed oil or a quart of new milk.

As a prevention, aviod turning the cattle out until the dew or rain has dried off. In addition, giving a full feed of dry roughage, such as the animals are accustomed to, just before turning them out, will be found helpful in preventing this trouble.

Supplementing Dry Pastures.

In response to many inquiries, Prof. O. B. Nystrom, Dairyman at the Washington State College, has prepared the following statement: Each summer a number of pastures dry up, or at least begin to fail In order to keep up the milk flow something to help the pastures along not only shows in the milk pail but lengthens the life of the pasture.

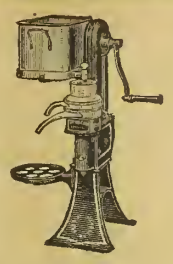
Crops that may be used for thispurpose are thousand-headed kale, peas and oats, vetch and oats, peas and barley, alfalfa, corn and clovers. Those may be used either as soiling crops or as silage. Any of the root crops may also be used to advantage, if they are large enough for this purpose so early in the season.

The thoughtful dairyman prepares for this shortage of pasture by sowing these soiling crops each spring, at intervals of from three to four weeks, and has them ready for the cows when needed. But if these special soiling crops are not sown, any green food that will be relished by the animals is valuable to keep their digestion in good shape and stimulate the milk flow.

The summer silo is probably the best solution of this problem of summer feed, for it enables the dairyman to harvest his crop at the proper time and then feed it out when needed in just as good a condition as when put into the sio.

Concerning fodder corn for soiling, Professor Henry says: "On farms lacking summer silage, feeding corn forage in the green stage would become general, for the reason that during the late summer and early fall the pastures are often scant and animals forced to subsist on them suffer from lack of sufficient food and can not do their best An acre of ripened corn fed in early fall to dairy cows which are otherwise on poor food, may so advance their condition as to return double the value it would yield were it held over until winter and fed at a time when there is often a plethora of the same material."

The testing association promotes a better appreciation of the cow and consequently better results are sure to follow.



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FIRM BUTTER

Butter made from cream skimmed by the Standard cream separator is noted for its firmness. This is due to the fact tbat the curved wings of the Standard's centre piece prevent the breaking of the globules of butter fat during the process of separation. Just why the curved wings of the

Standard

do this is explained at length in our new separator catalog which also gives other interesting information. Every dairyman knows that good solid butter brings the highest price—and that's the kind of butter the Standard insures.

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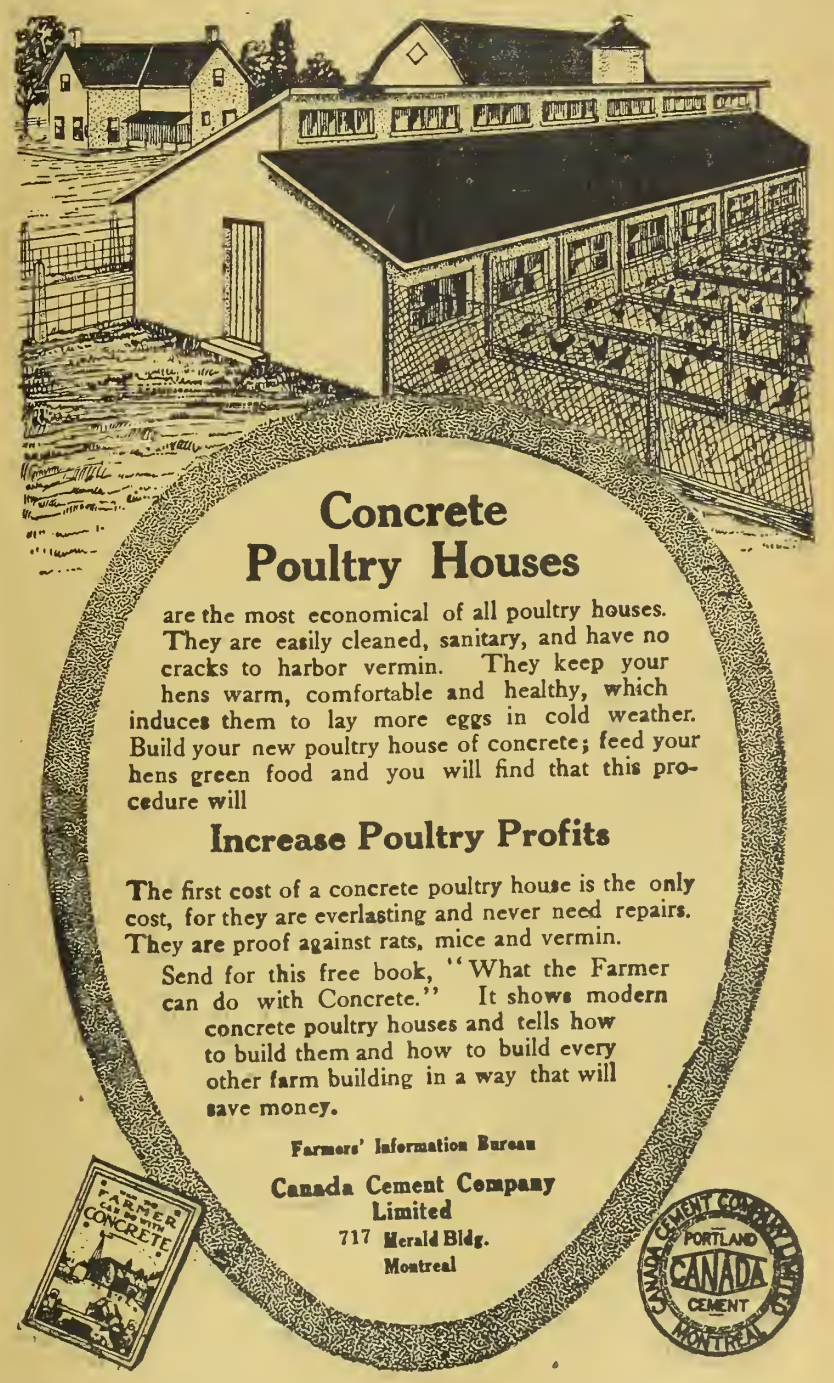

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Increase Poultry Profits

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Editor The Maritime Farmer:—

I like the Maritime Farmer very much. The articles you publish in your horse columns are always interesting to me.—R. J. S., Coles Id., N. B.

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THE LAWRENCE-WILLIAMS COMPANY, Toronto, Ont.

LIVE STOCK.

The Castration of Farm Animals.

Farmers do not think it worth while to discuss the question whether castration is a cruel operation or not. They are forced to take things as they are, and recognize that as long as domesticated animals are kept for the food of man the operation is absolutely necessary, and whether they like it or not they have no alternative. The production of wethers and oxen is a part of practice which is universal where stock-keeping is made a business, but it is worthy of note that the farmers of Northern France do not as a rule castrate their foals, and experience no difficulty from working the entire animals on the road. But while castration on the farm seems to be indispensable, there is no doubt that the very familiarity of the operation entails the danger of forgetting that the pain inflicted is very real, while to the low value of the animals dealt with, particularly of the sheep, is to be attributed the fact that the methods employed are often very slipshod, that the persons employed are often very ignorant, and that the after consequences are attended with more pain to the animals than there is any need for. Untoward results may, of course, attend every surgical operation, more particularly if it is conducted in a farm yard or other place where the cleanly surroundings of the human operating theatre are not obtainable; but a good deal of the mischief is due rather to active errors than to neglect, and might be easily avoided.

Sheep and Lambs

Early methods of castration are often very crude indeed, and of the most barbarous character, but it is not necessary to detail these because they have fortunately fallen into disuse. But even under present methods, though the operators are often really skilful at their work, the death rate is sometimes exceedingly high; blood poisoning may set in, and when this occurs among a large flock of sheep, the losses may run into a very high figure. It is just as well, therefore, to remember that when young lambs are to be sold quickly for the butcher no object is to be served by the operation, and they may as well be left alone to enjoy their existence until they are "fit to kill for food." What happens very often in the case of a flock is that a day is appointed for the business, and, in order to get it over, al the lambs, whatever their age, are dealt with at the same time. This is a mistake, particularly when the day chosen does not happen to be specially favorable; but whatever the weather, there will probably be many in the flock who are not old enough or strong enough to undergo it. A far better plan is for the shep herd to take each animal as he notices. that is big enough and strong enough and treat it separately. Perform the operation, whenever possible, in the early morning, so that the animal may have the whole day before in which to recover from the shock. In the spring when the work is generally done, the nights are sometimes very cold, and a low temperature is unfavorable

The method usually adopted with sheep is to cut off a piece of the lower part of the scrotum, press out the glands and draw them. A pair of forceps should be used for this purpose, but the attachments should be separated first, as this makes the drawing easier, and probably less painful. We regard as most insanitary, the unpleasant method of drawing the glands forcibly away with the teeth; the human mouth is not aseptic—it is probably, even in the case of a comparatively cleanly individual, in a condition which a surgeon would desscribe as foul—but the operator may be anything but cleanly, and it is easy to understand that such a method as this may lead to blood poisoning and loss. All hustling of the flock should be avoided before the work of castrtation is entered upon. If the animals are heated, or if the sun is hot, the danger of complications is greatly increased, so that for his own sake the farmer should avoid exciting the animals. Bleeding should be prevented as much as possible—this is a point of great importance in the case of sheep and when anything of the kind happens the animal should be kept apart and carefully watched, all clots being removed when the bleeding is stopped. If the clots remain and bleeding should still be in progress, the blood retained may undergo decomposition—with bad results. This is one reason why removing a piece of the scrotum, which may seem unnecessary, is really less cruel than making a slight cut; the blood has a better chance of getting away, and whatever discharges there are will have a free vent. When big males and old rams are castrated the hot iron is employed because of the risk of the formation of clots.

Use of Irritants.

Perhaps the greatest fault committed by the castrator on the farm is in the use of irritants, which are applied to the cut end of the cord. A common form of this is the "green" ointment, which is made of verdigris, and the effects of its use are very painful for a considerable period. It is quite unnecessary, a needless infliction of pain, and no surgeon would think of using such a dressing. The green ointment is used for the purpose of inducing suppuration, and our own statement that it is not called for may be supplemented by the opinion of an eminent veterinary surgeon. Professor Williams says that "this is a very reprehensible practice, calculated to inflict much unnecessary pain. There is no necessity for the establishment of any suppurative action—indeed the very fact of there being any suppuration at all indicates that an amount of inflammation calculated to retard the healing process has been caused by the operation, and instead of irritating the parts by abominable mixtures it is the duty of the practioner to perform the operation in such a manner as to cause but the slightest possible degree of pain, and to do nothing having a tendency to retard the process of repair by the adhesive inflammation."

See that the animal is healthy, that the instruments used are all clean, and that the clothing and hands of the op-

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EARLY YIELDER WHITE OATS
THE GREATEST OF ALL YIELDERS
This superb variety is undoubtedly the heaviest cropping White Oat ever offered.
It is practically immune from rust, is the earliest and most bountiful cropper of the heavy-growing sorts.
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WHITE WAVE THE "ALL-MEAT" OATS
Thin Hulls. Weighs more to the measured bushel than any other sort. Yields well on poor land and immense crops on good soil.
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Success on some baking days can be expected no matter what flour you use. But constant success is rarer. It can be assured in only one way. The miller must select his wheat by oven test.
So from each shipment of wheat we take ten pounds as a sample. We grind this into flour. Bread is baked from the flour.
If this bread is high in quality, large in quantity, we use the shipment from which it came. Otherwise we sell it.
Constant baking success comes as a matter of course from flour bearing this name

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are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They 51

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The Maritime Farmer one year and one of our 1½x6½ Tungsten barn lights, handsomely finished, for $1,30 (Light alone sells everywhere for $2.00).

The Maritime Farmer one year and one of our vest pocket lights complete for $1.25 (Light sells everywhere for $1.80).

We have other valuable flash light premiums which we will gladly furnish on application. We can supply them at about half-price, with the Maritime Farmer.

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If interested write us.

The Maritime Farmer,
Sussex, :: New Brunswick

erator are also clean; in this way a good deal of the danger will be averted.

Pigs.

The castration of pigs is often carried on in a very haphazard fashion, but in reality these animals call for special care, owing to the large number of cases in which scrotal hernia occurs. This is a complication to be looked for in all animals, but it is especially common among young pigs The trouble may be detected before the operation is performed, and in that case it is best to push the youngsters on as fast as possible for the butcher without operating. But if it is decided to operate, care must be taken, and any injury inflicted attended to at once.

Bullocks and Calves.

For the calf or young bullock two men must be employed, and a noosed cord is used to secure the animal. The testes are removed through two separate incisions, but these should be slit into one after the removal, and care should be taken that this is at the lowest part of the scrotum, for here again provision for free drainage is essential.

The age at which animals are operated on must depend very argely on circumstances. The best time for lambs is probably on the first favorable opportunity after they reach the age of a fortnight, but it is often delayed until they are much older. Calves are usually treated somewhere about the age of three months. Colts are usually left until they are approaching twelve months. It is believed that the later the period the more masculine and fully developed the animal becomes, and as this is a point of some importance in the horse, owners sometimes delay the operation much longer. It must be remembered, however, that the older the animal the greater the risk and further the greater loss, if loss occurs, inasmuch as he has cost more to rear.

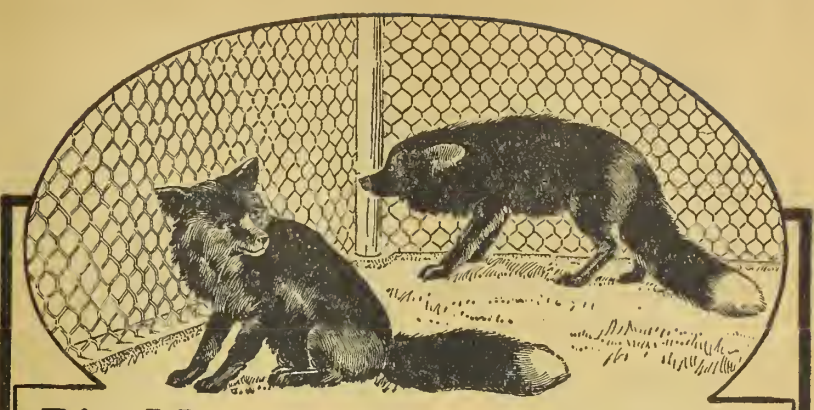
As questions on such matters often appear in live stock papers, it may be added that the plan often followed of using, with various animals, a clamp which is fixed on to the cord and left there for a considerable time, is a cruel one, causing a good deal of pain, which need not be inflicted

Anaesthetics.

There is one matter which claims the consideraton of every humane owner of stock—how far in the case of painful operations suffering may be prevented by the use of anaesthetics. We are quite aware of the objections that may be offered—considerations of cost, extra trouble and so on, but in the case of the larger and more valuable animals like horses and cows, and more particularly when they are aged or fully developed, the expenditure will often be found to be fully justified, apart from the question of humaneness. Professor Hobday, one of our most experienced veterinary surgeons, states that the horse is a good subject for chloroform, and he has used it freely, while the evidence showing that it s perfectly safe for many other animals is strong enough to warrant its employment. A large proportion of those who may be termed the modern veterinary surgeons continually use aanaesthetics, and Professor Hobday himself has kept records of 1,200 consecutive cases in which he has used chlorform on dogs. In all these death occurred in only five, notwithstanding the fact that the animals were taken as they came, and there was no opportunity in preparing them in the way that would naturally be adopted in the case of a patient in a hospital.

In the face of these facts, allegations that the use of anaesthetics is not safe canot be regarded as having any foundation, though the impression that they are not so in the case of animals is very common Professor Hobday, who always uses cocaine in cases of castration, adds that a good many farmers are adept in the use of anaesthetics and use them for operations which they carry out themselves, but by far the majority of castrators other than veterinary surgeons make no use of them at all. Obviously the gain from their use is not confined to the avoidance of pain, for if an animal is rendered insensible the operation is far more likely to be efficiently performed.—F. and H., England.

Editor's Note:—In the case of lambs buyers in the aritime Provinces will give one cent per pound more for castrated lambs than they will for ram lambs. It therefore pays the farmer to castrate his ram lambs early.



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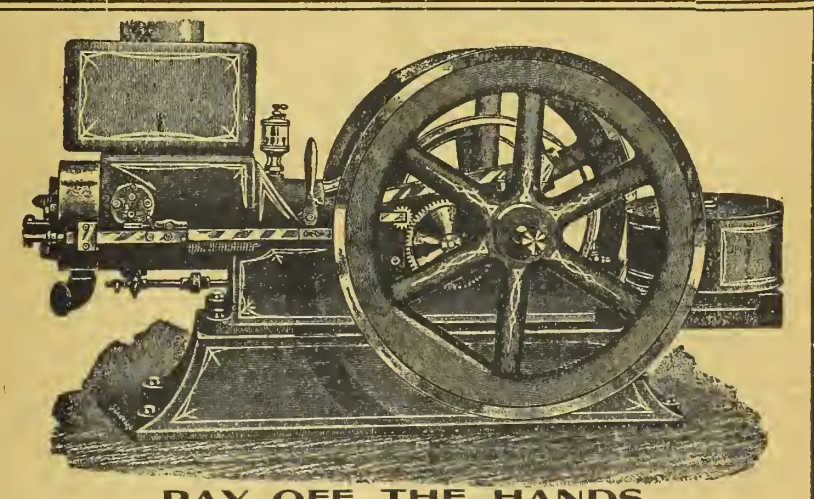

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The Sussex Motor Co.'s engine is the BEST, SIMPLEST and most satisfactory gasoline engine made. It will develop more power at less expense than any other.

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THE HORSE.

Balking Horses.

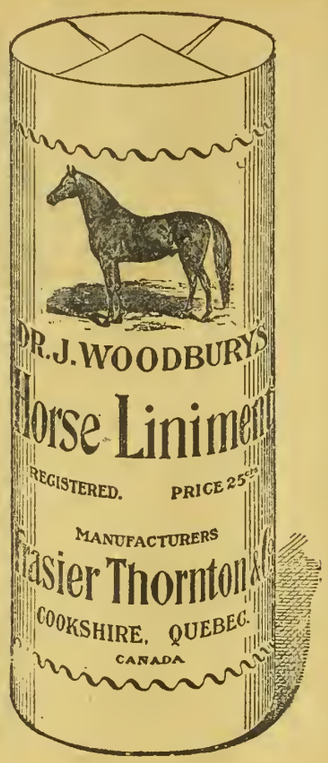
The vice of balking is not a specially common one but stands out plainly as the most annoying weaknes possible for horse flesh to display. Reams may be writen as to what to do and all the remedies may fail. Proper consideration would look at once to the cause, especially in young horses, and if this be done it will be found that in ninety-nine per cent. of the cases, the origin of the trouble is in putting on too much load. Colt-breakers should never be in a hurry to complete any job nor should be rushed at the first work that comes along, no matter how busy the season or short the help.

Naturally the draft bred colt needs the least breaking and possibly on that account less care need be taken with him. In the case of horses of trotting more or less "high strung" lineage being broken to pull the driver must be forever on the lookout. It is a very easy matter to make such a horse balky. One of the easiest ways to do this is to hitch him with some other horse that is much slower. The younger one being the faster and ambitious is continually surging ahead and as continually being taken back. Unless the driver has unlimited patience—a characteristic rarely seen in any but the owner—he will after a time long or short do some yanking at the youngster and then trouble looms like the headlight of a locomotive approaching at the rate of 60 miles an hour.

As to the matter of curing a balking horse once the habit has become fixed many men tell many stories. The most ridiculous, cruel and inhuman acts have been credited with success, but once a balker always a balker comes very nearly fitting the case. However, as there is no infallable rule and as patience that never gives out coupled with good management alone may be said to hold forth any hope of ultimate and permanent success, the writer would advise the owner of the colt which shows signs of becoming balky to abstain from using him in any wheeled vehicle for some time. Instead hatch him to a light sled, giving him enough advantage on the doubletree so he will be able to do his share of the work easily and comfortably. Then if he does well—and the probability is that he will—the transition to the wagon may be gradual. The writer can only offer such measures remedial as he has successfully tested and seen tested. He once cured a mare of balking by using her this way in the middle of the trey for a whole year and eventually hitched her to the wagon in the trey, then to the bobs drawing hay on the snow and when spring came and the near horse was taken off she went all right. It was a mean job but it paid.

Another point to be considered is condition. Many a colt has balked simply because he was poor and run down, without ambition and generally in better shape for the knacker's yard than the breaking harness. Always see to it that young horses are in good flesh and spirit when the breaking process is begun.

Again, the ridiculous idea of "hitching a colt up and driving him right off like an old horse" is all buncumbe. The man who knows no more than to bridle a horse and try such capers ought to get into trouble. Some have succeeded but they are the exceptions and when these instances are looked up it is generally found that the real breaking has been done consciously or unconsciously in some other way. A colt's mouth is a very tender thing. It should be thoroughly toughened before any driving is attempted. It is the same with the harness. The colt should be perfectly accustomed to it and a close watch should be kept to see that the collar and straps all fit "neither too free nor too bind."



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THESE POWDERS ARE SUPERIOR TO ANY OTHER IN QUALITY
Dr. J. WOODBURY'S CELEBRATED CONDITION POWDERS FOR HORSES & CATTLE
PRICE 25¢

For Sale By All Dealers

Rheumatism in the Horse.

There is a good deal of discusion at the present time about this disease in the horse, and by many both navicular disease and ringbones are supposed to be due to a form of rheumatism, and undoubtedly the same treatment is of service, especially in navicular disease. Rheumatism may be defined as an inflammatory affection of the joints fibrous, muscular, or nervous tissues, having a tendency to migrate or spread when affecting the muscles of the lumbar region. In the human subject, it is spoken of as "lumbago," or, if the great sciatic nerve or the muscles of the neck or shoulder (stiff neck) be affected as sciatica.

At present the essential cause is not known; there are three hypotheses, two modern, one ancient. I will take the later first. For many centuries the humoral pathology dominated the practice of physicians. The speculation was that all diseases, bodily and mental, depeded on the conditions and proportions of the humours, of which there were four: blood, phlegm, yelow bile and black bile. Here we have the origin of the modern word rheumatism from "rheuma," a flowing, as it was supposed by the old physicians to proceed form a defluction of humours. The more modern theory is that is is due to a specific bacillus, but up to the present it has not been satisfactorly demonstrated. The third, and one that accords more with the facts, is that it is due to perverted granular functions which produce auto-toxins, which, passing into the blood stream, produce the great varieety of forms which this disease assumes. Predisposing causes are heriditary tendencies, exposure to cold and wet, sudden chills, and changes of temperature.

A rigidity in the affected joints, which often, when moved, give out a cracking sound, pain at the commencement of movement, and swelling of the joints due to effusion in the articulation. The animal becomes very lame on one or more limbs, but the peculiarity of the lameness is its tendency to shift. It may be acute or chronic, and the first form undoubtedly does occur in our animals, but is not very comon. The pulse and temperature are high, the skin is hide-bound, there is a staring coat, and difficulty in rising due to the lumbar facia being involved. All these may pass off in a few days and leave no ill effects behind, but there is a tendency to recurrence.

The chronic form affecting the joints—rheumatoid arthritis—may be sight at first, and with care and treatment the ameness may pass off. And here comes a pitfall in the purchase of a horse. Plenty of horses change hands at our public markets that are the victims of these recurring attacks from a constitutional diathesis, and eventually become unworkable. In this form it is caled "joint felon."

The changes that take place are as follows:—First in the articular cartilage. This by degeneration as the joint moves wares away until the bones rub against each other, and become shiny and ivory like in appearance. Next, the synovial membrane, by becoming very vascular, secretes more synovia, and hence the swelling. At the same time, suppuration rarely occurs. Lastly, at the margin of the cartilage a form of bony matter, or calcification, goes on, but true bony anchlyosis is rare. Now here comes a question: Are spavins, splints, sidebones, ringbone, and navicular diseases only different manifestations of this protean disorder, modified by the difference of food, drink, and habits;

The cause possibly may be due to rheumatism; at any rate the fact remains that similar treatment and drugs that have so beneficial an effect in the human subject in this disease, have also corespondingly a good effect in retarding or ameliorating the symptoms.

Rest is a mistake. Slow work, a dry stable, an occasional purgative, careful feeding, and ripe crushed oats are good. Clover hay and peas or beans ought not to be given. If sudden lameness and heat come on apply fomentations and friction with soothing liniments, and afterwards a blister applied only for two hours. Aceto-salicylic acid in doses of two drachms at night and iodide of potassium in the morning in doses of from thirty to forty grains, occasionally discontinuing same for a day or two, have given the best palliative results; also give four or six oun-

Heaves CURED

—by removing the cause—and cured to stay cured—If 3 boxes of

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fail to effect a cure of any case—old or new, we will refund the full amount paid.

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My horses have been cured by your valuable preparation and I heartily recommend it to all who have sick horses. Results satisfactory.

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That's the only way you can afford to keep them, because any lameness means less work and less profit to you.

Spavin, Splint, Curb, Sweeney, Ringbone, Swelling or Lameness need not prevent your horses from working. Simply use Kendall's Spavin Cure.

It works while the horse works—takes away the pain—reduces swellings—makes legs and joints sound and strong—leaves no scars or white hairs because it does not blister.

Kendall's Spavin Cure

has been the horseman's standby for 40 years and is used all over the world.

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WILLIAM H. DOUD.

Keep your horses sound as a dollar. Get Kendall's today and you will have it tomorrow if needed. $1 a bottle—6 for $5.

When you buy, ask for free copy of our book "A Treatise On The Horse" or write us 51

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Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is an
ANTISEPTIC AND GERMICIDE
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ABSORBINE, JR., antiseptic liniment for mankind reduces Strains, Painful, Knotted, Swollen Veins. Milk Leg. Gout. Concentrated—only a few drops required at an application. Price $1 per bottle at dealers or delivered.
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Minard's Liniment Co., Limited.

I was very sick with Quinsy and thought I would strangle. I used MINARD'S LINIMENT and it cured me at once.

I am never without it now.

Yours gratefully,
MRS. C. D. PRINCE.

Nauwigewauk, Oct. 21st.

There never was a time when people appreciated the real merits of Chamlain's Cough Remedy more than now. This is shown by the increase in sales and voluntary testimonials from persons who have been cured by it. If you or your children are troubled with a cough or a cold give it a trial and become acquainted with its good qualities. For sale by all dealers.

ces of Epsom or glauber salts in a bran mash sweetened with treakle once or twice a week as a stimulant to induce greater functional activity in the liver or kidneys.—Southern Vet.

Attention to Horses Teeth.

There are many horses of all ages that are not thriving well, although consuming a reasonable amount of food, and their owners are at a loss to account for it, and often spend money in condition powders, stock food, etc., without result. The animals do not show symptoms of illness, but simply do not thrive, and have not the spirit of energy they should have. The cause in the majority of cases will be found in the mouth, either there is faulty dentition or there are irregularities of the teeth. The subjects do not require medical treatment all that is needed is intelligent attention to the teeth. We say "intelligent attention" as in many cases unskilled or ignorant interference does much more harm than good. It requires a man who thoroughly understands the anatomy of the mouth, and has the necessary instruments and skill to correct whatever is wrong.

Breeding Matched Teams.

As one rides over the country he sees an occasional band of farm horses as much alike as peas in a pod. As they stand at attention while a train approaches, they present a uniform lot of heads and a similar degree of interest. Perhaps they wheel and race away across fields, exhibiting a striking similarity in form and movement. They are either bred alke or selected by a master horseman.

It is possible for an experienced horseman to pick up animals here and there and yet have them match up nicely in conformation, quality and action. But one is sometimes deceived as to dispositions. Sometimes the horse with an excitable temper fags out and lags behind at the end of a hard day's work, while a quieter horse keeps more strength and vitality in reserve. It is not always the fast horse in the morning that is ahead in the afternoon. The man who breeds his own work horses may not be as keen a judge yet if he gets the right start he has a great advantage in the effort to produce a uniform lot. There will be many small variations in his productions, but if he mates his mare with a stallion like her in appearance, disposition and breeding, the offspring will average very similar. Many desirable lots of farm horses are the descendants of one or two good mares, whose daughters and granddaughters, like them, have ben mated in the same way.

It is a pleasure to work such horses. They look well together and they step along with the same vim and persistence. A uniform lot of farm horses is an indication that the owner knows what he is doing and has definite plans for accomplishment.

Too much water, especially very cold water, given to an over-heated animal coming in from work, may produce colic or other digestive derangements. By all means, however, give the warm, tired horse a few swallows when coming in which will aid in cooling him off, moisten his parched mouth and throat and induce him to eat dry feed more readily.

When beginning the horse on the land, rest them at short intervals and lift the collars from off their shoulders down well with the hand. This removes sweat and dirt and goes a long way towards pre venting ugly sores.

Keep the stable well ventilated during the spring season, but avoid direct drafts on the working animals. Colds often result from the raw night winds blowing directly on the sweaty coats of the tired animals.

NEPONSET Paroid Roofing

There's a NEPONSET Roofing for Every Building

GET Neponset Roofings—the "slowly made" kind. Then you are sure to get roofings that are slow to wear out. Then you'll never get a poor roofing when you need a good one.

Neponset Roofings are long on the roof—because long "in the making." This means more than you think. It means this: Maximum protection to your home—your stock—and your pocket-book. Protection against leaks—repairs—and that greatest danger of all—fire. Remarkable "year-in-and-year-out" protection—in cold or hot climates—at a minimum cost—this is the "blanket protection" slowly made Neponset Roofings *invariably* give.

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Other Neponset Roofings are—Neponset Shingles for residences; Neponset Proslate, the colored roofing.

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Also makers of Neponset Wall Board, used in place of laths and plaster, and Neponset Waterproof Building Paper

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NOTHING adds greater beauty to a house than a tastefully arranged garden—and nothing detracts more from the appearance of a garden than the barren spots where seeds "refused" to grow.

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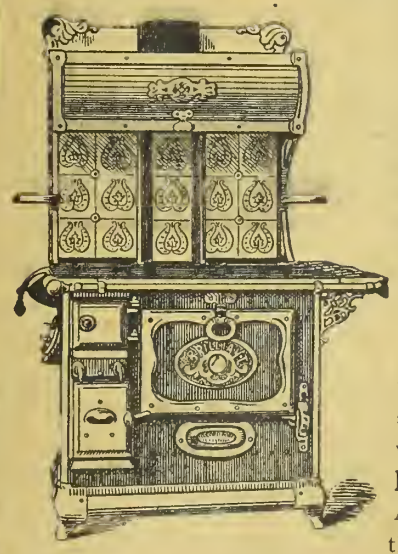

There is no saving in having a poor stove. It burns up fuel without giving the right kind of heat. You cannot regulate it for cooking purposes either. It takes a good stove to turn out first class bread, cakes or pastry all the time. You will not be disappointed in choosing a

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to cook with, to heat with. You can have it with or without reservoir, any style of warming closet,
MADE FOR WOOD & COAL
Ask for our catalogue and see the other various styles.

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POULTRY.

Variety in Feeding Fowls.

In order to make utility poultry-keeeping a success plenty of variety must be introduced into the feeding of the birds. Even poor quality fowls of barndoor stamp can be induced to lay quite a lot of winter eggs if the feeding is right. There are many good foods on the market, not too expensive, but still not used half as much as they might be.

The Value of Meat

In order to obtain a big supply of winter eggs plenty of cooked meat is essential, but it is also necessary that the meat should be purchased at a fair price. "Lights" are very good, but they require a great deal of boiling, and they involve an amount of trouble which most fanciers do not desire, while they are also somewhat disagreeable to handle, and unless they are cut up into small pieces they cannot be served out properly.

Green Cut Bone

Fresh green cut bone is a valuable winter food for helping the egg supply, but if it is not served absolutely fresh and ground from bones which are full of nutriment it will be of no value, for stale bones set up bowel trouble and other minor diseases The dry bone meal which is now largely advertised, although it is useful for growing fowls, act in the same way as the fresh cut bone.

Corn Feeding

A large number of fanciers still firmly believe that plenty of corn, both in the form of meal and grain, is one of the best methods of feeding fowls in winter. I admit that it is a cheap way, but cheap feeding never did bring in maximum profits. It is only by using the very best of foods carefully blended, that the winter egg supply can be brought to satisfactory dimensions.

A little corn on cold mornings, especially if it is very frosty, is undoubtedly useful, since it helps to promote bodily heat, and in this way keeps the birds in sound condition; but if it is given in large quantities it has a tendency to induce liver trouble—to make the birds put on superflous flesh. Yet corn is a food that is tolerated in fifty per cent. of present-day poultry yards, and it is still highly spoken of by many who use it.

Experts are doing everything in their power to induce poultry keepers to give less corn, and although their efforts to a certain extent are successful, there is no doubt that corn appears far too frequently in the daily menu. Barley-meal, which is also largely employed, is really too fattening. Like corn, it can be served in very cold weather, but at other periods should be used sparingly.

Fig. 1—House with Cotton Windows closed for Stormy Days and Cold Nights.

Fig 2--House with Cotton Windows hooked up to allow Sunshine and Fresh Air in on the Floors and the Birds.

(See page 551)

Green Food

It does not matter how much cooked meat is given or how well the various grains are selected, unless there is a fair proportion of green food introduced winter eggs will not be forthcoming in proper numbers. To some people the supply of green food presents one of the greatest difficulties at this time of the year. Cut clover which has been scalded over night is undoubtedly good; boiled cabbage leaves, and anything so long as it is succulent, are bound to prove useful; but high prices cannot be paid for this kind of stuff. Still, all those who live near our large towns ought to be able to purchase green food at a very low figure. Turnips, too, can be boiled, or even given in the raw state, if the supply of green food seems to dwindle during certain weeks.

Method Important

Even if one has at one's command all kinds of poultry foods, is able to give plenty of variety, and to feed on nothing but the best lines, it does not follow that egg production will be carried out successfully. There must be a method in feeding, and unless the method is correct, unless the system is properly carried out, the birds will not benefit as they should.

Some people advocate giving grain twice, with a hot soft mash in the evening. I believe this has given excellent results to those who are keeping fowls in the sem-intensive system. Another class of poultry-keeper has adhered to the plan of giving a hot morning mash, say, at eight o'clock, with a

ECONOMICAL----Heats the house well without burning all the coal you can buy.

McClary's Sunshine Furnace

Gives steady, even heat on least fuel.

See the McClary dealer or write for booklet.

SISTER: READ MY FREE OFFER.

I am a woman.
I know a woman's trials.
I know her need of sympathy and help.

If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understand women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back**, or **bowels, feeling of weight** and **dragging down sensations, falling or displacement of internal organs, bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete **ten days' treatment** entirely **free and postpaid**, to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escaping the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured**, my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatment is for all,—**young or old.** To **Mothers of Daughters**, I will explain a simple home treatment which speedily and effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, **write for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask** for the **free treatment to-day**, as you may not see this offer again. Address:

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EMPIRE Disc Separator

Choose the Empire Separator because exclusive features of construction—a three ball bearing for the bowl-spindle, adjustable point-bearings on the worm wheel spindle and a bowl 20% lighter than others, eliminate friction and make for lighter running and long life. The safety-clutch makes starting easy and guards against accident to the mechanism.
The Empire guarantees close skimming.
For small herds—The Baltic Separator—selling as low as $15.00.
Makers of "Sta-Rite" Gasoline Engines—"They start right and Sta-rite."

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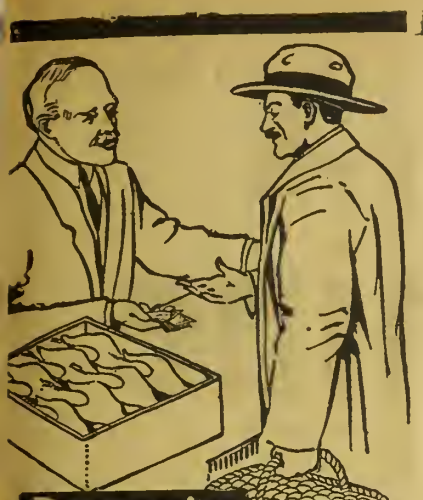

Progressive Farmers Make Handsome Profits from Poultry

THE stoutest advocates of Poultry-Raising on the farm are the progressive farmers who have investigated the Peerless Way. These men are alive to the fact that Canada does not produce one third of the poultry and eggs consumed in this country, and that handsome profits go across the border to the American farmer who is called upon to supply the shortage.

You, Mr. Farmer, can have this profit, plus the amount spent in Customs duties and long freight hauls importing eggs and poultry from the States, and you will always have an eager market waiting to buy up all the poultry and eggs you can raise.

Read what this British Columbia farmer says:

Greenwood, B.C., Dec. 1, 1913.
"I am pleased to report a good season for the past summer with the poultry . . pullets are just commencing to lay. Eggs hatched well and I raised practically all in the Brooder and only lost (1) chick out of 500 hatched. I sold 20 dozen baby chicks and am keeping over 150 pullets, as it is the egg trade that I am working up.
"Since last September, eggs have been selling here at 70c. per doz., and at present they are bringing 80c. and are very scarce too."
(Sgd.) A. R. Royce.

The Peerless Way Makes Poultry Pay

The whole idea of the Peerless Way of Poultry Raising is to raise the greatest number of the strongest chickens at the least outlay of money and with the least expenditure of time. We know that a farmer's regular duties do not leave him much time to look after chickens, so we have bent all our energies to perfecting a system whereby a farmer can take care of 400 or 500 chickens the Peerless Way in less time than he can look after 30 or 40 the old way.

Send for descriptive illustrated Booklet "Money in Eggs". It's Free, you need it.

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little green food or a little wheat at noon, and a heavy meal at night. So long as the birds are never overfed for the first two meals, but given as much as they can eat at night, they will do well; but if the system is reversed, if food is given in big quantities in the morning and the birds allowed to roost with insufficient food in their crops, this is not the right way of promoting winter egg production.

Given good food, satisfactory housing, and scrupulous cleanliness, egg production during the winter months is not an impossible proposition. On the contrary, hundreds of fanciers are now obtaining good results; but there are certainly far more who have not yet solved the problem, and it is to this class I appeal, if their methods of housing and feeding are wrong, to make a radical change, and try to feed their birds on the lines suggested above.

Feeding Young Chicks.

Do Not Feed Too Soon

When the chick is hatched it ed it hasit has a sufficient supply of nourishment in the yolk of the egg to last for several days. What the chick requires for the first few days is not feed but warmth and rest.

A Little Sand or Grist First

When the chicks are removed to their brooding quarters there should be some coarse sand or fine grit scattered where they can have free access to it. They should then be left until they show positive signs of hunger, which would be between the second and third day after hatching. They may then be given some bread crumbs that have been very slightly moistened with milk; this may be scattered on clean sand or chick grit. If being brooded by a hen she will see that no food is allowed to lie around, but if in a brooder that part of the food that the chicks do not pick up in a few minutes should be removed as nothing in feeding causes so much trouble as leaving food of that nature around until it is sour.

Feed For the First Ten or Twelve Days.

The following daily ration of five feeds given about two and a half hours apart and continued from the time the chicks are two to three days out of the shell until 10 or 12 days of age may be altered or adopted to suit conditions;

First feed:—Dry bread crumbs slightly moistened with milk.

Second feed:—Finely cracked mixed grains or commercial chick feed.

Third feed:—Rolled oats.

Fourth feed:—Dry bread crumbs moistened with milk.

Fifth feed:—Finely cracked mixed grains.

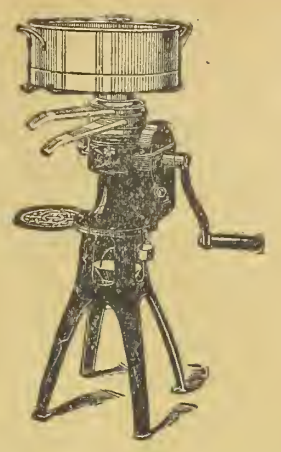
In addition to the above give the chicks daily a little green food such as grass, lettuce, sprouted oats, etc. Do not have the moistened bread sloppy but in a crumbly state and during this period let the chicks into fresh soil or rass every day if possible.

Feed After Ten or Twelve Days.

After the chicks are ten days to two weeks old, coarser foods may be allowed. The infertile eggs may be boiled and mixed with the mash food and the bread and milk discontinued. Hoppers in which is put cracked grains and dry mash or rolled oats may be placed where the chicks can have free access to them. As soon as they become accustomed to the hoppers all hand feeding except the mash may be discontinued. If the chicks are on range it will be found that after a time they will get careless about coming when called at which time the mash may be dropped and dependence placed entirely upon the hopper feeding.

Place grit and water, also a dish of sour milk if possible where the chicks will have free access to them. Nothing provides animal food in better form than does milk, the chicks like it and thrive on it.

International Harvester Cream Separators



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A DAIRY farmer who does not use a cream separator is losing up to $15 per cow per year. Complete your dairy equipment by the purchase of an International Harvester cream separator—Lily, Bluebell or Dairymaid. These separators skim closely—leaving barely a drop of cream in a gallon of milk—and they will do it for years.

These machines are furnished with pulleys for the use of power. Belted to a small I H C engine, you have the best outfit it is possible for you to buy. Note the low supply can on I H C separators, the height of the milk spout which allows a 10-gallon can to be used for the skim milk, the strong frame with open base which can be kept perfectly clean, and the dozen other features which make these I H C machines the best.

Your local dealer should have one of these machines on sale. If he has not, write us before you buy and we will tell you where you can see one; also send you an interesting book on separators.

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Eddy's Bags combine ***great strength*** with their ***sanitary qualities.*** They will not burst at an inconvenient moment and scatter their contents.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. adies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue.)

"And you will be right," said Mrs. Steerfort. "My son's tutor is a conscientious gentleman; and if I had not implicit reliance on my son, I should have reliance on him."

"Should you?" said Miss Dartle. "Dear me! Conscientious, is he? Really conscientious, now?"

"Yes, I am convinced of it," said Mrs. Steerforth.

"How very nice!" exclaimed Miss Dartle. "What a comfort! Really conscientious? Then he's not—but of course ne couldn't be, if he's really conscientious. Well, I shall be quite happy in my opinion of him, from this time. You can't think how it elevates him in my opinion, to know for certain that he's really conscientious!"

Her own views of every question, and her correction of everything that was said to which she was opposed, Miss Dartle insinuated in the same way; sometimes I could not conceal from myself, with great power, thou' in contradiction even of Steerforth. An instance happened before dinner was done. Mrs. Steerforth speaking to me about my intention of going down into Suffolk, I said at hazard how glad I should be, if Steerforth would only go there with me; and explaining to him that I was going to see my old nurse, and Mr. Peggotty's family, I reminded him of the boatman whom he had seen at school.

"Oh! That bluff fellow!" said Steerforth. "He had a son with him, had he not?"

"No. That was his nephew," I replied; "whom he adopted, though, as a son. He has a very pretty little niece, too, whom he adopted as a daughter. In short, his house (or rather his boat, for he lives in one, on dry land) is full of people who are objects of his generosity and his kindness. You would be delighted to see that household."

"Should I?" said Steerforth. "Well I think I should. I must see what can be hone. It would be worth a journey (not to mention the pleasure of a journey with you, Daisy), to see that sort of people together, and to make one I am."

My heart leaped with a new hope of pleasure. But it was in reference to the tone in which he had spoken of "that sort of people," that Miss Dartle, whose sparving eyes had been waiting for us, now broke in again.

"Oh, but really? Do tell me. Are they, though?" she said.

"Are they what? And are who what?" said Steerforth.

"That sort of people. Are they really animals and clods, and beings of another order? I want to know so much."

"Why, there's a pretty wide separation between them and us," said Steerforth, with indifference. "They are not to be expected to be as sensitive as we are. Their delicacy is not to be shocked or hurt very easily. They are wonderfully virtuous, I dare say. Some people contend for that, at least; and I am sure I don't want to contradict them. But they have not very fine natures, and they may be thankful that, like their coarse rough skins, they are not easily wounded."

"Really!" said Miss Dartle. "Well I don't know, now, when I have been better pleased than to hear that. It is so consoling. It's such a delight to know that, when they suffer, they don't feel! Sometimes I have been quite uneasy for that sort of people; but now I shall just dismiss the idea of them altogether. Live and learn. I have my doubts, I confess, but now altogether they're cleared up. I didn't know, and now I do know, and that shows the advantage of asking —don't it?"

I believe that Steerforth had said what he had in jest, or to draw Miss Dartle out; and I expected him to say as much when she was gone, and we two were sitting before the fire. But he merely asked me what I thought of her.

"She is very clever, is she not?" I asked.

"Clever! She brings everything to a grindstone," said Steerforth, "and sharpens it, as she has sharpened her own face and figure these years past. She has worn herself away by constant sharpening. She is all edge."

"What a remarkable scar that is upon her lip!" I said.

Steerforth's face fell, and he paused a moment.

"Why, the fact is, he returned, "I did that."

"By an unfortunate accident!"

"No. I was a young boy, and she exasperated me, and I threw a hammer at her. A promising young angel I must have been!"

I was deeply sorry to have touched on such a painful theme, but that was useless now.

"She has borne the mark ever since as you see," said Steerforth; and she'll bear it to her grave. She was the motherless child of a sort of cousin of my father's. He died one day. My mother, who was th?n a widow, brought here here to be company to her. She has a couple of thousand pounds of her own, and saves the interest of it every year to add to the principal. There's the history of Miss Rosa Dartle for you."

"And I have no doubt she loves you like a brother?" said I.

"Humph!" retorted Steerforth, looking at the fire. "Some brothers are not loved over much; and some love—but help yourself Copperfield! We'll drink the daisies of the field, in compliment to you; and the lilies of the valley that toil not, neither do they spin, in compliment to me—the more shame for me!" A moody smile that had overspread his features, cleared off as he said this merrily, and he was his own frank, winning self again.

I could not help glancing at the scar with a painful interest when we went in to tea. It was not long before I observed that it was the most susceptible part of her face, and that when she turned pale, the mark altered first, and became a dull, lead-colored streak, lengthening out to its full extent, like a mark in invisible ink brought to the fire. There was a little altercation between her and Steerforth about the cast of the dice at backgammon, when I thought her, for one moment, in a storm of rage; and then I saw it start forth like the old writing on the wall.

It was no matter of wonder to me to find Mrs. Sterforth devoted to her son. She seemed to be able to speak or think about nothing else. She showed me his picture as an infant, in a locket, with some of his baby-hair in it; she showed me his picture as he had been when I first knew him and she wore at her breast his picture as he was now. All the letters he had ever written to her, she kept in a cabinet near her own chair by the fire; and she would have read me some of them, and I should have been very glad to hear them, too, if he had not interposed, and coaxed her out of the design.

"It was at Mr. Creakle's, my son tells me that you first became acquainted," said Mrs. Steerforth, as she and I were talking at one table, while they played backgammon at another. "Indeed, I recollect his speaking, at that time, of a pupil, younger than himself who had taken his fancy there; but your name, as you may suppose, has not lived in my memory.

"He was very generous and noble to me in those days, I assure you ma'am," said I, "and I stood in need of such a frien. I should have been quite crushed without him."

"He is always generous and noble" said Mrs. Steerforth, proudly.

I subscribed to this with all my heart, God knows. She knew I did; for the stateliness of her manner already abated towards me, except when she spoke in praise of him, and then her air was always lofty.

"It was not a fit school generally for my son," she said; "far from it; but there were particular circumstances to be considered at the time, of more importance even than that selection. My son's high spirit made it desirable that he should be placed with some man who felt its superiority, and would be content to bow himself before it; and we found such a man there."

I knew that, knowing the fellow. And yet I did not despise him the more for it, but thought it a redeeming quality in him, if he could be allowed any grace for not resisting one so irrestible as Steerforth. ...

"My son's great capacity was tempted on, there, by a feeling of voluntary emulation and conscious pride," the fond lady went on to say. "He would have risen against all constraint; but he found himself the monarch of the place, and he haughtily determined to be worthy of his station. It was like himself."

I echoed, with all my heart and soul, that it was like himself.

"So my son took, of his own will, and on no compulsion, to the course in which he can always, when it is his own pleasure, outstrip every competitor," she pursued. 'My son informs me, Mr. Copperfield, that you were quite devoted to him, and that when you met yesterday you made yourself known to him with tears of joy. I should be an affected woman if I had made any pretence of being suprised by my son's inspiring such emotions; but I cannot be indifferent to any one who is so sensible of his merits, and I am very glad to see you here, and can assure you that he feels an unusual friendship for you, aad that you may rely on his protection."

Miss Dartle played backgammon as eagerly as she did everything else. If I had seen her, first, at the board, I should have fancied that her figure had got thin, and her eyes had got large, over that pursuit, and no other in the world. But I am very much mistaken if she missed a word of this, or lost a look of mine as I received it with the utmost pleasure, and, honored by Mrs. Steerforth's confidence, felt older than I had done since I left Canterbury.

When the evening was pretty far spent, and a tray of glasses and decanters came in, Steerforth promised over the fire, that he would seriously think of going down into the country with me. There was no hurry, he said; a week hence would do; and his mother hospitably said the same. While we were talking, he more than once called me Daisy; which brought Miss Dartle out again.

"But really, Mr. Copperfield," she asked, "is it a nickname? And why does he give it you? Is it—eh? —because he thinks you young and innocent? I am so stupid in these things.

I colored in replying that I believe it was.

"Oh!" said Miss Dartle. "Now I am glad to know that! I ask for information, and I am glad to know it. He thinks you young and innocent; and so you are his friend? Well, that's quite delightful!"

She went to bed soon after this, and Mrs. Steerforth retired too. Steerforth and I, after lingering for half an hour over the fire, talking about Traddles and all the rest of them at old Salem House, went upstairs together. Steerforth's room was next to mine, and I went in to look at it. It was a picture of comfort, full of easy chairs cushions and footstools, worked by his mother's hand, and with no sort of thing omitted that could help to render it complete. Finally, her handsome features looked down on her darling from a portrait on the wall, as if it were even something to her that her

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likeness should watch him while he slept.

I found the fire burning clear enough in my room by this time, and the curtains drawn before the windows and round the bed, giving it a very snug appearance. I sat down in a great chair upon the hearth to meditate on my happiness, and had enjoyed the contemplation of it for some time, when I found a likeness of Miss Dartle looking eagerly at me from above the chimney-place.

It was a startling likeness and necessarily had a startling look. The painter hadn't made the scar, but I made it; and there it was, coming and going; now confined to the upper lip as I had seen it at dinner, and now showing the whole extent of the wound inflicted by the hammer, as I had seen it when she was passoniate.

I wondered peevishly why they couldn't put her anywhere else instead of quartering her on me. To get rid of her, I undressed quickly, extinguished my light, and went to bed. But, as I fell asleep, I could not forget that she was still there looking, "Is it really, though? I want to know;" and when I awoke in the night, I found that I was asking all sorts of people in my dreams whether it really was or not—without knowing what I meant.

CHAPTER XXI.

There was a servant in that house, a man who, I understood, was usually with Steerforth, and had come into his service at the University, who was in appearance a pattern of respectability. I believe there never existed in his station a more respectable looking man. He was taciturn, soft-footed, very quiet in his manner, deferential, observant, always at hand when wanted, and never near when not wanted; but his respectability. He had not a pliant face, but had rather a stiff neck, rather a tight smooth head with short great claim to consideration was his hair clinging to it at the sides, a soft way of speaking, with a peculiar habit of whispering the letter S so distinctly, that he seemed to use it oftener than any other man; but every peculiarity that he had he made it respectable. If his nose had been upside down, he would have made that respectable. He surrounded himself with an atmosphere of respectability, and walked secure in it. It would have been next to impossible to suspect him of any thing wrong, he was so thoroughly respectable. Nobody could have thought of putting him in a livery, he was so highly respectable. To have imposed any derogratory work upon him, would have been to inflict a wanton insult on the feelings of a most r?spectable man. And of this, I noticed the women-servants in the household were so intuitively conscious, that they always did such work themselves, and generally while he read the paper by the pnatry fire.

Such a self-contained man I never saw. But in that quality, as in every other he possessed, he only seemed to be more respectable. Even the fact that no one knew his Christian name seemed to form a part of his respecbility. Nothing could be objected against his surname, Littimer, by which he was known. Peter might have been hanged, or Tom transported; but Littimer was perfectly respectable.

It was occasioned, I suppose, by the reverend nature of respectability in the abstract, but I felt particularly young in this man's presence. How old he was himself, I could not guess And that again went to his credit on the same score: for in the calmness of respectability he might have numbered fifty years as well as thirty.

Littimer was in my room in the

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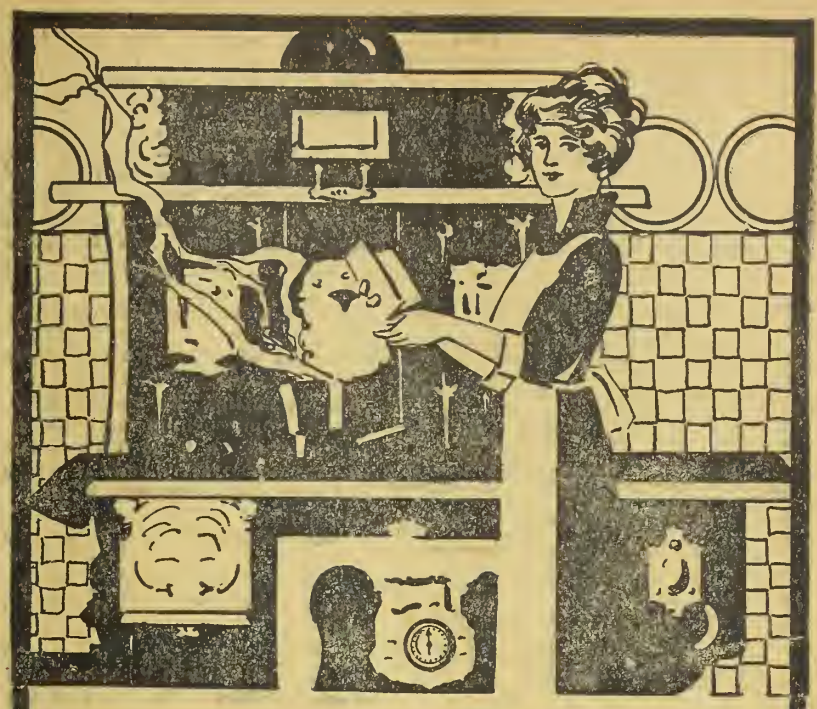

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morning before I was up, to bring me that reproachful shaving water, and to put out my clothes. When I undrew the curtains and looked out of bed, I saw him in an equable temperature of respectability, unaffected by the east wind of January, and not even breathing frostily, standing my boots right and left in the first dancing position, and blowing specks of dust off my coat as he laid it down like a baby.

I gave him good morning, and asked him what o'clock it was. He took out of his pocket the most respectable hunting watch I ever saw, and preventing the spring with his thumb from opening far, looked in at the face as if he were consulting an oracular oyster, snut it up again, and said, if I pleased, it was half-past eight.

"Mr. Steerforth will be glad to hear how you have rested, sir."

"Thank you," said I, "very well, indeed Is Mr. Steerforth quite well?"

"Thank you, sir, Mr. Steerforth is tolerably well." Another of his characteristics. No use of superlatives. A cool calm medium always.

"Is there anything more I can have the honor of doing for you, sir ? The Rarning bell will ring at nine; the family take breakfast at half-past nine."

"Nothing, I thank you."

"I thank you, sir, if you please;" and with that, and with a little inclination of his head when he passed the bedside, as an apology for correcting me, he went out, shutting the door as delicately as if I had just fallen into a sweet sleep on which my life depended.

Every morning we held exactly this conversation; never any more, and never any less; and yet, invariably, however far I might have been lifted out of myself over-night, and advanced towards maturer years by Steerforth's companionship or Mrs. Sterforth's confidence, or Miss Dartle's conversation, in the presence of this most respectable man I became as our smaller poets sing, "a boy again."

He got horses for us; and Steerforth, who knew everything, gave me lessons in riding. He provided foils for us, and Steerforth gave me lessons in fencing—gloves, and I began of the same master, to improve in boxing. It gave me no manner of concern that Steerforth should find me a novice in these sciences, but I never could bear to show my want of skill before the respectable Lattimer. I had no reason to believe that Lattimer understood such arts himself ; he never led me to suppose anything of the kind, by so much as the vibration of one of his respectable eyelashes; yet whenever he was by, while we were practising, I felt myself the greenest and most inexperienced of mortals.

I am particular about this man, because he made a particular effect on me at that time, and because of what took place thereafter.

(To be continued)

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SANDEN, AUTHOR.

MANLY, VIGOROUS MEN RULE THE WORLD

In reference to manly strength, I believe it is now more generally acknowledged than ever before that the manly man stands back of all that makes for progress, development and achievement in the world, a truth which any of us can easily verify if we but look about us with impartial eyes.

As a matter of fact, the man who is debilitated, unstrung and enervated cannot, for perfectly obvious reasons, expect to approach those real and masterful attainments which seem but a natural and easy accomplishment for him whose nerve force, brain power and manly strength are perfectly normal. Hence, we acknowledge the debilitated, weakened man to be handicapped in every walk of life where real manhood counts, yet it would indeed be cruel of me to here so state the fact in public print were I not of the honest opinion that there is every hope for the unmanly man to restore himself to a state of health and vigor, if he but clear his mind of abnormal fear, and then make a fair, square effort to redeem himself.

There are two specimens of humanity for which I have no earthly use. One is the man who, though now strong and vital, yet plunges into dissipation and excess with the certain knowledge of his unmanly fate. The other is the man who, though knowingly debilitated and enervated, makes no effort to get away from his life of dissipation and wrong practices. As a matter of fact, there is no hope for either of these unfortunates But for him who acknowledges his errors, who may come to me and say, "I have paid the penalty of my past follies, but I am THROUGH with my life of dissipation, and I am going to make a manly effort to restore myself," to such a man, I carea not what his physical condition may be, I can say in all truthfulness, "You, my friend, are on the right road to new strength and new manhood", for he really is, and there is no doubt about it.

I make a little appliance that I call a VITALIZER, which I designed to aid just such men who seek manly strength. I am not offering this VITALIZER here for sale, but merely suggest that you, reader take this opportunity to learnall about what this little appliance is doing today everywhere throughout the world; then, if in the future you want to use one yourself and will so write me, I will gladly make some liberal proposition whereby you may have one to try. The VITALIZER is fully described in one section of the free book which the coupon below entitles you to.

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Secretary-Treasurers Report for May Meeting, Sussex Branch W. I.

Editor The Maritime Farmer:—

The newly organized branch of the Women's Institute held its second meeting on May 1st, at the Provincial Dairy, Sussex, with a membership of thirty-five. The meeting opened with a reading of the minutes by the secretary. The programme for the afternoon opened with a talk from our President, Mrs. N. W. Eveleigh, taking as her subject "Women in the Home." Mrs. Eveleigh emphasized the importance of Institute work so that women might have an opportunity of interchanging ideas. Women have many probems to deal with Training is just as necessary for the home maker as for the woman who intends following a profession. Women must know a great deal. Problems arise in the home which tax the wisest and most skilful. No knowledge once gained is ever wasted. Mrs. Eveleigh again emphasized the fact that in the home woman must be the financier dealing with problems of home economics.

Mrs. Horace Slipp then read a very helpful and suggestive paper which she had prepared; her subject being "Work in the Home." In speaking Mrs. Slipp strongly urged the necessity of women economizing their strength by labor-saving methods and appliances. For instance, never stand to work which can be well done while seated. Mrs. Slipp's paper brought forth some valuable discussions by the members present.

Mrs. Harry Wiles was then called upon to read a very humorous account of how a woman's club extended its usefulness by a resolution made and kept by each member. "To watch our own temper," never to do or say anything that would ruffle the temper of another.

The last number on the programme was an address by Mrs. J. Frank Roach on "The Stranger within the Gates." She spoke of the new settlers who are now making homes within our province. Many of these settlers are entirely ignorant of the conditions and methods of this country and have everything to learn. The speaker asked the women of the Women's Institute to hold out a helping hand to these new home makers while working against great odds.

In closing our programme, we find much has been said about the home. I wonder how many of us realize that the home is the greatest manufacturing plant in the world. In it are manufactured the bodies and brains of men and women. To become a wife is to become a member of the greatest profession. It calls for brains, study, training, and hard concentrated effort.

The secretary in closing urged her sister members of the Institute to let their object be in the future the uplifting of character, the betterment of our home life the forwarding of every good work for home and country. Truy a missionary work without a limit.

A few minutes were set aside for the purpose of exchanging ideas. The secretary then read her report, reading several letters received from the Department of Agriculture, together with the Treasurer's report.

Mrs. N. W. Eveleigh was appointed a delegate to attend the annual Women's Institute to be held in Fredericton on May 26th, 27th and 28th. Substitute apointed, Mrs. F. G. Lansdowne. The meeting then adjourned to meet June 5th at the Institute Rooms, Provincial Dairy, at three o'clock, sharp. —Mrs. F. G. Lansdowne, Sec'y Treas.

Prince Edward Island Women's Institute Notes.

During the month of April the Women's Institutes held their regular meetings, taking as their subjects, Gardening, Future Improvements of the School and Grounds, Future Work for the Institutes, Vegetable Coloring, Home Decoration, Short Cuts in Housekeeping, Events in Canadian History, etc.

Miss Helena Macdonald, of Montague, who has recently been appointed by the Government as Assistant Supervisor to Mrs. A. E. Dunbrack, who is now holding the position as Supervisor, took up her duties with the Department of Agriculture on the 28th April and will acompany Mrs. Dunbrack at the following meetings scheduled to be held during the months of May and June:—May 5th, Norbro; 12th, Georgetown, 13th, Montague; 27th, Harrington; 28th, York, 29th, Marshfield; 31st, New Haven; June 1st, Cornwall; 2nd, Meadowbank; 3rd, Clyde River; 4th, Kingston; 5th, East Wiltshire; 8th, New London; 9th, Stanley Bridge; 10th, New Glasgow; 11th, Springfield; 12th, Traveller's Rest; 15th, Kensington; 16th, Malpeque; 17th, Darnley; 18th, French River; 19th, Long River; 22nd, Middeton.

At these meetings practical demonstrations will be given along the lines of millinery and cooking of the various foodstuffs.

FARMERS, ATTENTION !!!

We want a man in every locality in Eastern Canada to sell our big line of Household Necessities, Medicines, Extracts, Spices, Stock Remedies, Poultry Supplies, etc., — direct to farmers. Every one a household necessity, sold on Rawleighs' Pay-After-You-Are-Satisfied Plan.

YOU CAN MAKE

$100 TO $200 PER MONTH CLEAR PROFIT

over and above all expenses. If you can furnish team, write at once for our matchless offer.

NO DUTY TO PAY. Good freight service. Practically no competition. We are the only Company who owns and operates its own factory in Canada. Hundreds of our salesmen are making big money here in the West. Now is the time to secure good Eastern territory.

EVERY RAWLEIGH SALESMAN is backed by the service of one of the oldest Buying, Manufacturing and Distributing Organizations in North America. Established 19 years. Capital and Surplus over $2,000,000. References: Duns, Bradstreets, or any bank in Winnipeg. Write today for full particulars:

THE W T. RAWLEIGH MEDICAL COMPANY
90 GUNNELL ST., WINNIPEG, MANITOBA

YOU can always be sure that anything made with

REGAL FLOUR

will touch the highest mark in looks, taste and healthfulness, because Regal excels in the qualities that produce tasty, nutritious bread and pastry.

Better flour than Regal is not made hence you cannot do better than use it. Remember too, that you run no risk when you buy Regal. It is a *known* flour, guaranteed by us. Get a barrel to-day. We'll give you your money back if it isn't satisfactory.

The St. Lawrence Flour Mills Co., Ltd.
Montreal, Canada

A WONDERFUL REMEDY

Orange Lily is daily curing the most obstinate cases of Female Disorders. Falling of the Womb, Leucorrhoea, Painful and Suppressed Menstruation, etc., etc., are all of them relieved from the start by its use, and a few weeks' or months' treatment accomplishes a complete cure. This remedy is a positive, scientific preparation, and is based on the discoveries of Pasteur and Lister. It is an applied treatment; that is, it is not taken internally, but is applied direct to the suffering parts, and it, therefore, acts with all the certainty of the known laws of chemical action. As it comes in direct contact with the diseased tissue, its antiseptic and nerve-food properties cannot help have a beneficent influence. I receive from 10 to 50 letters daily, speaking of the benefits and cures it is performing, and so sure am I that it will do what is claimed for it that I will send, absolutely free, a 25c box to every suffering woman who will write for it. Price, $1 per box, which is sufficient for one months' treatment. Address, MRS. FRANCES E. CURRAH, WINDSOR, ONT. 3

FOR SALE BY LEADING DRUGGISTS EVERYWHERE

Black Cat Batteries

—cost less
—last longest

WHY? Because they have NINE LIVES!

They outlast all other batteries. Made in Canada by the oldest, largest and most reliable Battery Factory in the Dominion.

CANADIAN CARBON CO. 3
Limited
96 West King Street
TORONTO

Nerves Were Unstrung.

WOULD ALMOST GO OUT OF HER MIND.

Many women become run down and worn out by household cares, and duties never ending, and sooner or later find themselves with shattered nerves and weak hearts.

On the first sign of any weakness of the heart or nerves you should avail yourself of a perfect cure by using Milburn's Heart and Nerve Pills.

Mrs. Archie Goodine, Tilley, N.B., writes:—"When I was troubled with my heart, two years ago, I was very bad. My nerves were so unstrung, sometimes I would almost be out of my mind. I doctored myself with everything I could get, until at last I got four boxes of Milburn's Heart and Nerve Pills, and they have cured me. I cannot speak too highly of this wonderful remedy, and will recommend it to all sufferers."

Milburn's Heart and Nerve Pills are 50c. per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

The Maritime Farmer a Great Advertising Medium.

Willow Bank Jersey Farm,
St. John,
March 30, 1914

Gentlemen,—Please discontinue ad. of Jerseys in Maritime Farmer, and send me bill of same. Will have another ad. in a few days. The Maritime Farmer is a great advertising medium.—B. V. Millidge.

The Powdery Scab.

(Continued from 535

1. Free from Powdery Scab and other dangerous potato diseases.

2. Grown in areas known to be free from Powdery Scab or other dangerous potato diseases.

It is altogether likely, therefore that potatoes from disease-free districts can be shipped to Bermuda as heretofore. While we are not in a position at present to say whether similar arrangements can be made with the United States authorities, it is posible that this may eventually be done.

Under the provisions of the Destructive Insect, Pest and Plant Disease Act, 1911, regulations may be passed laying down certain quarantine lines within the Province, over which potatoes may not be shiped. If, therefore, the majority of the farmers of any county or district practically free from the disease, declare that for their own protection and to preserve their export trade, they desire to have the importation from outside points prohibited the provincial government would undertake to proclaim and establish such a quarantine. Those interested should take prompt action.

The administration of this act is in the hands of the undersigned, who will be glad to hear from anyone regarding this matter. In the meantime, the Department of Agriculture is wiling as far as their means permit, to inspect the seed potatoes of growers catering to the export trade, in order that they may be certain that only clean seed is planted. In the fall, inspection of export potatoes may be aranged for, though it may possibly be necesary that a small inspection fee be imposed to help cover the cost of this inspection. As the further distribution of this disease is likely to be atended by serious consequences, the growers are earnestly urged to take the following precautions:—

1. Use only clean, smooth-skined potatoes for planting. Reject all tubers showing disease of ony kind. Do not run the risk of infecting the land, even though you believe the disease to be only the comon scab.

2. Do not pick aparenntly clean "seed" out of a lot affected with Powdery Scab . It is impossible to detect this disease in its early stages and no seed treatment is known.

3. Never grow potatoes on land that has previously grown an affected crop. The disease may remain in the soil for years and the only treatment is to plant clean seed on disease free soil.

4. Use only locally grown potatoes for seed except in localities where disease has been found. If it is desired to buy from outside points, purchase only such as has been inspected and certified free from Powdery Scab by some recognized government official.

Whether we are to free ourselves from the disease or whether we are to become more and more affected and eventually lose our export trade, rests with the growers themselves. For the benefit of those who are not familiar with the appearance of Powdery Scab the following short account is given:—

Though in its early stages the disbears a close resemblance to the ordinary potato scab common everywhere they can usually be distinguished with a fair degree of accuracy by even a superficial examination. The "scabs" of the comon potato scab are flatter, more irregular in shape and tend to run together to a greater extent than with the Powdery Scab. In the case of the Powdery Scab, the affected areas are more raised, are regular in shape and, even where in bad cases of the disease they tend to run together they still retain their separate identity. The scab by areas on the surface are also filled with an abundant olive green powder, which gives the disease its name. In mild cases and in its early stages the Powdery Scab resembles quite closely the ordinary scab, but in severe cases the potatoes become gnarly or distorted and covered with deep sores. Such potatoes are not fit for human food. The disease exhibits those more objectionable symptoms, where affected potatoes are planted on land that has previously produced a crop affected with the disease.

The Dominion Division of Botany intends to publish a bulletin showing the different diseases of potatoes in their natural color. Meanwhile we wil be pleased to receive and report upon suspected samples.—William H. Brittain. Truro N. S.

Outdoors or in—this is the paint that gives satisfaction

Stands the test of Canada's trying weather as no other paint you have ever used. For barns and other buildings, for your implements and wagons, and for your home, both outside and in there is a Ramsay finish that is the best of its kind.
To the man who does his own painting the convenience and economy of Ramsay's Paint is self evident.
The man who hires painters to do his work for him will do well to specify Ramsay's paints—they wear so well and protect wood and metal so thoroughly from deterioration. The local Ramsay dealer will give you splendid service and suggestions. Or write direct to the factory. (3)

A. RAMSAY & SON CO. (Established 1842) MONTREAL, Que.

Dominion
Ammunition
TRADE MARK
Metallics and Shot Shells
For every kind
of Canadian game
There's a Dominion Shot Shell or Cartridge suited for hunting all kinds of Canadian game. Careful selection of materials, accurate loading, rigid inspection and thorough testing, are reasons why the best shooting results are obtained from the use of Dominion Ammunition. ¶ Make sure that your next hunting trip is successful. See that your dealer supplies you with Dominion Ammunition.
The Dominion Cartridge Co., Limited
318 Transportation Building, Montreal
Send 10 cents (stamps or coin) for 16 beautiful colored pictures of Canadian game.
DOMINION
No 12
IMPERIAL
303

LOUDEN

Balance Grapple Fork

GIANT
Spreads when open 6 ft. 7 in. Tines go into hay 2 ft. Width of outside tines 25 in.
STANDARD
Spreads when open 4 ft. 10 in. Tines go into hay 2 ft. Width of outside tines 19 in.
TWO SIZES
Ready for Work

For All Kinds of Hay

IN alfalfa, timothy, loose grain or straw, there is nothing to equal it. There can be no disappointment to the user of a Louden Fork. Build your loads without special care, by hand or with a loader, it does not matter, this fork goes right after it, and handles it right.

Not difficult to work

Our Patent Arch Support insures a perfect balance, and swings the fork true open or closed. Handled as easily as a harpoon fork, and gives much better service.

REMEMBER, there is not another fork just as good. Insist upon a Louden. Write for catalogue covering our complete lines.

"Everything for the Barn"

The LOUDEN MACHINERY CO.

Dept. 78 GUELPH, Ont. 7

Get Acquainted with P. E. Island Black Fox Profits

In 1913 investors in fox enterprises on P. E. I. secured profits amounting to $4,000,000.

A pair of Prince Edward Island silver foxes with their litter of four, sold in 1913 for $51,000.

A pair of high quality breeders sold last year for $32,500.

Four fox pelts from Prince Edward Island have brought $2,900, $2,700, $2,615 and $2,500 on the London market,

The Sirdar Silver Fox Company has FIVE PAIRS of the Island's highest quality, pedigreed silver foxes, chosen from stock of high fur qualiiy and big production records. The capital stock of the company is $75,000, shares $10 each. Write for free prospectus and further information TODAY.

Sirdar Silver Fox Co., Ltd.

Summerside, P. E. I., Canada

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will strengthen your digestion and improve your apetite. Thousands have been benefited by taking these Tablets. Sold by all dealers.

The Farmers' Ideal Poultry House.

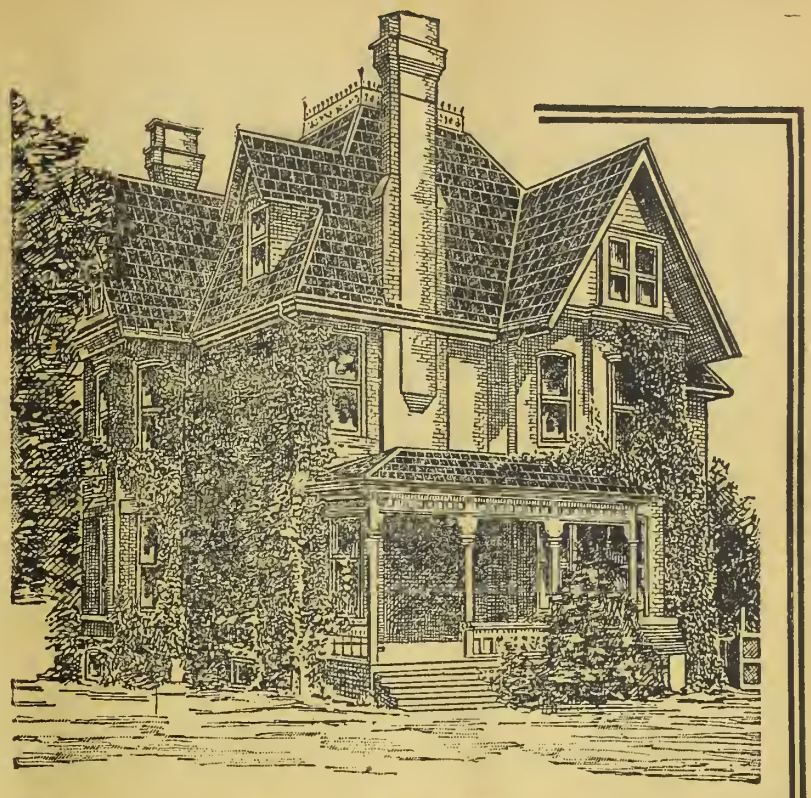
The greatest difficulty I experienced in my work was that of impressing the average farmer with the importance of the poultry branch of his farm. He believes that there might be money in it, but he neither likes poultry nor has time to bother with them. So he does nothing in this regard and does not give his wife and family a fair chance to do anything along this line. When he is told that every twenty-five well housed and well fed hens will yield more profit than the average cow, he always wants to change the subject and discusss fertilzers and other matters. On the other hand, many persons are found taking a keen interest in their poultry keeping, building cheap, up-to-date poultry houses and improving their stock. These persons express themselves pleased with the results obtained, aand they are extending their plants. There is a splendid oportunity for the farmers and others to increase their poultry plants and take advantage of the high prices prevaling for poultry and poultry products. Every farmer should keep at least 100 hens. The amount of labor entailed is not great, and with reasonable success the revenue obtainable, in proportion to the capital invested, is greater and more readily available than is the case in other branches of farm work.

I am more convinced than ever that the greatest need of the average farmer in New Brunswick is a proper poultry house. The usual hen house of the farm is "wonderfully and fearfully made," and 75 per cent. of the cause of non-production of eggs in winter can be laid at the door of the poultry house. These houses are constructed apparently without the slightest thought for the health and comfort for the flock. There is no consideration given to night ventilation, sunshine, fresh air and exercise, or to the convenience of the caretaker. Most of these so-called poultry houses are too small, resulting in over-crowding, which is preventative of good results. They are not properly ventilated and therefore they are damp and in cold weather become frost-coated on the inside, conditions which cause disease and bad health. These kind of quarters, scrub stock, hens over two years old, and late hatched pullets are some of the reasons why eggs are so scarce and expensive in winter and why so many farmers say that poultry don't pay.

Realizing the need of better poultry houses, I prepared a leaflet on "Poultry House Construction," giving plans for a modern poultry house. I have superintended the construction of several of these houses, and they are giving perfect satisfaction. The house contains three pens, each acommodating twenty-five hens. It is thirty-six feet long by twelve feet wide, giving a floor space to each pen of twelve feet square, or 144 square feet, just sufficient for twenty-five hens, allowing six square feet of room to each bird. The posts are six feet high, with an "A" shaped roof, making a loft above the plate. This is filled with straw supported on boards laid two inches apart, and thus absorbs the moisture arising from the pens. In the gable end there is an opening twenty-four inches square, which allows an abundant current of air to circulate over the straw, drying it out and suplying a constant supply of fresh air without creating a down draft, which is sure to result from a direct shaft ventilator through the roof. It will be noted in the illustration that he front is suplied with part glass and part cotton windows. One illustration shows the cotton window hooked up during the day to allow the direct rays of the sun to shine in on the floors of the pens, and free circulation of fresh air through the house which thoroughly airs and dries the interior of the whole building. I am convinced that no more satisfactory house than this can be used in our New Brunswick climate. These houses are plain, easy to construct, as cheap as the usual type of house, and at the same time they give the desired results.

Blue-prints of this house are being prepared, and may be obtained free of charge on application to the Department of Agriculture, Fredericton.

I invariably find that the men and wo men who take a certain pride in their poultry work are the ones that are making it sucessful. They have a practical house; also either pure-bred stock or high-class grade birds, which they are improving each year by introducing the good pure-bred male, always of the same breed, for crossing and breding from crosses only causes the stock to revert back to mongrels. It is only by systematic and intelligent work that we can make a success of all lines of farm work and especialy of poultry and live-stock.—Seth Jones, Poultry Supt. for New Brunswick in the 1913 Report.



Why not a Modern Roof?

The old wooden shingle has to go the way of all other unsatisfactory building material and is being rapidly replaced by the twentieth century *Brantford Asphalt Shingle.*

Everyone knows how the old-fashioned wood shingle was high in price but low in quality, would warp, curl, get loose, split and rot. The

Brantford Asphalt Shingle

will do none of these things. It is practically imperishable, although costing little more than wood shingles. Again, you save on the laying, as *Brantford Asphalt Shingles* are easier to lay and can be put on not only quicker, but more effectively. Quite fireproof too, therefore reduce insurance rates. Never need repainting, because colors are permanent and fadeless. *Brantford Asphalt Shingles* undoubtedly make a house warmer and more attractive in appearance. They are finished with a coating of crushed natural rock, in green, red and black. Artistic effects can be obtained without extra cost by using shingles of different colors. Write for free booklet to-day.

'Roof Leak'

For protecting tin, iron, wood or felt roofs. Makes any leak watertight and old roofs as good as new. Write for booklet.

Brantford Roofing Co., Limited

Brantford Canada

Warehouses: Toronto Montreal Winnipeg 76

MARKETS.

HALIFAX

GRAIN—Oats, 49c to 51c. bus., bagged, 52c. to 54c.; Peas, whole, $7.00 bbl.

FEEDSTUFFS—Bran, $29.00 to $30.00 ton; Shorts, $30.00 ton; Middlings, $30.00 to $31.00 ton; Linseed Meal, $37.00 to $39.00 ton; Gluten Feed, $32.00 to $34.00 ton; Corn Meal, $1.65 to $1.70

GRASS SEEDS—Timothy, 8c. to 11c. lb.; Com. Red Cover, 19c. to 24c. lb.; Mam. Red Clover, 20c. to 21c.; Alsike, 17c. to 20c. lb.

HORSES—Drafters, $250.00 to $275.00; Roadsters, $200.00 to $250.00; Carriage, $175.00 to $200.00.

DRESSED MEATS—Beef (carcass) 8c. to 13c. lb.; Mutton, 8c. to 9½c. lb.; Veal, 8c. to 10c.; Pork, 9c. to 12c.

DAIRY PRODUCTS—Creamery Butter, 30c. lb.; Dairy Butter, 24c. lb.; Cheese, 16c.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c. doz.; Fowl, 15 to 18c. lb.; Ducks, 18 to 20 c. lb.; Geese, 17c. to 20c. lb.; Turkeys, 22c. to 23c. lb.

FRUIT—Apples, No. 1 Spy, $6.00 bbl.; No. 2 Spy, $5.00; No. 3 Spy, $3.00 No. 1 Nonpareil, $5.00; Strawberries, 40c. box.

MISCELLANEOUS—Hay, $16.00 to $17.00 ton; Wool 25c. to 27c. lb.; Beef Hides, 12c. to 13c. lb.; Calf Skins, 18c. to 20c. lb.; Sheep Skins, 75c. to $1.50 each.

VEGETABLES—Carots, $2.50 bbl.; Potatoes, $1.00 bag; Turnips, $1.25 bag; Parsnips, $2.00 bbl.; Cabbage, 2½ c. lb.; Tomatoes, $4.00 case; Cucumbers, $1.50 doz.

During the past week eggs have been acting better and the price has gone up from 18c. to 20c. per dozen, with the demand at the present time good. Cheese, which has been firm all through the winter, selling as high as 17½c. is now quoted at 16c. This falling off in price is due to the receipts of the new season's stock. Beef dressed is a little firmer, selling at 8c. to 13c. per lb. Tomatoes are beginning to become more plentiful. Two weeks ago they were quoted at $6.00 per case last week at $4.50 and today at $4.00. A case weighs about thirty pounds, so that at present prices they are very reasonable for this season of the year. It would seem that apples have struck their highest, since the supplies of Baldwins and Golden Russets have already gone off the market without any advance in price.

CHARLOTTETOWN

GRAIN—Wheat, 95c. to $1.50 bus.; Oats, White, 36c. Back, 40c. bus.; Barley, 60c. to 80c. bus.; Buckwheat, 75c. to 80c.

FEEDSTUFFS—Bran, $1.50 per 100 lbs.; Shorts, $1.50 per 100 lbs.; Middlings, $1.50 per 100 lbs.; Oil-Cake, $1.95 to $2.10 per 100 lbs.; Gluten Feed $1.85 per bag; Corn Meal, $1.95 per bag.

LIVE STOCK—Butchers Cattle, 6½ c. to 8c. live weight; Stockers, $25.00 to $40.00; Milch Cows, $40.00 to $65.00; Sheep, 5c. to 5¼c. lb.

DRESSED MEATS—Beef (carcass) 12c. to 14c. lb.; Beef (retail) 9c. to 20c. lb.; Mutton, 10c. to 16c. lb.; Veal, (carcass) 5c. to 5½c. lb.; Pork, (carcass) light and heavy, 8½c. to 10c., select, 11c.

HORSES—Drafters, Roadsters and Carriage, $175.00 to $250.00.

DAIRY PRODUCTS—Creamery Butter, 30c. to 32c. lb.; Dairy Butter, 24c. to 28c. lb.; Cheese, 15½c. to 16c. lb.

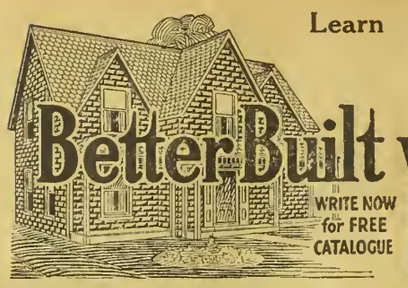
POULTRY AND POULTRY PRODUCTS—Eggs, 18c. to 20c. lb.; Fowl, 12c. to 14c.

FRUIT—Apples, $3.50 to $5.00 bbl.

MISCELLANEOUS—Hay, pressed, $12.00 to $12.50 ton; Straw, $6.00 to $7.00 ton; Wool, 24c. to 25c. lb.; Beef Hides, 12c. lb.; Calf Skins, 16c. lb.; Sheep Skins, 90c. to $1.25 each.

VEGETABLES—Carrots, 50c. to 60c. bus.; Potatoes, 35c. to 40c. bus.; Turnips, 16c. to 20c. bus.; Beets, 40c. to 50c. bus.; Parsnips, $1.25 to $1.50 per 100 lbs.

Little or no change since my last report. Roads have continued almost impassable and supply of farm produce offerng is very limited. Some few cars of potatoes loaded along the line of the P. E. I. R. R. have been shipped but very few have been brought in by teams. Oat market is steady but quiet. Vegetables are a very poor supply and prices quoted are more or less estimated value. Feeds are scarce, in fact, bran is not obtainable until new supply arrives. Eggs are in fine supply and prices hold steady. Buyers are paying more attention to quality than they did other years and it looks as if this will be the rule after this. Beef is still scarce and high but market is a little easier. Pork is firm and supply scarcely epual to demand. Butter is offered in quantities sufficient for demand for retail use.



Learn the "Metallic" Way—It Means Dollars to you.

Better Built with "Metallic" Materials

WRITE NOW for FREE CATALOGUE

The METALLIC ROOFING CO. LIMITED
TORONTO WINNIPEG

MENTION WHAT YOU INTEND TO BUILD

SPRAY NOW!

The Early Sprayer Gets the Bugs

Style "G"

Because they lack vitality and spraying done now will be more effective than twice the work later on. If you have not begun spraying yet every days delay means loss and damage.

What make and style of Spray Pump shall I use? Is the question asked by nearly every farmer.

The Kant-Klog Sprayer, Style "G"

here illustrated sprays Trees, all kinds of Small Fruits and Garden Vegetables, also Disinfects, Whitewashes and has many other uses. It is fitted with "Kant-Klog" Nozzle that throws round sprays, flat sprays and solid streams. Three of each and all of different size, volume and fineness. The Spray Body is made of heavy polished brass or galvanized steel as required.

Each STYLE "G" SPRAYER is furnished complete with "Kant-Klog" Nozzle, thumb pressure Spring Hose Cock, Carrier Strap and Safety Valve.

Price with Galvanized Steel Body $4.00. Price with Polished Brass Body $6.75.

Junior No. 5 Spray and Force Pump

In this pump the objectionable foot-rest, clamps, leather suction, packing, etc., are entirely done away with. It requires no fastening of any kind, holds itself down and works anywhere and everywhere, All the operator need do is to press the plunger down. It rises of itself, the upward stroke being made by a brass spring forcing the cylinder apart. The All-Brass suction working with a brass cylinder with All-Brass Valves, does away entirely with leather, rubber or other packing. It is practically impossible for any part to get out of order.

The Junior No. 5 Pump will pump from a pail, barrel, tank, spring or creek and will do more kinds of work than any pump of its kind made. It will throw two solid streams, one of flat spray and one fine round spray. Has automatic mixer to keep solution stirred, pleases everybody and will last a lifetime.

Price of Junior No. 5 Pump complete with hose and 3 feet of brass tube to attach to hose for spraying trees $3.50.

Either of above Pumps sent freight paid to your nearest Railway Station or Boat Wharf on receipt of price. Prompt attention to all orders is assured you.

T. McAVITY & SONS, LTD.

ST. JOHN, - - N. B.

Green Food for Poultry

is esential as part of the winter ration When cabbage and beets are not available, sprouted oats can be easily fed. Soak the oats in a bucket for at least 24 hours and then place in a pile on the top shelf of the sprouter. On the third day spread them out and let them grow to a height of not over 2 inches, then feed them. Keep the oats in a room of moderate temperature and dampen every day.

To be a Successful Dairy Man You Should be Able to Answer Yes to Each of These Questions.

1. Do you weigh and test the milk from each cow and keep an accurate record of her product ?
2. Do you dispose of all cows that are not profitable?
3. Have you a pure bred dairy bull ?
4. Are you raising the heifer calves from the best cows ?
5. Are you feeding liberally and using a balanced ration ?
6. Have you a silo ?
7. Are you raising legum nous hay cowpeas, clover or alfalfa ?
8. Is the milk or cream you sell as clean as the food on your own table ?

ESSENTIALS FOR IMPROVEMENT OF DAIRY CATTLE.

1. Feed your cows liberally enough to allow the good ones to show up.
2. Weigh the milk of each cow regularly and test it monthly if possibly by the Babcock test.
3. Cull out those that do not make a profit and keep the best.
4. Use only a pure-bred bull of a strictly dairy breed and from the kind of a cow you want to raise. Keep accurate breeding records. Do not cross breeds.
5. Raise the heifer calves from the best cows with great care.

THE SIN OF OMISSION

It isn,t the thing you do, friend,
But the thing you leave undone
That gives you the bitter heartaches,
When the work of the year is done,
When apples are all worm eaten
And the taters blighted and small
When the use of a "PERFECT SPRAY PUMP"
Would have saved them one and all.

Oh, the appes you might have had, my friend,
If you'd only sprayed the same,
Oh, the taters you've thrown away, my friend,
That would have been clear gain.
These would have paid for your spray pump,
And have left you a happier man.
Then buy the best "A PERFECT,"
And save them while you can.
..THE "PERFECT SPRAY PUMPS are manufactured by R. B. WESTHAVER, MAHONE BAY, N. S.

Color of Yolk

The color of the yolk of the egg is affected by the food taken into the system An absence of green food is frequently shown by the paleness of the yolk.

Wood Ashes and Hen Manure

fight whenever put together. The result is always a loss of ammonia. Never mix them. Apply each separately to the garden. Sifted coal ashes don't quarrel with hen manure, and are therefore excellent to place under the roosts.

The Stallion Barrister.

In response to the request of several readers of the Maritime Farmer asking for information re the noted stallion, Barrister, we republish a portion of an article by Hon John Richards on Early Importations of Noted Horses to Prince Edward Island, which appeared in our issue of May 28, 1912,.

"Barrister" was brought to Prince Edward Island in the spring of 1881, when he was three years old. He was selected and purchased in the city of York, England, by C. C. Gardiner, Esq., who is recognized as one of the best judges of horses and no further proof of this is wanting than the selection of such a good horse as "Barrister" affords.

"It seems superflous to say much in these pages about the achievements of "Barrister" in the stud as these are well known to the majority of our readers in the Provinces who are at all interested in horse breeding. That he was a great sire, all will admit, indeed, it may not be too much to say, that his superior never crossed the Atlantic. His progeng for several generations won distinctions in the prize rings of Prince Edward Island and adjoining provinces, also in the State of Maine, to which many of them were

"Ideal Fence" Is a Permanent Investment

More miles of "Ideal Fence" are sold in Canada annually than any other make, which proves without a doubt that "Ideal Fence" offers the best investment to the successful farmers. They know when they buy "Ideal" they are gettting full value for their money. They insist on quality, service and protection, and get it in "Ideal". You need not experiment in buying fence, but profit by your neighbor's experience and buy "Ideal"

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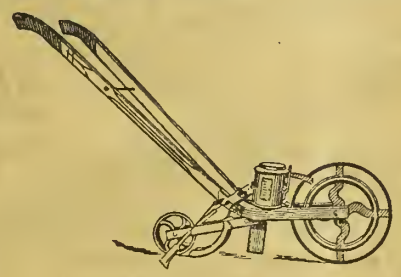

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Does the work of two men in half the time. Makes the drill, sows, covers and rolls the seed while you walk.

No better seeder can be built for the fast and accurate sowing of turnips, cabbage, carrots, beets, corn and all other garden seeds.

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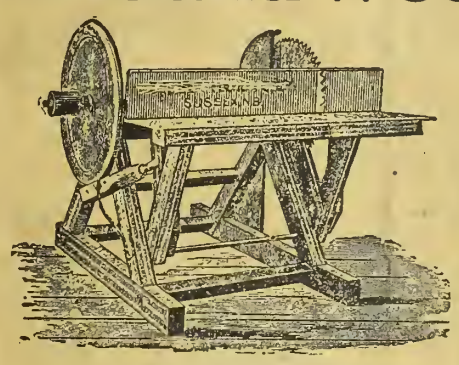

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The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1⅝" diam.

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THE ROSS .22 IS A BULL'S-EYE TICKLER

Boys and men who want a .22 Calibre rifle which is safe, speedy and accurate should buy the new Ross Cadet Rifle. The barrel has the same care bestowed on it as other Ross Military Models, which are famous the world over, and the sights are of a novel adjustable peep and globe style, quite equal to many sold at from $5.00 to $10.00.

This rifle is a great one for camp and trail and good enough for any man or boy unless very large game is being hunted.

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If your dealer cannot show one, write direct for illustrated catalogue—sent free.

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A BECOMING MODEL

51-WF30. Rembrandt, showing the new pleated tulle trimming, fine imitation hair braid shape (in **Black, White or Burnt** only), trimmed around crown with fine quality silk rainproof tulle box pleated and in two-tone effect or solid colors. **Black with White, Black with Cerise, Black with Burnt Orange, Black with Emerald, White with Royal, Sapphire Blue, Saxe Blue or Tango.** Dainty bunch of silk roses in harmonizing colors and two fancy ornaments of tulle at left side, and bunch of roses at right side.
Special bargain price.... 2.65
Shipping weight of hat is 2 lbs.
The above popular trimming on any of our Catalogue shapes allow $1.65 extra.

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Ladies' Genuine Panama Hats, beautiful quality, soft, flexible finish, newest shapes, $2.75, $3.50, $3.75. See our Spring and Summer Catalogue, pages 50-51.

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Only Two Umbrellas sold to a Customer

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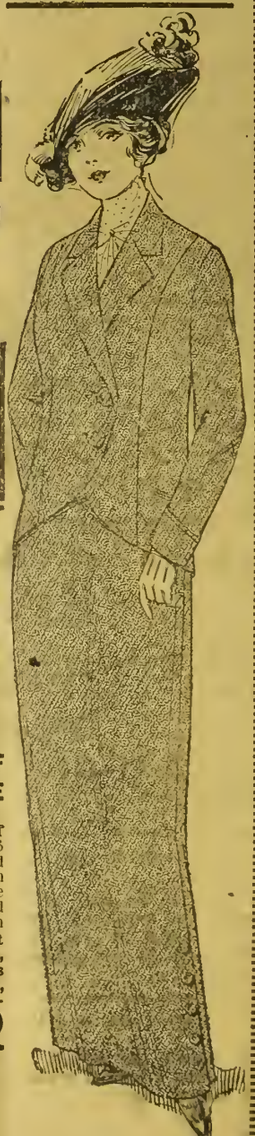

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THE T. EATON CO LIMITED
TORONTO CANADA

taken at long prices; and in the breeding ranks they were no less successful.

"Barrister" himself, was a frequent prize winner at the leading shows in the Old Country, as a yearling, and two-year-old, in competition with many of the best in the land, he was highly commended In this country, he never met defeat when in his prime. He was a bay in color, large, well-shaped feet, and with a set of legs that denoted both strength and quality of bone. His weight at three years old was about 1,700, and at five years, close upon a ton.

"Barister" was sired by Emperor 1155 Clydesdale Stud Book—a noted horse for which the high price of 600 guineas was paid. His dam, "Bounce" was by "Honest Tom", the greatest Shire horse England had produced, he having no less than six first prizes at the Royal Society Show "Bounce" was regarded as one of the best mares in the three kingdoms, in her day, and rarely met defeat in the show ring.

"It will be noticed in "Brrister's breeding that his sire was a Clydesdale and his dam was got by a Shire horse. It is well to state that before the inception of the draft horse stud books in England and Scotland, horses were frequently bred in these lines, and many of the best horses in Scotland, notably "Prince of Wales," "Darnley," and the superb show horse "Prince of Avondale," were evolved in this way, and are now regarded as among the great progenitors of the Clydesdale breed"

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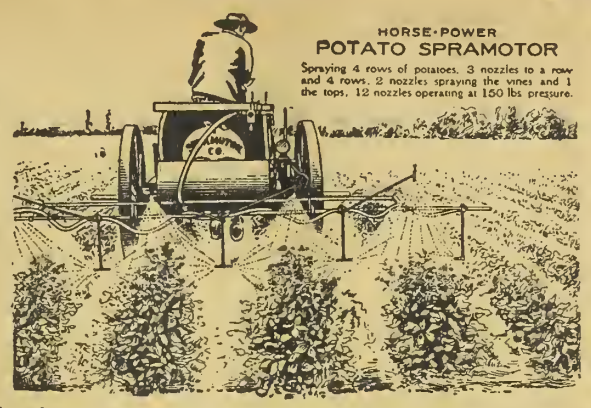
If you let pests, parasites and disease have their way with your crop every year, you lose thousands of dollars and you know it. Get after them with a *Spramotor* and transfer those dollars into your bank account.

Do you think the Canadian Government awarded first prize to the *Spramotor* because it was a "pretty good machine" or because it was *the best machine* out of the eleven that were entered? Why did the other ten makers go out of the spraying machine business right after that contest, for ten years? And how far behind are they now?


HORSE-POWER
POTATO SPRAMOTOR
Spraying 4 rows of potatoes, 3 nozzles to a row and 4 rows, 2 nozzles spraying the vines and 1 the tops, 12 nozzles operating at 150 lbs pressure.

These are questions you should ask when deciding which spraying machine to buy. Consider this fact:—We make a larger range and more styles of spraying machines than any other firm in the world. Did you know that you can buy an efficient hand *Spramotor* for as little as $6? From that price on we build hand-cart, horse-drawn, horse-operated and gasoline-power Spramotors up to $350, embracing dozens of different styles suitable to every purpose.

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We give you in the *Spramotor* over twenty distinct patented features that no other machine can have. Every point has been worked out, every obstacle overcome. Here's something to think about:

All Parts Made in our own Factory

We are not satisfied to accept fittings and small parts from some other maker. Everything about the *Spramotor* is manufactured right in our own factory, under strictest supervision, even down to the nozzles. We make a far better nozzle ourselves than we can buy anywhere in America, and the same applies to all fittings used We carefully inspect every part of every machine, then test each outfit under pressure, when it is ready to ship. Result—every *Spramotor* owner is a *Spramotor* booster. It pays!

FREE Write us some idea of what you could use a *Spramotor* for, and we will send you full particulars of an outfit that will fill your needs at the lowest possible cost. In addition, we will mail you our valuable illustrated treatise on Crop Diseases gratis, without obligating you in any way.

Will you write us today.

Prominent Grower Endorses *Spramotor*

JOHNSON BROS.

Fruit Growers, Shippers and Exporters

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Messrs. Spramotor Co.,
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Dear Sirs:—

The Model C Power Spramotor that we purchased from you last spring has given us the best of satisfaction—much better than we expected. It was kept running constantly every day for some ten weeks, and proved itself first class in every way.

We were especially pleased with the automatic air regulator, which was a surprise to us, and far excels any other regulator that we have ever used or have ever seen.

The engine is strong and simple.

Yours truly,
(Signed) D. JOHNSON.

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ASSETS Options on 28 pairs highest grade Silver Black Foxes, including 8 pairs of the famous Oulton Breeders and 5 pairs breeders of other standard strains; also 15 pairs young, all of standard strains. 3 pairs of above breeders include this year's young making a dividend probable this year.

We have a long lease of the Oulton ranch at Little Shemogue, N. B. and are negotiating for its purchase with large farm attached.

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will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $3.00 to $14. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

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We make a specialty of growing hardy fruit trees, in all the leading varieties, suitable for the Maritime Provinces, at lowest possible prices, consistent with quality.

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Containing 400 acres, 56 acres dyke land, 35 upland in high state of cultivation, 15 in bush land to be cleared and the remainder in timber, 2 good houses, 3 barns on farm in fair repair, plenty good water, 5 miles to station, 2 1-2 to steam boat landing, 2 to church ane store, 1-4 to school and Poss Office. Apply owner

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Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association.

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ROSE COMB BROWN LEGHORNS for sale after June 15 to make room for young stock. Winners in show room and laying contests. Eggs for hatching $1.50 per 15. - Mating list free. ERNEST PRINGLE, Stanley, N. B.

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"The first consideration in hatching eggs is the seection of the egg itself." says Prof. F. S. Jacoby, of the College of Agriculture, Ohio State University. "Not every egg is desirable for hatching purposes. If possible eggs from only the best hens should be used. These may be obtained by the use of trap nests, or by having a small breeding pen separate from the main flock. Eggs for hatching should be put into the incubator or under the hens as soon as possible after being laid. Eggs may be kept ten days, or even two weeks, if they are kept in a cool, dry place and turned daily. However, the germ is not as strong in an egg two weeks old as in one a day old. The shape and color of the eggs should be considered. Only regular, medium-sized eggs, with a shell in accordance with the breed, will produce healthy vigorous chicks. Irregular, round, extremely large or extremely small eggs will not produce the best chicks."

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During the past two years we have tried several methods of starting baby chicks. If one is troubled with diarrhea of any kind, lack of vitality, or slow growth, or then try the following plan, which has been one of the most successful plans of feeding baby chicks that we have ever used.

We sprinkle a little clover chaff or fine cut straw or clean litter, free from must and mold, over the floor of the brooder or the hover before the chicks are placed in it. We provide a small fountain of pure water. The chicks are not fed for 48 hours, or more after they are hatched. We begin by feeding a mixture of two-thirds rolled oats and one-third wheat bran mixed with a small amount of charcoal. This is fed on a clean board or a paper four or five times a day and only a small quantity at a time. We remove the feeding board after the chicks are through eating. Clean sand is given about the time the first feed is given, and no grit is given before.

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BABY CHICKS

We can fill limited number of orders for B. P. Rock & W. Leghorn chicks this spring. Prices, April $20.-00 per 100. May, $15.00 per 100. Cash before shipment.

NEW LAID EGGS

We pay best cash market prices for new laid eggs delivered weekly.

LIVE POULTRY

Price per lb. on live market poultry quoted at any time also on dry picked, undrawn dead poultry.

BROODERS

Write us for prices on most modern Colony-house Brooder Stoves. Also a few second-hand Model indoor brooders for sale very reasonably.

KINNEAR POULTRY CO
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About 1000 pounds of the famous Gr. Top "Corning" Turnip Seed, crop 1913, grown from selected roots.

Price 50c

Postpaid 55c.

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—churning that is more of a pastime than a labor. That's the kind of churning a MAXWELL'S "FAVORITE" does. The mechanism is so perfect—so smooth. And it gives splendid results.

THE Maxwell "FAVORITE" CHURN WITH BOW LEVER

is used in thousands of dairies—in Canada—Australia, New Zealand, S. Africa and Denmark. It produces butter with a minimum of effort. Used in Agricultural Colleges. Praised by Government Inspectors as the finest butter maker in the world.

Get your dealer to demonstrate the unique features of the MAXWELL "FAVORITE" (with Bow Lever)

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Adjustable handle—moveable to centre, right or left, as desired.

Strong light steel frame.
All roller bearings. (not ball)
Dark oak finish with gold bronze hoops.
Sold in eight sizes.

2

"SILVER LACED WYANDOTTES"

Stock and Eggs for Hatching for Sale.

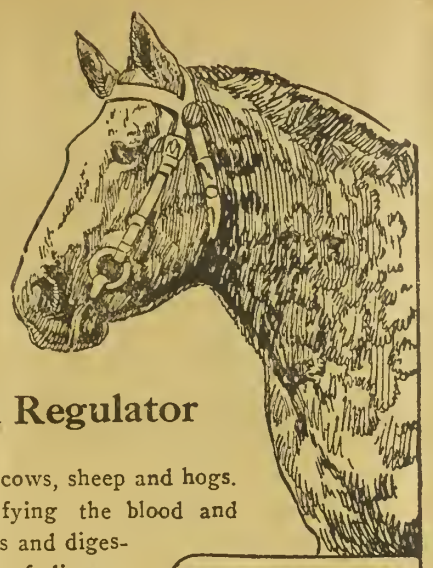
The Silver Laced Wyandottee is a breed combining quality and heauty, prolific layers, fine table fowl and rank high among breeders of poultry.

The Magnolia Poultry Yard's stock of Silver Laced Wyandottes were winners of first breeding pen at the Amherst Fair in 1913, among strong competition. This is only one of the reasons why you should buy this stock. The work is personally supervised by the owner, and the stock this spring has never been in better condition.

Write for information and get your pick of the stock now.

The Magnolia Avenue Poultry Yards
E. KYLE, Prop., Sussex, N. B.

Vigorous Stock



PLENTY of sunlight, clean bedding and fresh air are essential to the maintenance of health in the stable. But even with the best of care, the close confinement and heavy demands made upon the animals always necessitate a tonic and health regulator.

Pratts Animal Regulator

puts new life and vigor into horses, cows, sheep and hogs. It is a mild digestive tonic, purifying the blood and gently regulating the bowels, kidneys and digestive organs. It is a preventative of disease, because it supplies just the necessary elements to keep the stock healthy and vigorous when closely confined or overworked.

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Brandram's B. B. Genuine White Lead is the one safe white lead to use because it is corroded by the famous Brandram process, which makes it penetrate further into the wood on account of its wonderful smoothness and fineness. It can be depended upon to protect the wood longer against deterioration than lead made by any other process.

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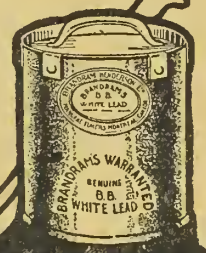
Write for booklet, or ask your dealer.



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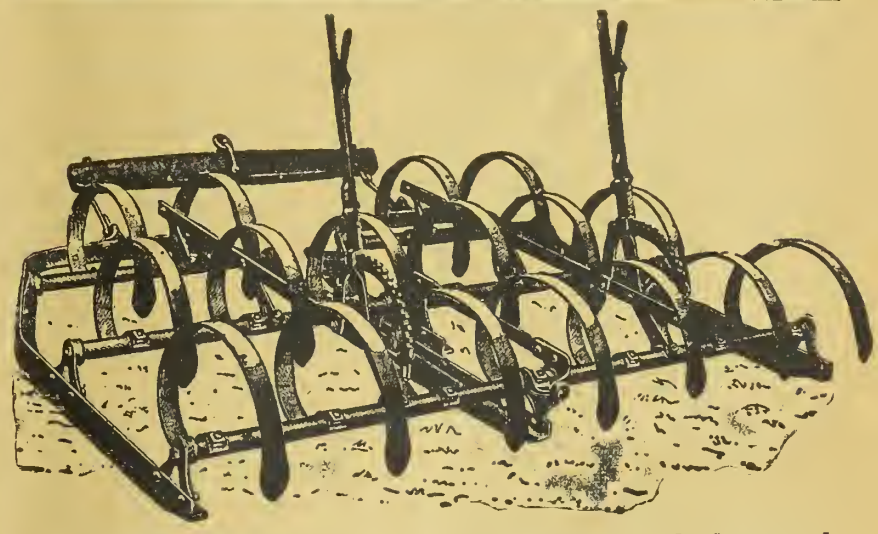
THE UNIVERSAL CAR

"My kingdom for a horse," proffered a defeated monarch. But the modern man gets an infinitely better means of transportation—at lowest cost—when he buys a sturdy Ford. The economical Ford has made the horse an extravagance at any price.

Six hundred dollars is the price of the Ford runabout; the touring car is six fifty; the town car nine hundred—f. o. b. Ford, Ont., complete with equipment. Get catalog and particulars from Ford Motor Company of Canada, Limited, Ford, Ont.



Farmers who know our Lever Harrow and the work it does are buying it and every farmer who uses it talks enthusiastically of its merits.

With the levers the teeth can be regulated to depth in an instant. It will do more effective work than any other harrow and save half your time. Made in sizes:

9 and 11 Tooth, Single Section.
15 and 17 " Double "

The Eastern Steel Co., Ltd.
Successors to The Bailey-Underwood Co., Ltd. & The Brown Machine Co., Ltd.
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A COLD Developed Into BRONCHITIS.

However slight a cold you have, you should never neglect it. In all possibility, if you do not treat it in time it will develop into bronchitis, pneumonia, or some other serious throat or lung trouble.

Dr. Wood's Norway Pine Syrup is particularly adapted for all colds, coughs, bronchitis, pneumonia, asthma, whooping cough and all troubles of the throat and lungs. Three points in favour of Dr. Wood's Norway Pine Syrup are: 1. Its action is prompt. 2. It invigorates as well as heals, and soothes the throat and lungs. 3. It is pleasant, harmless and agreeable in taste.

Mrs. Albert Vait, Brockville, Ont., writes:—"Just a line to let you know about Dr. Wood's Norway Pine Syrup. Our oldest little girl is now six years old. When she was four months old she got a cold which developed into Bronchitis, and we tried everything we could think of and had two doctors attending her, but it was no good. One day I read in your almanac about Dr. Wood's Norway Pine Syrup, so I tried it, and before she had finished one bottle of it, the dry hacking cough had nearly all gone. There is nothing equal to it, and we are never without it in the house."

See that you get "Dr. Wood's" when you ask for it, as there are numerous imitations on the market. The genuine is manufactured by The T. Milburn Co., Limited, Toronto, Ont.

Price, 25c.; family size, 50c.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't imitate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists,
41 Church Street, Toronto, Ont.

SPRING TONIC

For purifying the blood and cleansing the system there is nothing just as good as

Gates' Life of Man Bitters and Invigorating Syrup

WHY?

Because no other medicine known to medical skill will extract the water from the blood, removing it from the system in the natural way. They cleanse every organ in the body so that nature resumes her original standing.

Try them and be convinced of their purely vegetable and healthgiving properties.

Sold everywhere and by wholesale and retail druggists.

C. Gates, Son & Co.
Middleton, N. S.

Proposed Assistance to Associations of Wool-Growers by the Live Stock Branch of the Dominion Department of Agriculture in the Marketing of their Wool Clips.

The Live Stock Branch of the Dominion Dept of Agriculture is prepared to offer practical asistance this year to Asociations of Wool Growers in the preparation and display of their wool clips for market. Associations, in order to receive this aid, must be organized in acordance with the regulations of the Branch and membership is limited to actual owners of sheep. West of Fort William an Association must contain at least 3.000 sheep, or sufficient to comprise one car-load of wool; east of there, a relative number. The services of expert wool classifers, who will take charge of and perform the grading, classification and preparation of the wool, will be provided.

This proposal represents much more than a mere continuation of the work undertaken last year, when two wool classifiers, in the employ of the Live Stock Branch, visited the Western Provinces and gave practical instructions aand advice to sheep-raisers upon wool growing. Rather it means the introduction of a definite scheme whereby wool producers may be actually assisted in preparing and presenting their wools upon the market in the most aceptable fashion and thus be in a position to cater more directly to the requirements of the market. Moreover, it should prove effective in development and improving the general status of sheep-raising and in creating an impetus to the production and preparation of an improved grade of wool and indirectly a better class of mutton.

The Branch will also provide the means for the establishment of a central bureau for the distribution of current information respecting domestic and foreign markets of wool, so that the Associations may be constantly in command of complete knowledge concerning the source of the demand and the ruling price of all grades. Reliable information of this nature will serve as an excellent asset to an association in directing its policy and placing it in closer relationship with the demands of the trade.

Sheep-raisers desirous of taking advantage of this offer and of forming an Association should write, for detailed information and aplication forms, to the Live Stock Commissioner, Ottawa.

There is Always a Demand for Goods of Quality.

More and more all the time progressive concerns believe in the value of making their wares better known, especially if their goods have real merit. A notable instance of this is the case of the Enterprise Foundry Co., Saskville, N. B., who are now running a series of ads in this paper, to which we have very great pleasure in drawing attention.

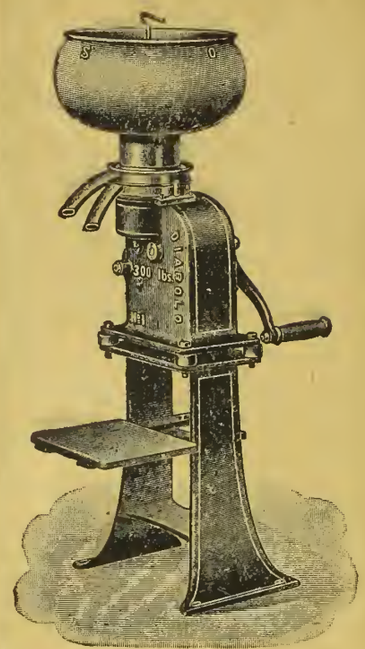
This concern is already well known and their goods are sold freely in every province of Canada.

As their President, Mr. W. S. Fisher writes us, their aim has been to make something beter than the average, feeling that there is a growing demand for the best that can be made and their efforts are concentrated on this.

The Enterprise Monarch Steel Range has become a household word on account or its very many special features of excellence and this is the article that they are now drawing special attention to.

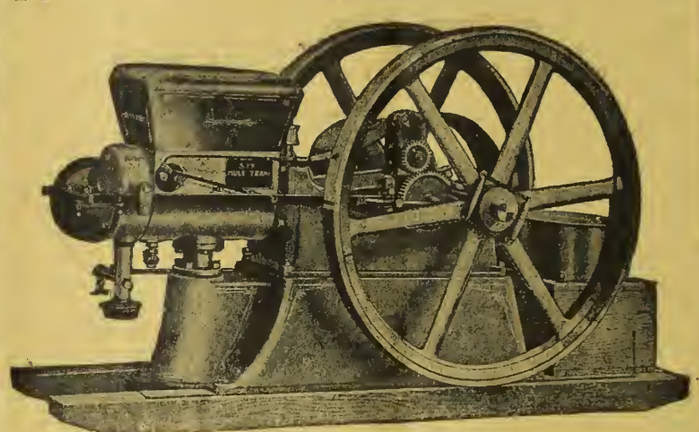
Later on they will have something to say about their Blazer Warm Air Furnace, which, like the Monarch Range, also possesses a number of features, that commend it to those who are seeking the best.

THE "DIABOLO" CREAM SEPARATOR



The "Diabolo" Separator is a high grade machine. Its record in skimming capacity has never been beaten. It is simple to handle, easy to clean and light to work. On account of its accurately machined parts it runs noiselessly and smoothly, while wear and friction are reduced to minimum. Fully guaranteed for ten years.

THE "ESCO" GASOLINE ENGINE



The acme of perfection in engine building

Full powered, smooth running, simple construction, reliable for steady work, long lived and low priced. Built by the world's largest makers. We guarantee every engine for a period of five years, and will replace, free of charge, any part which proves defective in material or workmanship during that time.

THE EASTERN STEEL CO., LTD.

Successors to the Bailey-Underwood Co., Ltd. and Brown Machine Company, Limited

New Glasgow, - - - Nova Scotia

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, write us at once enclosing 2-cent stamp for our reply, DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDICINE CO., Dept. 81 MONTREAL, QUE.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

REGISTESED TRADE MARK

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, MAY 26, 1914. Number 16.

"RUTHLANDS"

Most Up-to-Date Methods, Latest Improvements, and Systematic Conductance of a Farm

Owned by Senator W. B. Ross

It is hardly possible to do justice, in a short article, to such an extensive, well-conducted, and model farm as "Ruthlands," but something of their improved way of working, conveniences, and labor-saving devices may be helpful to those working along the same line.

The above mentioned farm is situated at Middleton, Nova Scotia, in the centre of the Annapolis Valley, which is justly famed for its fertility, and lies between the North and South Mountain ranges: thus sheltered, it has justly earned the name of "The Garden of Nova Scotia."

Without a doubt this farm is one of the most up-to-date in the Maritime Provinces. It consists of seven hundred acres, five hundred under cultivation, the remainder in pasture and woodland.

It contains a variety of soil, suitable for all kinds of cereals, vegetables and fruit.

The Senator evidently is a strong believer in drainage, as he has put in twenty-six miles of drainage tile, ranging the size from three to eight inches.

There are three large, well finished modern barns on different parts of the farm, the largest is 90x45 feet, with an ell 30x40 feet. Four large, commodious dwelling houses are situated near each barn for the convenience of the workmen, with blacksmith shop, cooperage, large carriage house, machine and implement houses all lighted by electric lights and connected by a telephone system which runs to all parts of the farm.

The barns have cement and brick foundations, with 10 feet cellars the full size of the buildings, divided off in bins for each root crop; affording ample space for the storing of roots and feed.

All roots are run through a pulper and mixed with feed, each day as the stock requires it. A pipe runs along in front of the stalls, supplying each animal with a constant supply of fresh water. Hay and grain are supplied from above, by shoots to the different stalls, which is a great convenience and saving of labor. Trap doors are also supplied at the rear of each stall for the scraping in of refuse. And all doors are hung on weights, running in a groove; up and down, instead of on hinges. We can all see the convenience and advantage of this. There is no space monopolized by the swing of the door, and any size of opening may be had for ventilation without having the door made in two parts. I wish I had the opportunity of showing each farmer who reads this article, over this splendid farm; much of interest and profit could be seen, which, if touched in this article would require a lengthy description.

One of the Three Houses on "Ruthlands" Farm.

One of the Large Barns on "Ruthlands" Farm

Hospital stalls are supplied for sick animals, or those nearing foal, where they can be cared for, to the comfort of the animal, and very often to the profit of the owner.

The interior of the stables are finished in plained and matched lumber as well as all box stalls and partitions, thus preventing all drafts and colds.

From 60 to 85 head of cattle are kept on this farm; twelve horses, one stallion, and a pair of brood mares. At present there is a two-year-old Clydesdale which weighs 1,300 pounds.

Beef cattle was sold from this farm, girting 7 ft. 9 inches, weighing 4,000 pounds, live weight, dressed 2,250 pounds per pair.

Two 2-year-old steers were sold recently from this farm, weighing, alive, 2,400 pounds. Eighteen head of such cattle were sold from this fram during the winter, and thirty more are on hand for sale. These beeves sell for from $6.00 to $6.50 per cwt. This alone is a handsome income for the farmer, besides the benefit he is doing his farm by using the hay on the farm, and also making a profitable use of the undersized potatoes, and unmarketable vegetables.

From fifteen to twenty brood sows are always kept on this farm, also a Yorkshire and a Berkshire boar.

Two large hen houses, one 85x22 ft., the other 30x15 ft. are filled with four hundred laying hens. The incubator is not used on this farm; but instead, about eight feet is partioned off at one end of the henhouse for a hatchery. The walls are divided off in square boxes, or pigeon holes, with just space enough for the nest and an equal space for the hen to come off for her food. The setting hen is put into one of these boxes with her nest of eggs, and kept there until her time is up: her food being passed to her through the small door in front, in which is a small square of wire netting to allow of ventilation and light. In this way each hen is kept separate, and several dozens of nests occupies only a very small space. This arrangemnet is giving excellent satisfaction.

A passage-way runs from one end to the other of this long hen house, along which are the nests for the laying hens. The remaining space is divided up into twelve feet pens, by wire netting, keeping each flock by itself. Along the side opposite the passageway, is a space for a warm roosting place during night, which is one of the secrets of egg production. Cotton is used on the upper half of all windows. A Brahma hen was recently killed from this flock which weighed nine pounds, when dressed.

Eggs, beef, pork and cream, are shipped to the nearby market of Halifax, where highest market prices are always cheerfully paid. The income from cream alone, from nine milking cows, averages during the winter months, fifty-five dollars per month. One Ayrshire cow, while receiving no extra care, has produced fifty pounds of milk per day during the winter.

It is a curious fact, and one which the stock producer should keep in mind, that the benefits of cross-breeding is only really beneficial in the first generation; after which, further efforts in this line seems to result in only a lot of unprofitable scrub animals. The pure bred animal will always give a good account of itself. There are also two fine pure bred bulls on this farm, one splendid looking Ayrshire, the other a Shorthorn, the latter, an exceptionally fine looking animal, purchased in England for six hundred dollars.

From the orchard, an average of seven thousand barrels of apples are shipped to England, adding very materially to the income of this farm. In ten years, when the young trees come into full bearing, this orchard will produce twenty-five thousand barrels of choice apples.

Thorough cultivation, for weed killing and moisture-conservation, is prac-

(Continued on page 594

Clean Barns Prevent Tuberculosis

Finding of the International Commission—Aspects of the Disease—Its Nature—Conditions Favorable to It—Precautionary Measures That Should be Taken to Prevent It.

Our farmers despise the crowded life, the filthy slums, and the multitude of unsanitary conditions that obtain in our large cities. They believe that human beings who are reared under these conditions cannot grow up strong, cannot attain the highest success in the battle of life. Our farmers uphold farm life—farm life, with its clean surroundings, clean food, healthy atmosphere, and abundant sunlight, as the seed-bed for the development of the highest type of manhood and womanhood.

And yet, there are actually farmers who deny to their stock those very sanitary conditions to which they attribute their own strength and welfare! They disparage city life, but they keep their cows in buildings filthier than the vilest of city slums. Nature does not except cattle from her laws. Cattle will not do well under this treatment, any more than men or women or children.

Progressive dairymen grasp the signifigance of this inconsistency, and in every Province of the Dominion are building modern, well-lighted, well-ventilated barns that are as clean and as easy to keep free from dirt as the kitchens in their own houses. These barns have cement floors and walls and are fitted with sanitary, steel stalls. They recognize that the additional outlay required to build a barn that will be healthful and comfortable for the cows, will quickly come back to them through better returns in the milk pail, through increased prices for their stock and dairy products, and by the prevention of diseases and losses among the stock.

In this conection, the report of the the International Commission of the control of Bovine Tuberculosis, published in 1911, and quoted below, is very interesting and should be thoroughly read by every former.

"Where did tuberculosois come from? We do not know. History records it from the earliest times.

"Over a century ago its contagious nature was suspected, and many facts were recorded to prove that it must be 'catching.' Doctors differed about it, and for a ong time the question was hotly disputed. Finally it was settled by Dr. Robert Koch, a distinguished German physician, who discovered the germ of the disease in the year 1882, and named it Bacillus Tuberculosis. He proved by experiment that the disease is produced by these germs, and without them the disease cannot be produced. It is now universally admitted that tuberculosis is a contagious disease, and may be transmitted from animal to man.

Aspects of the Disease

"The importance of tuberculosis may be considered from two points of view: first, the loss it entails upon the cattle owner, and second, the danger of communication to human beings.

"Consider first its effect upon the pocket of the owner of the cattle, whether farmer or breeder or dairyman. A serious percentage of the dairy cows of the continent are affected, and the disease is found in even a larger percentage of dairy herds.

"It is no uncommon thing to find as many as 70 per cent or 80 per cent of the cows in a herd diseased. These animals will be in various stages of the disease, some recently infected showing no sign of ill health, others badly diseased, but outwardly appearing healthy, while a few are evidently breaking down and wasting away.

"The loss to the owner is evident when a cow dies of the disease, or, when an apparently healthy cow is slaughtered for beef and found so badly affected as to be unfit for food.

"The calves in such a herd do not long remain healthy. They catch the disease before many months old, and are a source of loss instead of gain.

"Although the disease is most frequently found in herds that are more or less closely confined, such as dairy herds and pure bred cattle, other herds are by no means free from it. Even range cattle are sometimes affected, and the infection spreads in spite of the open-air life of the cattle.

"Tuberculosis is common among hogs. The public abattoirs report that a serious percentage of all hogs inspected is found to be tuberculous.

"The aggregate of these losses among cattle and hogs is enormous, amounting to millions of dollars every year, besides materially decreasing the food supply of the country.

"Turning to the other aspect of the case, the danger of infection of human beings with tuberculosis from cattle, we have only to consider a few facts, to realize its vital importance to every community.

"Milk is the staple food of infants and young children, and is usually taken in a raw state. If this milk is from a tuberculosis cow, it may contain millions of living tubercule germs. Young children fed on such milk often contract the disease, and it is a frequent cause of death among them.

Nature of the Disease

"The germ of tuberculosis, the tubercle bacillus, is a tiny, slender, rod-shaped body. Several thousands of them placed end to end would be needed to measure an inch, so that they are quite invisible to the naked eye.

"Once the bacillus has gained lodgment inside the body of an animal, it begins to grow and multiply. It gets longer, and when full grown, divides crosswise, making two out of one. Each of these goes through the same process, the two become four the four eight, the eight sixteen, and so on, indefinitely. This multiplication takes place quite rapidly when conditions are favorable, a few hours only being required for the birth of each generation.

"Tuberculosis is contagious or 'cachng'. It spreads from cow to cow in a herd until most of them are affected. This may not attract much notice from the owner, as a disease is slow to develop and a cow may be affected with it for several months, and sometimes for years, before any signs of ill health are seen.

"This slow development is the chief reason for the great loss it causes to the farmer. He does not suspect its presence in his herd until a large number are diseased. If the disease developed rapidly and caused death in a few days, the owner would soon take steps to check its progress and to protect the rest of his herd. Tuberculosis is slow and hidden in its course, and thus arouses no suspicion until great damage is done.

"The tubercle bacillus does not multiply outside the body of an animal. It can live a long time in favorable surroundings, such as dark and dirty stables. Sunlight soon destroys it. Freezing does not hurt it but it can only stand a moderate amount of heat; exposure to 149 degrees Fahrenheit for twenty minutes kills it. Protected by a layer of dried mucus such as is coughed up from the lungs, it withstands drying, light and ordinary disinfectants, but is really killed by steam or boiling water.

"Dark, dirty, crowded stables are favorable to tuberculosis. Under these conditions the disease spreads rapidly and is only kept out with difficulty.

Precautionary Measures to Prevent Tuberculosis

"Clean, airy, well-lighted stables, on the other hand, are unfavorable to the development of the disease. If brought into such a stable it does not spread so rapidly and is not so difficult to get rid of as in the first case.

"Light is very important. Direct sunlight is a great destroyer of germ life. Tubercle bacilli soon die if ex-

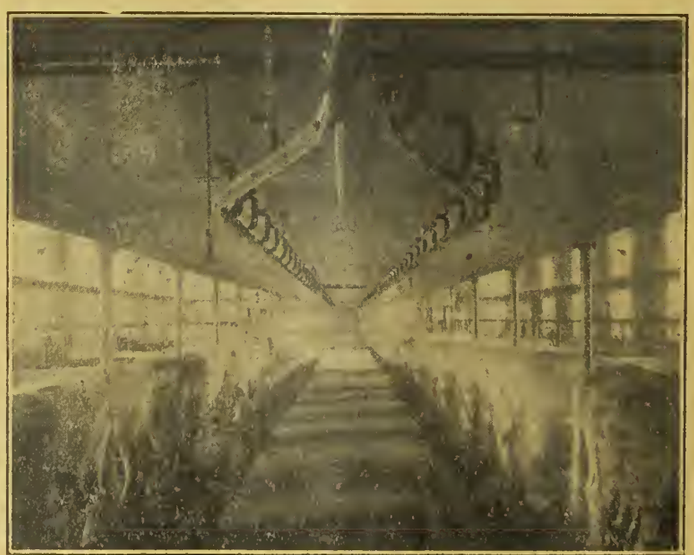
(Continued on page 586.)

EXTERIOR OF AGRICULTURAL COLLEGE BARN AT GUELPH

The Large Number of Windows permt the Sunlight to Bathe Every Inch of the Stable.

NEW BARN AT AGRICULTURAL COLLEGE, GUELPH, ONT.

Danger of Tuberculosis Largely Eliminated by a clean, sunny stable like this.



BARN OF W. T. RODDEN, VAUDREIL, QUE.

Note the Long Rows of Clean, Comfortable Cows. They are kept lined up to the Gutter, so no Manure gets on Their Flanks or Udders.

A New Agricultural School for New Brunswick

The first school of agriculture to be established in the Province of New Brunswick was opened during the past winter at Woodstock Previous to this the province had depended on the Nova Scotia Agricultural College at Truro, Macdonald College at St. Anne, Que., the Ontario Agricultural College at Guelph to provide agricultural instruction for its farmers and farmers' sons desiring it. Though quite a number took advantage of the faciities offered by these institutions, especially of the winter short course at Truro, it was felt that the time had come for the launching of a more aggressive policy, one which would reach hundreds and thousands instead of the forty or fifty students who annually sought instruction at outside institutions. The government accordingly decided to establish agricultural schools in two or three of the best agricultural centres of the Province.

R. NEWTON, B. S. A.

Director of Agricultural Instruction for the Province of New Brunswick. Principal of the Fisher Vocational School, Woodstock, N. B.

Through the beneficient will of the late Mr. L. P. Fisher, a resident of the town of Woodstock, in Carleton County, a fine, new school building was very opportunely placed at the disposal of the Department of Agriculture this year, free of cost to the Province, and this made it possible to open the first school at once. The present arrangement is that the first floor of the building shall be used for instruction in household science and manual training, under the management of the school board of the town of Woodstock, while the basement and second floor are to be used for classes in agriculture. The building is the property of the Department of Agriculture, and, as the work progresses, will probably be used for agricultural instruction solely, other accommodation to be provided for the classes in household science and manual training

The Building and its Equipment.

The building is 53x102 feet, very substantially built of brick, and very attractively finished throughout in cypress in the natural color. The first floor has two rooms suitable for offices, a few small storage rooms, and four class-rooms, equipped at present for cooking, sewing, laundry work, wood-working and draughting. The second floor has three offices, a room suitable for museum and library purposes, and four class-rooms, one of of which is equipped as a field crop laboratory, and a third as a lectnre room with tablet arm settees accommodating 70 students The fourth class-room has not yet been equipped, but will probably be fitted up as a biological laboratory.

In the basement, besides furnace room lavatories, there is a demonstration room, 34 feet square, with concrete floor and brick walls, suitable for purposes requiring the use of soil or other materials which would damage the polished woodwork of the class-rooms upstairs In the basement also is the live stock judging room, 34x51 feet, with a platform at one end, and seats accommodating over 100 students built in tiers along one side and one end of the room, leaving a large space vacant for live stock used in the judging demonstrations. This room is made to serve as well, an assembly room for large meetings, by placing folding assembly chairs in the space ordinarily reserved for the judging work In this way about 300 people can be comfortably seated.

The First Short Course.

The school was opened with a three weeks' course beginning March 9th. The first week was devoted to Horticulture and Bee-keeping, the second week to Field Crops and Soil Management and the third week to Live Stock, Dairying and Poultry. Students were encouraged to stay for the whole course, but the program was so arranged that those who could afford to stay only one week could get some part of the work complete in that time, and quite a number took advantage of this plan.

The program was planned to meet the needs of the average farmer, and to cover the problems met with in ordinary farm practice. Practical demonstrations and lantern lectures were features of the work.

The average attendance at the regular sessons during the day was about forty for the first week, fifty for the second week, and eighty for the third week. At the evening sessions the attendance was much arger, reaching as high as three hundred and fifty. A number of townspeople came in to these, in addition to a large number of farmers from the surrounding district who could not come in during the day. As this was the first agricultural short

(Continued on page 586.)

K. S. McGougan, A. Collins, F. L. McNutt, J. H. Dobie, V. J. McDonald, N. McLeod, Cyrus Poirier, Leo McDonald, J. McDonald, L. W. Pearson, P. B. Moreside, Eric Dobie, G. M. Ramsay, B. Gallant, W. J. Cass

PRINCE EDWARD ISLAND LONG COURSE AGRICULTURE CLASS 1913-14

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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Contract rates on application.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

MAY 26, 1914

DATES OF ISSUE.

June..... .....9—23
July ....7—21.

INTERNATIONAL CONFERENCE ON CITY PLANNING DRAFT OF PROPOSED TOWN-PLANNING ACT.

That the town-planning movement in Canada has come to stay and will have to be reckoned with in future is demonstrated by the fact that it has already engaged the attention of several of our provincial legislatures. The year 1912 saw comprehensive town-planning acts passed in New Brunswick and Nova Scotia, and, last year, Alberta led the way for the Western Provinces. Ontario also has an act applicable to cities with a population of 50,000 and upwards.

At the forthcoming International Conference on City Planning, Toronto, May 25 --27, a draft town-planning act, which it is hoped will be a model for all Canadian provinces, will be submitted to the delegates present by a special committee appointed by the Commission of Conservation. Frank criticism and full discussion of this proposed act will be invited. After being amended in accordance with the resolutions of the Conference, copies will be sent to each provincial government. urging them to enact legislation along the lines proposed.

As now drafted, the Bill provides for the preparing and carrying-out of town-planning projects by a Local Board in each city or town, subject to the approval of a Central Town-planning Board for the whole province. Projects will apply chiefly to land likely to be used for building purposes, but may, in certain circumstances, include land already built upon or land unsuitable for building. Provision is made for compensation of private owners if injuriously affected and for the local authority recovering half of the unearned increment if property values are increased. The Central Board may act on its own initiative if the Local Board fails to do its duty or if no Local Board exists.

Under such an act, the growth of every town will be regulated so that streets may be of adequate width and in accord with the general plan of the town; housing congestion will not be permitted; sufficient open space will be reserved for parks, squares and other municipal purposes; and health, amenity and convenience will be given due consideration in all new building areas and, so far as possible, in old ones.

EDUCATION IN THE MARITIME PROVINCES.

At the time of taking the last Canadian Census, Prince Edward Island had one school to every 196 of the total population, Nova Scotia had one to every 185 and New Brunswick had one to every 186. For the eastern provinces, the highest percentage of schoool attendance, was made by Prince Edward Island with 84.60 per cent, Nova Scotia 82.86 per cent and New Brunswick with 80.05 per cent of the total population between seven and fourteen years. Viewing the question in another way, this shows that of the total number of children between seven and fourteen, Prince Edward Island had 154 children per 1,000, Nova Scotia 171 and New Brunswick 200, who were not attending school and whose education had been apparently neglected in the year 1910. In the year 1911 Prince Edward Island had one school to every 196 of the population, Nova Scotia one to every 186. Basing the Computations on the number of persons between the years of six to sixteen, Prince Edward Island had one teacher to every 39 children, Nova Scotia one to every 41, New Brunswick one to every 43. The Maritime Provinces show the greatest population attending school for, from 4 to 6 months out of the year.

WHAT IS A PROFITABLE COW?

The amount of milk given by different cows varies greatly, and one cannot tell exactly which are the most profitable by knowing the number of pounds of milk given. The quality of the milk varies almost as greatly as the quantity, and in butter making it frequently happens that the heaviest milkers are not the heaviest butter-fat producers.

As an actual indication of what cows do give, when careful count is taken, we extract the following paragraph from a letter from C. F. Whitely, who is in charge of cow testing work for the Dominion Dairy Division. Speaking of testing cows, he says:

"The general results as applied to a district are full of suggestions. In one lot of 422 cows belonging to 42 men the average yield last year was found to be 4,494 pounds of milk, the cost of feed $32.90; thus, simply taking the cost of feed into consideration, leaving a net profiot of $14.28. But a slight investigation showed that the 100 best cows produced milk to the value of $7,137.00, the 100 poorest cows produced only $3,200.00, or much less than half as $1.74 each. It thus is evident that each one of the 100 best cows made as clear profit on the milk produced as that given by eighteen of the poorest."

The general argument of Mr. Whitely's letter is evident, but our reason for quoting it here is to show what is an actual average milk yield on a large block of cows.

Let us do a little figuring: Average milk will test close around 4 per cent butter-fat. A cow giving 6,000 lbs. of 4 per cent milk, would thus yield 240 lbs. butter-fat. This, when made into butter, would run about 120 per cent of that weight (there is about 16 per cent of water, salt and curdy matter in butter). Thus our 240 lbs. butter-fat represents 288 lbs. butter. This, at 21 cents a pound, would realize $60.48; at 23 cents, $66.24.

There are many cows that produce more than this, but a great many more that give less. The 6,000 pound cow is a good standard. Try to bring all your cows up to it.

THE FARM STATIONERY.

Although there is a gradual increase in the number of farmers useing a regular printed envelope and letter head for correspondence, the majority do not ever think of this as one of the main points in business-like farming.

Every one knows that a letter written in a cramped hand on a sheet of lady's size writing paper and mailed in an envelope that doesn't fit, causes one to wonder what sort of a fellow put that together. On the outside there is nothing to aid the post office clerks in dealing with the letter in case the addressee cannot be located, and such a letter soon lands with the dead ones.

But when a letter comes with the envelope neatly printed with sender's name, address and route number in the corner, that letter and its sender are respected and the reply is written accordingly. Printed letterheads and envelopes always more than pay for themselves.

FOR HOME AND COUNTRY.

We have received so many requests to publish articles of common interest to the Women's Institute movement in Prince Edward Island, Nova Scotia and New Brunswick that we have decided to make a change in the heading of our Home Department.

"For Home and Country" the motto of the Women's Institutes in Canada has been selected as the new heading for the Home Department of the Maritime Farmer.

The Women's Institute movement is fast gaining ground in the Maritime Provinces under the efficient supervision of Miss Fraser, Miss Winter and Mrs. Dunback.

These ladies will contribute to the columns of the Maritime Farmer and thus help to bring the members of the Women's Institute of the Maritime Provinces in closer touch with each other. Through the columns of the Maritime Farmer they can interchange ideas. Send us short reports of your meetings and copies of best addresses read at your meetings. In this way the work of the Women's Institutes may be made more efficient and far reaching; it will reach the very class of women who will be benefited by all that the Institutes' motto, "For Home and Country," implies.

Before building a stable, study the ventilation question a little.

A number of the cities and towns of Canada are this year observing a "clean up" week. The idea is an excellent one. A little of the same leaven would be a good thing on some of our farms.

High Ridge, Medium Ridge, and Level Culture For Potatoes Compared

EXEPERIMENTS .IN .AROOSTOOK COUNTY, MAINE.

The methods of ridge culture is almost universally used by potato growers in Aroostook County. Probably over 90 per cent. of the farmers practice what might be called extreme ridge culture. The ridging begins at the time of planting. The planter most used has a plow constructed that it makes little more than a mark on the soil unless it is very light, instead of a furow, then the disks at the rear of the machine cover the seed by throwing up a ridge perhaps 4 inches high so that the seed at the very start is practically on a level with the surface between the rows. A few farmers make a practice of going over the field with a weeder and somewhat flattening the ridge but the number that do this is comparatively few. The method most usually followed is to go between the rows with the cultivator perhaps 8 to 10 days after the potatoes are planted and then as soon as they begin to break the ground go over with a horse-hoe and bury them up also burying the weeds at the same time and thereby raising the height of the ridge. This kind of cultivation is continued until the tops are too large to pass through without injury. By this time an A shaped ridge has been formed about 12 to 15 inches high and, of course, the surface between the rows has been dropped by the continual scraping up of the soil so that the tubers growing in the ridge are considerably above the surface in the rows.

It can be readily seen that in a dry season a field so handled must suffer considerably from lack of moisture. In the rather wet seasons usual to Aroostook County no lack of moisture is felt and the drains between the rows are an advantage rather than an injury, but in an extremely dry season it would seem that the drainage is too great. The ridges being high and narrow dry out very quickly and it would appear therefore the crop must suffer more from lack of moisture than it would if the roots of the plant were below the level as they are when modified level culture is practiced.

In the years 1907, 1908 and 1909 field experiments comparing the shallow planting and high ridge cultivation in Aroostook County with a deeper planting and a low, broad ridge were carried out at Houlton. The three seasons had an abundant water supply. Indeed in 1909 there was more rainfall than the crop needed. Because of the long continued, cold, wet weather and early frost the yield was reduced materially. The results as given in the following table show no practical advantage of one method over the other so far as yield is concerned.

NANCY F.

First Prize Two-year-od Clydesdale Filly and a Close Second for Championship at the 1913 Fredericton Exhibition. Sire, Up to Time; Dam, Rozelle, Owned by D. Fraser & Sons, Plaster Rock, N. B.

option of Aroostook County methods of potato growing all over the State. It seemed probable that the less rainfall and not infrequent droughs experienced in the more southern parts of the State might prove unfavorable to growing potatoes with the shallow planting high ridge method of cultiva- With the purchase of Highmoor Farm for the station an experiment comparing shallow planting with high ridge cultivation, somewhat deeper planting with a lower, broader ridge, and deep planting with as level cultivation as practicable, was begun. This has been continued through four years with two varieties of potatoes. The results of the experiment are here reported. The deep planted lots were planted at a depth of five inches, the medium at 3½ inches and the shallow at 2 inches.

Full data as to the planting, cultivation, spraying and harvesting of the crop were kept each season. But in an experiment of this type it does not seem wise to use space in reporting detail that, while they are important in showing that the crop is carefully

Table showing comparison of medium planted, broad low ridge with shallow planted high ridge in Aroostook County. Total area in experiments 15 acres.

METHOD OF CULTURE.	Year.	VARIETY	Yield of Merchantable potatoes per acre.
			Bush.
Medium planted	1907	Green Mountain	333
Medium ridge	1908	Green Mountain	301
	1909	Green Mountain	216
		Average three years	283
Shallow planted.	1907	Green Mountain	325
High ridge	1908	Green Mountain	291
	1909	Green Mountain	204
		Average three years	273

EXPERIMENTS IN KENNEBEC COUNTY, MAINE.

The successful growing of potatoes in Aroostook County has greatly stimulated the potato industry over the whole State. The great advance in value in land in Aroostook County has led farmers to sell and go to other parts of the State where land has less value. Both of these facts have led to the ad-

grown, have little agricultural significance beyond that fact.

The season of 1910 was favorable for a maximum crop as the rainfall was ample and the growing season greatly prolonged by frost keeping off until October. The seasons of 1911 and 1912 were not so favorable and 1913 was particularly unfavorable, although the rainfall in August was greater than the average and saved the crop from the damage that threatened from the dry July.

The time required for planting was the same on all the plots. The planting, spraying and harvesting were the same for all of the plots with the exception that on the deep planted it was necessary to use four horses on the digger. The deep planted required less hours of cultivation; the medium planted the most. A man and team for cultivating were on the deep plots 26 hours, on the medium 39 hours and on the shallow 35 hours per acre.

There was not much difference in the difficulties of digging between the shallow planted and the medium planted. The deep planted reyuired four horses instead of two on the digger, and a good deal of care was necessary to be sure that the digger was sufficiently deep in the ground to prevent cutting the tubers.

The yields of the four years are given in the table which follows:

Table showing comparison of deep planted, level culture, medium planted, medium ridge and shallow planted high ridge at Highmoor Farm (Kennebec County). Total area in experiments 16½ acres.

METHOD OF CULTURE.	Year.	VARIETY.	Yield per acre of merchantable potatoes.
			Bush
Deep planted	1910	Green Mountain	365
Level culture	1911	Irish Cobbler	16
	1912	Irish Cobbler	156
	1913	Green Mountain	359
		Average Green Mountain	360
		Average Irish Cobbler	163
		Average four years	261
Medium planted	1910	Green Mountain	436
Medium ridge	1911	Irish Cobbler	170
	1912	Irish Cobbler	162
	1913	Green Mountain	334
		Average Green Mountain	385
		Average Irish Cobbler	166
		Average four years	276
Shallow planted	1910	Green Mountain	372
High ridge	1911	Irish Cobbler	130
	1912	Irish Cobbler	147
	1913	Green Mountain	277
		Average Green Mountain	325
		Average Irish Cobbler	139
		Average four years	232

CONCLUSIONS.

In the three years experiments comparing the usual method practiced in Aroostook County with deeper planted seed and a lower, broader ridge than is commonly used there showed that so far as yield was concerned there is nothing to choose in that locality between the two methods.

The deep planted and medium planted gave practically the same yields at Highmoor Farm with the advantage (though within experimental error) in favor of the medium planted and medium ridge gave considerably better yields at Highmoor Farm than the shallow planted and high ridge. The medium ridge is cultivated as cheaply as the shallow ridge and is harvested nearly as easily. The deep planted are cultivated at less cost than either of the two other methods but are far more difficult to harvest.

The results indicate that for Aroostook County the shallow planted high ridge is well suited to the climatic conditions. And they also clearly indicate that for the lower counties in the State with their lesser rainfall during the growing season the medium planted with the broad low ridge cultivation is preferable to either of the others.

The Compost Heap.

It is natural that all growing plants require certain substances for their nourishment, and in order that any crop may grow successfully, the following plant food stuffs may be supplied: Phosphoric Acid, Potash, Nitrogen and Lime. The ordinary processes of cropping takes these plant food substances from the soil, and if we wish to maintain the productiveness of the soil, we must return these to the soil in some kind of manure. Barnyard manure is, by far, the cheapest and most suitable fertilizer for all kinds of crops, and to help this out, every farmer should make a special effort to make one or more compost heaps each year. If one is started, it is wonderful how material for it will present itself, which would otherwise go to waste. Most anything will make manures; sea-weed, kelp, etc., from the sea-shore, black mud and sods from the nearby bog, to which may be added oyster shells, straw, old paper, rags, sink water and slops, and a hundred and one other things which would be the better for the home to be gathered up, as well as a valuable source of profit to the farmer. If this were practised more, he would find he would not need so much artificial fertilizers, so called. Of course, some commercial fertilizers may be advantageously added as a

(Continued on page 594

HORTICULTURE.

Picking, Packing and Grading Fruits for the Market.

Mr. President and Gentlemen:—

I am very glad to be present at this meeting and I trust I may be able to interest you in the subject of my address. On the presumption that the grower has done his best in the way of care and cultivation necessary to the production of the best fruits whether it be in the orchard or in the small fruit area, he is now at the harvest time, confronted with problems that require good judgment, constant care, and the nicest kind of management. The most particular part of the business of growing farm and garden products, and the marketing to advantage is their preparation for the market. To be sloven and careless in our work and acting on the presumption "that any thing will do" will surely discount the profits to a large extent, hence the necessity of doing our best to make them attractive. Taking up the first part of our subject, picking (or gathering, if you prefer the word) means much to the fruit grower.

Fruits of all varities are a production that must have careful handling, as they are perishable to a greater or lesser extent, according to their variety and hardiness. Their value is increased when in the hands of the consumer, by previous careful handling. Therefore, the picking should be done with great care. Some varieties of apples are so sensitive to touch that gloves should be worn when picking to prevent spots and bruises. Apples should be placed in barrels in the orchard carefully and drawn to the fruit house, there to remain open for four or five days to cool off before being finally packed and graded for market. Every fruit grower should have a packing table and on this table turn out the fruit carefully from the barrel. The packer will then be in a position to distinguish the size or a quality of the fruit more readily and quicker work can be done.

The packer must see that his packages are properly stenciled, with his name preceeded by the words "packed by", his post office address, the name of the variety of fruit he is packing, and the grade, whether it is Fancy, No. 1, No. 2 or No. 3.

If "Fancy" the fruit must be practically perfect, free from all defects, well grown specimens and of good color.

If marked No. 1, the packer must aim to discard every injured or defective fruit and not delibertly include ten per cent. of inferior specimens.

If marked No. 2, the fruit must be sound and clean, not less than medium size for the variety, and must not include culls.

In packing No. 3 fruit the packer is responsible if the face of the package is better than its contents. Overfacing is an offence against the "Act" which is severely dealt with by the courts. It is a good and safe practice to follow in packing all grades that the face of your package shall be of uniform size fruit for the grade, and not of the largest on the table. The large fruit should be distributed throughout the barrel and not in sight when the barrel is opened. You may ask why? My answer is that both a nice face of uniform size fruit the barrel opens attractively. The customer is satisfied with its appearance and when being used larger fruit is found which was hidden from view when the package was opened. Confidence in the packer is greatly strengthened and the future sale of his fruit is assurred. I am sure you will have no difficulty in anticipating the satisfaction this customer will feel under such conditions. In my judgment it is to just such methods and practices lies the success which the fruit growers of New Brunswick may have if they will. If I might be permitted to suggest a "slogan" for the fruit growers association it would be, "New Brunswick Fruit for Quality" and see to it that we live up to the stanrard We are already producing considerable fruit, but so far sales have been among our own people. Soon we shall have apples for an export trade. It may be small in the beginning, but if all goes well, in ten or fifteen years, we may be shipping from 150,000 to 200,000 barrels per year in competition with other fruit producing provinces of our Dominion in outside mrkets. I can scarcely find words to tell you how much I should like that New Brunswick should start out in this export trade with a name firmly established for our honesty of pack and high grade and quality of fruit. Such conditions may be ours if we will. How great would be the vantage ground ,carrying with it increased profits and quick sales absolutely secure.

The same conditions which insure successful apple culture applies with equal force to the picking, packing, grading and marketing of small fruits. It is an accepted fact and quite widely known that the New Brunswick production of cultivated small fruits are the equal of the best grown in any country and are sought after in outside markets, because of their high quality. Here again, quality in the market end of the business should concern us most. Do not forget that our own credit and that of the Province is at stake and will suffer by bad practice. All our small fruits, particularly strawberries, if well grown, nicely packed in full quart boxes and shipped under favorable conditions, not only find a ready market in our provincial markets, but are greatly appreciated in Montreal, Toronto, Halifax and Boston, where prices have so far been satis factory.

So far as my observations go, the octagon box is a favorite. Its cost may be a trifle more but it has proved a better carrier for ong distance and rough usage.

Question: What is the cost?

Ans: From $5.00 to $6.00 per thousand.

They are entirely a New Brunswick production, invented, I think, by the late D. P. Wetmore, of Clifton, Kings County, who, I may say, was the pioneer in small fruit growing in the province on a commercial basis.

The same conditions apply with the marketing of raspberries, blackberries, gooseberries and currants, of which considerable quantities are grown, with an inviting outlook for increased production.

In 1912, it was estimated that New Brunswick produced one and one-quarter million boxes of small fruits. Last season was not so good and possibly seven hundred and fifty thousand boxes would be a fair estimate. The business is a profitable one that admits of great extension, coming back to our orchard work and packing of their products. Allow me to suggest that the individual members of this Association ask the Fruit Division at Ottawa for a copy of the Fruit Marks Act including the Inspection and Sale Act as

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Capital - - -	$ 6,000,000
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BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

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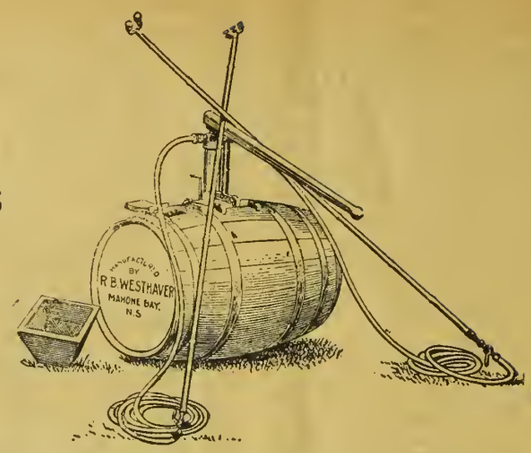

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The "PERFECT" Sprayer is all Good Points. Moderate in Price, Guaranteed in Quality. Write for catalogue.

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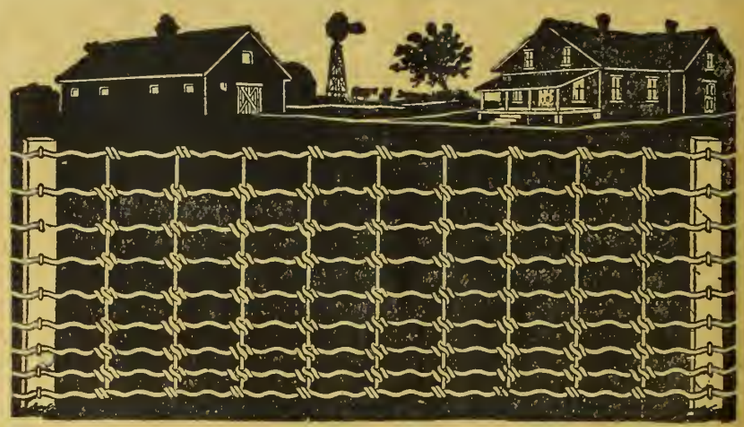

Take a Look at a Farm Fence Worth Building

Looks strong, doesn't it? It "is" strong. It's made to last. All made of No. 9 hard steel wires, both horizontals and uprights. Heaviest fence wire used. That's why "Ideal Fence" always stands erect, and resists all destructible elements.

"Ideal Fence" is easy to build, fits any surface, hilly or level.

IDEAL FENCE

May not be the cheapest Fence from a purchase point of view. No, but if you consider the cost of "Ideal Fence" from the point of view of the good material, perfect construction, a very long service, then certainly "Ideal Fence" is the cheapest.

Why is it the most economical Fence that can be bought?

1.—Because being built very strong, it requires less posts.
2.—Having less holes to dig, labor is saved and the entire cost of erection is reduced.
3.—With all this economy it will last longer than any inferior fence, and not cost half as much for its maintenance.

Only these three reasons would justify the preference to purchase "Ideal Fence" above all others, and yet there are many more reasons why.

Consider the safety of farm products, as well as cattle, etc. protected from without and within from the most reliable fence at medium prices.

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amended. Then, when you have studied its provisions, and are living up with its requirements, it will mean greater profits and the building up of a reputattion which any people might well covet. We must not overlook the fact that it is quality that insures high prices and quick sales. I oftcn think while at my work of inspection, and permit me to give expression to the thought that it would be greatly in the interest of the fruit growers of the province if they would decide not to market a No. 3 or cullapple. In the first place I do not think it profitable to do so. In my observations I find that as a rule the prices obtained for this class of stock leaves no profit over and above the cost of package, packing, freight and commission. Secondly, no man can, with any degree of pride in himself, his county or his business place his name and post office address on a package of fruit, the quality of which is unfit for human consumption and that goes begging for a customer.

Would it not be better in every way that this fruit should go to the vinegar factory, there to be manufactured into a necessary product, essential and necessary in the interest of good housekeeping or fed to stock I invite your consideration to this matter, with the hope that something may be done to prevent this class of fruit from being placed on the market.

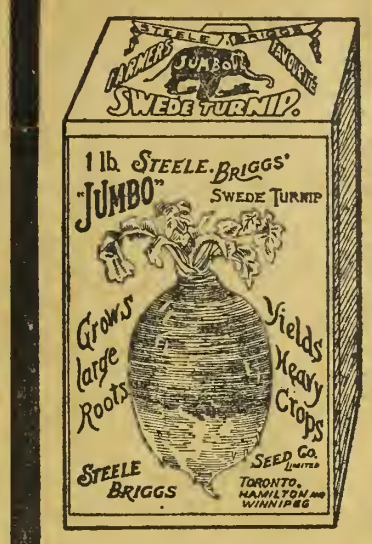
In conclusion, allow me to say for your encouragement that we can and do grow apples and all varieties of small fruits to great perfection in a very wide area in this Province. Shall we not then unite in co-operation work in closely looking after the market end of our business, which is summed up in tidy packages as a guarantee of honest work. This practice will surely crown our efforts with great success.—Synopsis of address by S. L. Peters, Dominion Fruit Inspector at the Annual Meeting of the New Brunswick Fruit Growers' Association, held in Fredericton, 1914.

$1.00 Per Apple.

Mr. Marshall, the business orchardist of Fitchburg, Mass., who this last year picked 4,000 boxes of choice apples, has had for years, a standing offer, posted on the walls of his packing house, of $1.00 to any man, visitor or laborer, who found a wormy apple on any tree or under a tree. The dollar is there yet, and the wormy apple has not been found. This simply tells of thoroughness in spraying. Men who complain about law, and that they must have a chance to dispose of their poor apples, want to realize that control of pests is largely in their hands, and that any large per cent of poor fruit tells of their failure to fertlize, prune and spray.

What we want to do is to get more out of our orchards by putting more into them. The man who gets 10 per cent. No. 2's has failed somewhere. Reduce this to three to five percent, very easily accomplished, and the dollars multiply for the grower. It costs too much to grow apples to allow them to grow themselves. In 1914 the one object should be to fertilize, prune and spray to increase size, improve color and minimize defective specimens. The man who fails has only himself to blame. The larger the per cent. of No. 1's the better for the pocket-book of the grower. It pays to spend ten dollars in spraying, when there is the certainty of getting back thirty to fifty. The penny wise and pound foolish man is still to be found among us, and probably will be to the end of the chapter, but this by no means proves that others must follow in the same track.

Let's get all that is possible, this year, out of every apple tree, by doing our best in fertilizing, pruning and spraying. It will pay. G. M. Twitchell, in Maine Farmer.



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Steele, Briggs' "Durham"
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Steele, Briggs' "Select Good Luck"

They produce bountiful crops of sound large roots, Sold only in sealed packages. Refuse substitutes—on others "just as good."

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SPRAY NOW!

Style "G"

The Early Sprayer Gets the Bugs

Because they lack vitality and spraying done now will be more effective than twice the work later on. If you have not begun spraying yet every days delay means loss and damage.

What make and style of Spray Pump shall I use? Is the question asked by nearly every farmer.

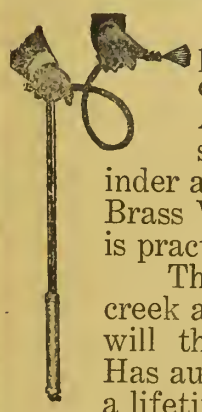
The Kant-Klog Sprayer, Style "G"

here illustrated sprays Trees, all kinds of Small Fruits and Garden Vegetables, also Disinfects, Whitewashes and has many other uses. It is fitted with "Kant-Klog" Nozzle that throws round sprays, flat sprays and solid streams. Three of each and all of different size, volume and fineness, The Spray Body is made of heavy polished brass or galvanized steel as required.

Each STYLE "G" SPRAYER is furnished complete with "Kant-Klog" Nozzle, thumb pressure Spring Hose Cock, Carrier Strap and Safety Valve.

Price with Galvanized Steel Body $4.00. Price with Polished Brass Body $6.75.

Junior No. 5 Spray and Force Pump



In this pump the objectionable foot-rest, clamps, leather suction, packing, etc., are entirely done away with. It requires no fastening of any kind, holds itself down and works anywhere and everywhere. All the operator need do is to press the plunger down. It rises of itself, the upward stroke being made by a brass spring forcing the cylinder apart. The All-Brass suction working with a brass cylinder with All-Brass Valves, does away entirely with leather, rubber or other packing. It is practically impossible for any part to get out of order.

The Junior No. 5 Pump will pump from a pail, barrel, tank, spring or creek and will do more kinds of work than any pump of its kind made. It will throw two solid streams, one flat spray and one fine round spray. Has automatic mixer to keep solution stirred, pleases everybody and will last a lifetime.

Price of Junior No. 5 Pump complete with hose and 3 feet of brass tube to attach to hose for spraying trees $3.50.

Either of above Pumps sent freight paid to your nearest Railway Station or Boat Wharf on receipt of price. Prompt attention to all orders is assured you.

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DAIRYING.

Is the Consumer Paying Too Much ?

Within the last few years there has much dissatisfaction among both milk producers and consumers. The dairy farmers claim that they are not receiving enough for their milk, while consumers claim that they are forced to pay exorbitant prices for the same article. It is apparent to anyone who has looked below the surface of this question, that many dairy farmers today are not receiving a price for their milk which will yield a fair profit. It is difficult to say just where the fault lies. The dairy farmer himself is not blameless. Sometimes his business is carried on in a wasteful, extravagant manner. Unprofitable cows are kept, and uneconomical methods of feeding are followed. It is unfair to ask the milk consuming public to pay him a profit on such a slipshod system, and yet that is what is often expected. On the other hand, in view of the increased cost of producing and handling milk and considering its high food value, consumers in many cities are paying a price which is much too low to allow a reasonable profit to the producer. The dairyman receives at his shipping station from about 2 cents to 5 cents per quart for his milk, dependnig upon the time of year and upon the city in which his milk is marketed. Probably the bulk of market milk in this country is sold by the farmers at about 3½ cents per quart, whereas the price to the consumer in the various cities ranges from about 6 cents to 10 cents per quart, depending upon the locality and upon whether the milk is sold 'lose' or bottled.

It is extremely doubtful if the dairy man in many cases received enough for his milk to pay for the bare cost of production at these prices. Bulletin 73, issued by the experiment station at Storrs, Conn., gives the cost of producing milk on the experimental farm for a period of five years. When the milk produced by the herd was figured as worth 4 cents a quart at the fram, the business was conducted at a loss every year out of five. Where the milk was figured at five cents a quart at the farm, the books showed a net profit four years out of five. Results similar to these have been obtained at several other stations.—Rural New Yorker.

Advice re Turning Cows to Pasture.

That, if cattle are turned to pasture in the spring before the field is dry and before the grass has attained a good start in its growth, there will be a degenerating effect on both the cow and the pasture, is the opinion expressed recently by Mr. D. D. Gray of the Central Experimental Farm.

Mr. Gray explains that cattle accustomed to dry hay cannot have their ration abruptly changed to soft green grass without a relaxation of the digestive organs, and purging, which is attended by a rapid loss of flesh. "An effect," he said, "will be exerted on the milk production and as a result the flow will not be as great."

Feeding cattle on dry forage during a week subsequent to their being turned to grass is offered as a method of eliminating difficulty from that source. "My experience," says Mr. Gray, "has shown that cattle are eager to get dry feed at this time of the year and, if hay is not available, straw should be fed because even it is greatly relished." A gradual change is strongly urged, because, under those circumstances the organs of the cow become accustomed to the new food without the danger that is encountered in a radical change and also the returns would be much greater.

Mr Gray explains the damage done the pasture as to the fact that too early grazing thwarts later growth because of the tender blades being cropped off too close to the roots. Also cattle on pasture trample the soft grass to such an extent that large amounts of grass are destroyed.

Mr. Gray favors the method of herding cattle in the spring in order that they may be caused to remain on the dry land which is less susceptible to damage.

Speaking of the system of feeding grain to cattle during the summer months, Mr. Gray places himself as being opposed to the practice ."From my experience," he says "there is a time in the year when the catte desire a rest from being fed grain, and I think that time is when they can get a good mouthful of grass. I have also found," he says, "that when cattle have been away from a grain ration for some time, upon its bein recommenced the results are much more pronounced and more extensive returns are received." The reason given for this is that, when the cow has been fed a continuous grain ration an equilibrium is set up and a steady supply of grain fails to produce any marked effect on the flow of milk, whereas, when the cow has been given a rest from grain, she will produce more milk from its nutriment when it is being fed

Mr. Gray would give the cattle a respite from being fed grain from the time good supplies of green grass are available until the grass begins to dry in the fall.

Help in the Dairy.

The future of dairying will be much influenced by the help which can be obtained to carry it on. The dairyman is more dependent upon labor than those engaged in some of the other lines of agricultural production. He needs help through all the year, whereas in other lines it will suffice to get it but for part of the year.

The dairymen of the future who are likely to be the most successful are those whose holdings are small, and who can, therefore, control their own help, by which is meant that they can supply it. It can come from within the home. The family will be able to grow the food, to milk the cows, to manufacture the product when necessary, and to dispose of the product. Persons thus situated are almost certain of success in their line.

The training which such work, especially milking, gives to both boys and girls, is very helpful to them. It teaches them the necessity of being punctual in this work, and the necessity for continuity in the same. It brings them into close touch with animal life, and thus begets in them a liking for working upon the farm

Of course, there is a difference in opinion as to whether girls should milk, as there is about many of the things that they ought to do. Some mammas seem to think that their daughters should not do any work. Those who marry them, come to think differently on this question. The mothers of the passing generation, almost without exception, knew how to milk. Was it a mistake in their education? Happy are the families who today are in a position to do all their own work.

Cost of Milk Production.

New Hampshire Experiment Station has recently issued bullletin No. 2, entitled "Cost of Milk Production." A test of 203 cows for a year was made to ascertain this cost. Eight of the number gave an average of over 10,000 pounds in the year; while 10 of the poorest gave an average of less than 4,000 pounds. Mr. Farmer, in which class are yours? If not in the 10,000-pound class, why not? Is it their fault or yours?

The eight 10,000-pound cows paid $106.82 profit each above cost of feed. The 10 below 4,000 pounds lacked $4.25 each of paying for feed. In other words the owner of each of these cows paid $4.25 cents for the privilege of Associating with a scrub; while the owner of each of the 10,000-pound cows not only had the satisfaction of better company, but received $106.82 to pay for the pleasure.

Each of the eight best cows paid the owner $2.21 for each dollar's worth of food eaten; while the cows in the 4,000 pound list only paid 93 cents for each dollar's worth.

It is interesting to note that the herd having the highest producer and best paying cow had also the lowest producer and least profitable cow. This shows cows in same herd with same care and treatment, with great difference in milking ability and profitable production.

How many Maritime dairymen know which of their cows are profit producers or mere dead-heads?

Farm Butter-Making Rules.

Cool the cream from the separator as soon as possible to 55 degrees Fahrenheit or lower

Never mix warm cream with cool cream.

Mix all the cream to be churned in one vat or can at least eighteen hours before churning.

Ripen at the temperature of 70 to 75 degrees Fahrenheit for from six to eight hours, stirring frequently during this period.

Cool cream to churning temperature as soon as ripe.

Let the cream stand eight hours or more (over night) at the churning temperature.

The temperature of churning should be such as to make the butter come in from thirty to forty-five minutes, usually 55 to 60 degrees Fahrenheit

If it is desired to use artificial coloring, it should be added to the cream just before churning.

Stop churning when the granules are about the size of peas, varying to wheat, and draw off the buttermilk.

Wash the butter once with pure water at the churning temperature, agitating three or four times, and drain.

"Melotte" CREAM SEPARATORS

The "Melotte" will increase your butter yield 25% besides improving the quality.

Saves time and labour, space and utensils.

Owing to its Suspended Bowl the "Melotte" is the simplest, most easy running and consequently the most durable cream separator made.

Write for Catalogue F.

R. A. LISTER & Co., Ltd.

82 Water St., ST. JOHN, N. B.

TORONTO - - - WINNIPEG

Wash a second time with water about four degrees above churning temperature, agitating seven or eight times, and drain.

Add salt wet, while the butter is in granular form, using about one to one and one-half for each pound of butter, according to the demands of the market.

Work the butter just enough to distribute the salt evenly.

EMPIRE Disc Separator

Choose the Empire Separator because exclusive features of construction—a three ball bearing for the bowl-spindle, adjustable point-bearings on the worm wheel spindle and a bowl 20% lighter than others, eliminate friction and make for lighter running and long life. The safety-clutch makes starting easy and guards against accident to the mechanism.
The Empire guarantees close skimming.
For small herds—The Baltic Separator—selling as low as $15.00.
Makers of "Sta-Rite" Gasoline Engines—"They start right and Sta-rite."

THE EMPIRE CREAM SEPARATOR CO. OF CANADA, LIMITED.
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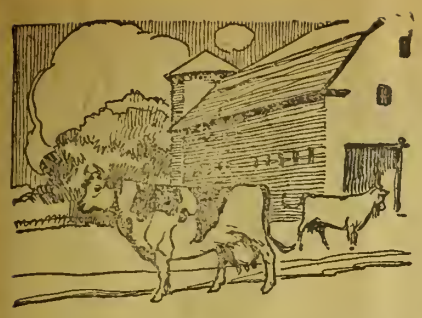

About the most practical piece of machinery on our farms is the

SHARPLES MILKER

THIS voluntary endorsement is made by the secretary of a most progressive dairy farm, whose name we will be pleased to furnish on request. He says further:

"Before getting the SHARPLES MILKER we were milking 100 to 110 cows. It took ten hand-milkers four hours a day—two in the morning and two at night. We are now milking approximately 135 cows with the eight units. We use two men to operate the machine and two to do the stripping. It takes these four men just about the same time to milk these 135 cows as it took our ten men to milk 100 by hand."

THE SHARPLES TUBULAR CREAM SEPARATOR is a product that for thirty-three years has built character into dairy farming. For dairymen who desire to keep abreast of progress.

Write for Catalogs

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West Chester, Pa.

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Agencies Everywhere

THE PLAYTIME

MAKES HAPPY HOMES

A great economist has said that the happy home is the very bone and sinew of our national life; but no home is as happy as it should be if the wife and mother is so utterly tired at night that she cannot be a cheerful companion in the family circle.

The greatest labor saver, the best conservator of health, strength and cheerfulness is the "Playtime" Washer. It takes the tired feeling out of wash-day. It is an efficient helpful servant that never tires and is always ready. As a power machine it is specially adapted for the country where gas, gasoline, steam engine or windmill power is available.

See the "Playtime" at your dealer's or send to us for full information.

CUMMER-DOWSWELL Limited
Hamilton, Ontario. 203

Advertise in the Maritime Farmer.

Expense vs. Savings.

Here and there one finds a dairyman who hesitates about taking up cow-testing because of the initial expense of three dollars for the necessary outfit of scales and bottles

This would seem to be an extreme case of "Penny wise and pound foolish." So many examples are constantly cropping up of distinct saving through the small expenditure that they should be noted for the encouragement of these who still hesitate.

Cows have been bought at auction time after time, discarded by owners who were evidently absolutely ignorant of their high value as good producers After one or two months' test the new owners have often refused $50 and $100 on their bargains. That is a pretty quick return on the cow testing outfit expenditure. In fact, amongst such discards at auction were picked up one or two word's champions, worth thousands of dollars.

This vital fact should not be overlooked: Hundreds of poor cows are being kept today at huge expense of whose low value the owners are also probably ignorant Yet a three-dollar outfit would help discover them soon turning the present loss into distinct savings.

Then, thanks to that small expense, many dairymen are now making an additional income of three hundred dollars from twenty cows, because the poorest have been discarded. It will abundantly pay every dairyman to keep dairy records.—C. F. W.

Cost Reducers.

So many dairymen wonder what the factory is going to pay, so many salesmen fight for another sixteenth of a cent on the price of cheese, that some milk producers in thinking almost entirely of selling price, are apt to overlook cost.

The twin sisters of economical milk production are good cows and individual records. Cows may be fed right and fed alike, yet fail to produce milk economically, that is at low cost, because they were not built on dairy lines. But even with the average run of dairy cows that seem to produce just about the same quantity of milk, there are so many strange variations that the keeping of milk records is not only advisable from the business standpoint but becomes of facinating interest.

When a simple feed record is kept in addition to the milk record, the actual cost of milk as produced by each cow is ascertained easily, so that the owner may be assured that he is keeping only such cows as yield plenty of milk at a low cost. Can you tell offhand whether the milk of some of your cows costs 62 cents or 97 cents per 100 pounds? If your profit over cost of feed is now only $10.00 per cow, you cn make it twenty by keeping records. Send to the Dairy Commissioner, Ottawa, for milk and feed record forms, which are free. They are cost reducers.—C. F. W.

How to Treat Hardened Quarters.

1. Is saltpeter a benefit for hardened quarters?

2 Please let me know if tincture of opium and fluid extract of belladonna are liable to dry a cow up if applied to hardened quarters.—W. O. M.

1. A tablespoonful dose of saltpeter commonly is prescribed and beneficial in cases of garget (mammitis.) It is given once or twice daily according to the severity of the case.

2. Belladonna tends to dry up milk flow, as does camphor,, tincture of opium is less powerful in this effect and is used for pain. It is not commonly used for udder diseases.

If the butter is to go to the market, it should be put up in neat, attractive packages.

A handy pump for farmers

It is a direct lift pump that can be attached to wind mills, a Fairbanks-Morse Eclipse Engine, or operated by hand.

This is one of the least expensive and most efficient of our high grade farm pumps.

Adapted for lifts from 30 to 125 feet. Altogether an ideal pump for any farm—easy to operate—will keep in good repair for years.

Send for free catalogue of pumps and water systems. If you are interested in farm engines, spraying outfits, lighting systems, power and hand tools, scales or mechanical goods of any kind, full particulars will be sent to you on request. Address Dept. 44

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The Massey-Harris Separator Gives Satisfaction

Satisfaction follows the use of this Separator

These are the Reasons Why

It saves more of the cream at all temperatures than any others.

It is easy to fill—easy to turn—easy to clean.

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It is a neat, symmetrical, nicely finished machine—one you will take pride in having and using.

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LIVE STOCK.

Prevent Losses by Attention to the Food.

It is now generally recognized that diarrhoea among young calves is due to a bacterial infection. Several different kinds of bacteria have been found to cause the disease. The great majority of cases, however, are caused by various forms of the common coli bacteria, or by a nearly related species, the paracoli. These species of bacteria are found in the intestines of all healthy animals. Ordinarily they are perfectly harmless. Sometimes, because of improper feeding or other causes, a calf becomes so weakened that these bacteria are able to set up a severe inflammation in the alimentary canal. This produces the diarrhoea or scours, and usually results in the death of the calf. After passage through one or two such calves, these bacteria acquire a greatly increased virulence. They are then able to attack healthy calves and cause their death. When such a virulent strain is once established in a barn it is very difficult to get rid of it. The infected calves are daily passing billions of these bacteria with their droppings. These are carried about from one part of the barn to another on the shoes and clothing of the attendants, by the bedding and even by the dust in the air.

The caves may become infected in various ways. Infection through the naval cord happens occasionally, but this does not occur so frequently as is generally supposed. A much more frequent method of infection is through the mouth. The calf brings its nose and mouth in contact with the soiled bedding and the sides of the stall. In this way it may take in many of the virulent organisms. If the milk of the calf is not handled in a sanitary manner, this also is a frequent source of infection.

To Prevent Disease.

A knowledge of the cause of the disease renders methods of prevention much simpler. On farms where the disease is not serious it is only necessary to see that the calf is born in a clean stall and is kept well supplied with clean bedding. Such a stall should be thoroughly cleaned and disinfected each time before it is used. After the calf is weaned careful attention should be given to the milk. It is necessary that the milk should be handled in a cleanly manner. The milk must be fresh and should be warmed to 95 deg. F. It should be given in clean pails which are kept especially for that purpose After use these pails should then be thoroughly washed and scalded. It would be still better if all the milk used were pasteurized by heating barely to 140 degrees F. for twenty minutes. Such treatment will kill all diarrhoea and tuberculosis germs. Such precautions, if carefully carried out, will prevent the disease on farms where it is not a serious infection.

On farms where the infection has gained a strong hold, prevention is a much more difficult task. On such farms the virulent bacteria are spread throughout the barn and the young calves become infected through the straw or even the dust. At such places it might be possible entirely to isolate the young calves in a new stable, where with special attendants and a careful attention to details, the disease might be eradicated. Such methdos, however, are usually not practicable.

The Serum Treatment.

Dr. C. O. Jenson, Copenhagen, Denmark, has devoted a great amount of time to the study of calf diarrhoea. As a result of his work he is able to produce a serum or rather several serums against the different forms of this disease. The serum treatment is now used extensively and with excellent results in Denmark and in many parts of Germany.

The preparation of such serums requires a great amount of labor and care if they are to prove successful Since there are a number of different strains of both coli and paracoli bacteria which can cause the disease it is always necessary to examine calves from each farm in order to find out just which strain of these organisms is causing the disease. Then a serum which corresponds to this particular organism must be used. After a serum appropriate for a given form has been obtained it is only necessary to inject a small quantity of this under the skin of the calf immune to that partcular organism and usually no further trouble will be experienced. Dr. Jensen has carefully shown that such methods will both prevent and cure the disease.

It is clear that such serum production can only be undertaken by the different experiment stations. A commercial firm will not ordinarily take the trouble to examine calves from each individual farm. Without such examinations for each farm where the treatment is to be used its success cannot be certain. It would be to the interest of cattle breeders to urge their experiment stations to undertake investigations along these lines.—F. M. Surface in Breeders' Gazette.

The New Brunswick provincial ditch-ing machine is now operating at Flower Mills, Carleton Co.

Mr. W. B. Ford, a graduate of MacDonald College, St. Anne de Bellevue, P. Q., has been appointed Animal Husbandman for the Province of New Brunskick.

SUMMER SHOES FOR MEN WHO WORK

Here is something new in footwear specially suitable for farmers, woodsmen, millmen, trackmen, laborers—all those needing strong yet light, cool, easy shoes. These are made on good-fitting right and left lasts from our famous oil-tanned Skowhegan waterproof leather with waterproofed sole leather outsoles and solid insoles.

Palmer's "Moose Head Brand"
"SUMMER PACKS" and "HARVEST SHOES"

are light weight, comfortable, durable working shoes for spring, summer and fall wear. Sold by leading dealers everywhere. If your merchant does not carry them write us, giving his name and address, and we will see that they are placed within your reach. Made 4, 6 and 9 inches high. 19

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Sample Free

THERE is a community near here that has found out all about Amatite. It began with a single farmer who wanted to roof a shed on his farm. He had heard that a new roofing had been invented which needed no painting. He found that its name was Amatite and he bought some and laid it. He found that it was just as easy to lay as the old-fashioned painted roofing, and it was sold in rolls with nails and cement supplies free as usual. And he found also that Amatite Roofing instead of costing more as might have been expected, actually cost less than other roofings of much less weight.

After the first winter, he noticed that the Amatite was exactly as good as ever, and after the second winter he was still unable to detect any change in it.

He has other roofings on his farm and he was accustomed to giving them a good heavy coat of paint every two years just as the manufacturers of those roofings urged him to do. He was glad that it was not necessary for him to paint the Amatite roof after the second year. It saved him money and trouble.

He began to tell his neighbors about Amatite, and the local dealer laid in a stock of it. Other farmers began buying it and had the same experience—the roofing gave faultless service year after year with no trouble whatever to the owners.

It is five years since the first Amatite Roofing was laid in that town. Now, Amatite is the principal roofing sold there. It has won its way on its merits.

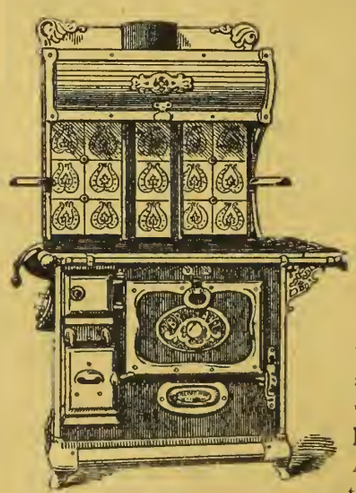
If you would like to have a sample of Amatite Roofing just to see what the mineral surface is like, we will send it to you free of charge.

Address our nearest office.

THE CARRITTE-PATERSON MFG. CO., Limited

ST. JOHN, N. B. HALIFAX, N. S. SYDNEY, N. S.

STOVE ECONOMY



There is no saving in having a poor stove. It burns up fuel without giving the right kind of heat. You cannot regulate it for cooking purposes either. It takes a good stove to turn out first class bread, cakes or pastry all the time. You will not be disappointed in choosing a

RECORD BRILLIANT RANGE

to cook with, to heat with. You can have it with or without reservoir, any style of warming closet,

MADE FOR WOOD & COAL

Ask for our catalogue and see the other various styles.

Record Foundry & Machine Co.,
Moncton, N. B.

Have You Seen Our Electric Flash Light Premium

$100 TO $200 PROFIT PER MONTH

Selling Farmers What They Need

Every farmer in Canada needs and uses our kind of goods. Over 2,000 men are making big money selling Rawleigh Quality Products, Household Remedies, Extracts, Spices, Soaps, Toilet Articles, Stock Remedies, Poultry Supplies, etc. Every article of the highest quality, well known and reliable.

We want a man at once in every locality to represent the greatest Buying, Manufacturing, Distributing and Selling Organization in North America. Established 19 years. Capital and Resources over Two Million Dollars. References, Dun's, Bradstreet's, or any bank in Winnipeg.

We offer you the opportunity to

Get Into Business For Yourself

With little competition. We are the only concern of our kind who own and operate a factory in Canada. No duty. Freight services prompt.

We want men of good standing in their community, who can furnish satisfactory bondsmen, and team for the conduct of the business. No experience required. We teach you how to handle the goods successfully and stand back of you with the services of our giant organization.

If you can meet our requirements, write for particulars of our matchless offer.

The W. T. Rawleigh Medical Co.
90 Henry Street
Winnipeg, Man.

Foot-Rot in Sheep.

There are two forms of foot-rot, one contagious, one mechanical; the latter is due to injury of feet from decay, cuts or bruising, by which means soil and filth gain an entrance, and set up inflammation of the sensitive strictures of the foot, from which pus is usually discharged. The injury may be caused by long grazing on low-lying pastures or by the animal stepping on sharp or rough objects. This latter is the common form. It only affects comparatively few animals in the flock. The treatment for this form of foot-rot consists first in carefully trimming the foot or feet. If pus has formed, give an exit for it at the lower surface of the foot, and apply an antiseptic foot poultice, such as bread, upon which a weak solution of Jewes fluid has been sprinkled. The recovery is usually soon with attention.

The contagious form of foot-rot is quite different, and is far more serious, but it can be prevented, and is amenable to treatment. It is primarily due to the entrance of necrotic bacteria into soft structures of the foot. It spreads from sheep to sheep, causing lameness, loss of flesh and even death. It first shows itself as a small, moist, unhealthy sag between the toes. This rapidly extends from above downwords and may extend to two, three or even all four feet. The horn becomes broken, and the discharge attracts flies, eggs and larvae, which develop in the wound, or on the fleece which has come in contact with the discharge.

If noticed early, the disease should not get beyond control. Examine all fresh arrivals for lameness, isolate at once from the rest of the herd any animal showing the least sign of disease affecting the skin between toes. The shepherd should disinfect his hands, and also the sheepfold, and the manure and a few inches of surface soil should be removed and ploughed into the land and the pastures given a rest until a winter's frost has sweetened it. A foot bath is more effectual than a dressing. Even the apparently healthy sheep every second day should be put through a shallow bath, and this is to be continued for a fortnight after the last case is detected. After cleansing the affected foot, cut off all detached horn, so as to expose all the diseased tissue trimmings burn or bury deeply). If much has to be cut away, apply clean tow, saturated with a weak antiseptic lotion, keep it in position with a properly adjusted bandage to keep out filth and wet. Later on a dry dressing of one part of chinosol, one part of burnt alum, and six parts of powdered Fuller's earth, applied once daily on cotton wool, and protected with suitable coverings, will quickly effect a cure.

The directions for bath are as follows:—Make a bath of wood or concrete, 16 ft. long, 8 in. wide, sides sloping out, provided with cross pieces to prevent slipping, and side-fences boarded to admit sheep walking easily through.

The solution is made by dissolving one pound of powdered sulphate of copper to each gallon of water. Although somewhat slow of solution, stirring and using warm water in the first instance will hasten it (for prevention half this strength will suffice) Part the hoofs first, when necessary, so that the solution can come in direct contact with all the parts.

Choose a day when grass and soil are dry. Remember the bath is poisonous, and take care the stock cannot get access to it. If ewes are treated, put them trough the bath quietly, so that the teats are not splashed or wetted, as this is likely to make lambs ill. Do not hurry sheep through the bath. The object is ony to wet the feet. If the wool becomes damped with the solution it may discolor it. This bath repeated at frequent intervals will effect a cure. The sheep should remain in the bath for about five minutes.—Southern Vet. in English F. & H.

Teaching the Calf to Drink.

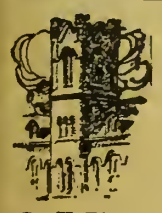
Oh to feed a new born calf
Is enough to make you laugh
  If it wasn't so pathetic and so sad.
When you try a little while
It is probable you will smile;
  But long before you're finished you'll be mad.

So you grab it by the ears
In a way to bring the tears
To the eyes of anyone who has a heart,
  And you ram its head down in
To the milk that's in the tin,
  While you swear the little beast is far from smart.

Soon you see that this is vain—
That your end you'll never gain—
  So you start to try the kindness game once more;
But its pointed little teeth
Cut your fingers from beneath
  'Till it seems no time at all 'till they are sore.

And yet this must be done,
If we want to make the "mon,"
  For our cattle raising is what pays us now;
So we may as well keep cool
As we watch it act the fool
  And with time and perseverance teach it how.

—O. P. in Nor' West Farmer.



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The Arts Course may be taken by correspondence, but students desiring to graduate must attend one session.

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ARTS EDUCATION MEDICINE
APPLIED SCIENCE Including ENGINEERING
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G. Y. CHOWN, Registrar, Kingston, Ont.

Bigger Profits For Dairymen

If you have a cream separator, have a skimming test made with the Babcock tester. Any Government dairy school will make a test if you send a sample of cream skimmed. When you get the report turn to page 33 of our new catalog where there is printed a skimming table, approved by Professor J. H. Grisdale, which will show you whether your separator is paying as big profits as a first class separator should. Send for the catalog anyway. It is worth reading—and is very different to the ordinary separator catalog. It tells facts ; gives actual tests ; shows things in dollars and cents.

Standard

The RENFREW MACHINERY Co., Ltd.
Head Office and Works, Refrew, Ont. Agencies Everywhere in Canada

Beware of Powdery Scab Infection When You Plant

Eugene H. Grubb, one of the best known authorities among potato grow- and whose word in such matters is supported by the U. S. Department of Agriculture says

"When disease is present it can be carried from a diseased potato to a healthy one by contact in a bin, in the sack, OR **IN A PLANTER.** The knife used in cutting seed pieces is capable of spreading a disease througout an entire lot of seed, and the 'picker' on a picker planter may do the same thing."

IRON AGE [Improved Robbins] Potato Planters

have no pickers and cannot carry infection or injure the seed. This is the planter you have known so well the last twenty years—plants 100 per cent.—every piece right and no waste.

We also make a full line of bucket and barrel sprayers with which you can disinfect potato storage house, barrels, etc.

Skipped hills raise no potatoes. This machine plants automatically but provides a place for a boy or man to make necessary corrections so that there will be one piece in each space and one only. Right depth, right distance apart, perfect placing. Medium or large fertilizer distributors or furnished without if you prefer.

The Bateman-Wilkinson Co., Ltd.
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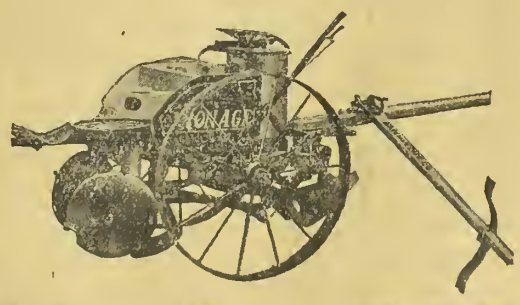
TORONTO, - - - ONTARIO
General Agents for New Brunswick { J. CLARK & SON Ltd., Fredericton
The LOUNSBURY Co., Ltd., Newcastle



THE HORSE.

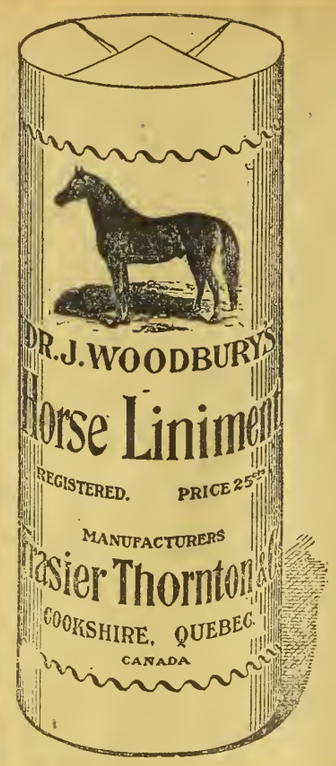
Spavins and Their Treatment.

There is no better known bone disease affecting the horse than spavin. Among the many different critical attitudes the prospective horse buyer assumes in looking the horse over, there is one which is never omitted (if the buyer is wise), and that is the one where the inside of the hock joints are the objects of critical scrutiny. "To err is human," and to forgive a horse dealer who palms off a horse on you which has a spavin would truly be divine. There are three kinds of spavin —bone, bog and blood spavin. Bone spavin is, of course, a bone disease; bog spavin is a distention of the hock joint by the swelling or bulging of the ligament which contains the synovia or joint oil, which lubricates the joint, while blood spavin is a swollen or varicose condition of the vein which passes over the region where spavin is usually found.

To detect spavin is not an altogether easy matter, because many horses have puffy, swollen hocks which, although very apt to be decorated by a spavin, are free from such a defect. The appearance of the sound, normal hock must be very clear to the mind of the horseman looking for this unsoundness.

As a general rule, before the bony lump is noticed, the horse may limp on the sore leg, but, again, no lameness may be noticed, the spavin developing so gradually.

There is no privileged class among horses with regard to spavin; all are liable to it, the fancy stepping hackney as well as the sober and slower-gaited draught horse.



Horsemen, Attention!

These are the Preparations which have helped to make Canadian horses famous.

They have many imitators but no equals.

Ask for and demand

Dr. J. Woodbury's Horse Liniment

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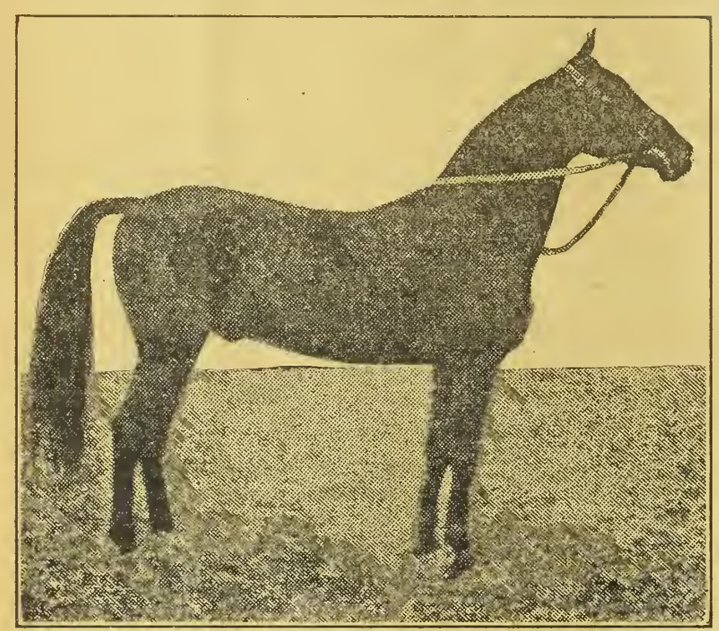

LORD HASTINGS

Second Prize Standard Bred Stallion at the 1914 Maritime Horse Show. Owned and Exhibited by H. W. Ryan, Petitcodiac.

How Spavins are Caused

Just as the tendency to have splints and ringbone is transmitted to the offspring of horses which have these bone diseases, so is the tendency to develop spavins handed down to the straight-pasterned, silty and weak-legged horse. Strains and continued concussion, or blows inflicted on the hock joint, will start the trouble.

Colts which are broken and put to work before they are fully developed and while their bone is still soft, will run a serious risk of straining the bones and thereby causing spavins to be thrown.

Hocks, even in a quite healthy conditioo, differ greatly with different horses, and the hocks on the same horse may differ also to a great extent.

It is generally taken as a fact among horsemen that a coarse hock is more susceptible to spavin than a clean, well-formed hock. This is true to a great extent, but it very often happens that the meaty, coarse hock may be the stronger. Here, of course, is room for controversy, because no one is courageous enough to differentiate clearly between coarseness and spavin, although again, the owner of a coarse-hocked animal would be highly incensed if he were told that his horse had a spavin.

How to Detect Spavin

A horse adorned with a spavin will generally go lame, especially when the spavin is forming. After the inflammation has disappeared the region becomes callous to a certain extent, and the lameless will very likely disappear, and nothing out of the ordinary may be noticed in the action of the horse till the spavin becomes so big that it interferes with the connecting ligaments, when the horse becomes very lame, especially when first moved.

When a horse is unfortunate enough to develop a spavin, his action is stiff, and the hock appears imperfectly flexed. Looked at when trotted away from the observer, the defective limb will be seen to drop, and the horse bears heavily on the other foot. By examining the shoe it may be noticed that the toe is more worn on the affected limb than on the healthy one.

What to do for Spavin

It is hardly necessary to state that a horse on which a spavin is detected should not be worked if a cure is anticipated. The joint should be bathed with a cooling lotion, and physic administered.

Continue bathing the affected part with cooling lotions for a few days, then blister repeatedly, if necessary. A good cooling lotion is composed of one part of red iodide of mercury to eight parts of lard or vaseline. It should be said that just after taking a horse from work, warm fomentations and hot bandages should be applied, before the limb is bathed with coolng lotions.

Spavins treated early, and in the above manner, generally become callous and set, and the surrounding parts adapt themselves gradually to the abnormal conformation, so that lameness usually disappears, and the action is very slightly changed.

It sometimes happens that all this treatment fails to bring about a cure, and firing in such cases may have to be resorted to, but when this drastic treatment is necessary, it can generally be accepted that the horse, as far

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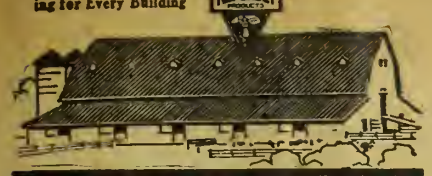

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as selling value is concerned, is beyond redemption, although, if the pain and accompanying lameness is disposed of by this treatment the horse may continue to work very satisfactorily.

An Overfeed of Grain.

Some one left the oat bin door open, the horses were loose; and we all know the rest. The thing to do if the accident has been detected an hour or so after the grain has been eaten is to get a veterinarian as soon as possible and pump as much out of the stomach by the aid of a stomach tube as possible. Then administer a purgative and antiferments. It sometimes happens that expert help is not available. If such is the case, then the matured horses should receive from one and one-half to two quarts of raw linseed oil, and two ounces of turpentine. Many neglect a horse that has overeaten until the symptoms of colic appear and then call a veterinary who may have difficulty in saving the horse.

The same precautions should be taken when a cow has accidendly eaten a part of a sack of oats, wheat or corn. From one to three pounds of Epsom salts given to a cow immediately after such a large feed may save the cow's life and also prevent her being foundered. The thing to remember is to do something for the cow immediately after the accident has been discovered.—C. L. Barnes, Colorado Agricultural College.

Should Horses be Clipped.

If horses have been stabled all winter, they will have short hair, and clipping will be of very little advantage. If they have been run out a good deal, they will have long hair, and clipping may be of considerable advantage. This exposed horse has needed a long, warm coat during winter,, and nature has provided it; but it certainly does not need this coat when working on a hot day before a seed drill. Such a horse is much better clipped. But if, after clipping, the weather turns bad, the horse should be blanketed until he becomes accustomed to his short coat. A long haired horse, brought to a sweat and then allowed to stand and chill in its wet hair, is much more likely to contract colds than if it were clipped and then covered with a dry blanket when stood still. Also the clipped horse will work much easier and not be so hard to keep clean.

The Unequal Team.

Often some writers say that they have observed that the horse behind is always thinner and a harder keeper and so he does more work than his mate But does this prove anything? There is just as much difference in horses as in men. Some men are fat, work hard and eat little.

Did a lazy horse ever go in the lead? No, he has tried everything, and has found from experience where the easy place is.

In driving two horses on a wagon with a heavy load, if one horse is in advance the tongue will be inclined to move toward the rear horse, showing a side draft. Now the horse in the lead must be exerting a greater force to cause this draft.

Take a pair of balance scales and put a weight in one pan; of course this side will go down. The balance scale and the evener are the same, each is hung in the centre. So whichever horse will exert the greater force on an evener will be ahead and will remain there as long as he continues to exert the greater force.—Teamster.

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POULTRY.

The Care of Young Chicks.

In no instance is a tenderly reared chicken as strong as one which has been taken care of only by assisting Nature. Mark that well, but—let us not be misunderstood. We do not advise that chickens which are hatched three or four months before the natural season should then be turned out to take their chance. It would be cruel, and could end only in death. They must be kept reasonably warm at night, and be well fed throughout the day. However, that does not mean hothouse rearing.

The Simple Life.

We are convinced from practical experience that fresh air is essential to chickens, that sun is as good as food to them, and that heat must be obtained from food rather than by stoves and hot water pipes. Our "fresh-air" chickens are clean and sturdy youngsters. They wander far from the coops and rearers. They scratch the earth wherever there appears hope of any result from it, and they turn over every leaf in search of insects.

When we appear with the food pail they run to meet us, and once the food is in the troughs they set to with a will Watch them on a fine day working on a bank. They turn up the fine earth, bury one side in the hole they have made and cover the other with dust. They raise their wings, stretch out their legs, and bask and grow in the glorious air and sunshine. It is a pleasure for us to watch them.

Contrast such birds with the hothouse chickens. Poor ittle creatures, they do not thrive. They die; but not in the common acceptation of the word. There is no illness, no struggle; they seem to perish of inanition. We have seen many such. They stand with their heads tucked under their wings, save when some excellent meal is placed before them. They then drowsily wake up and totter to their food.

Place them on free range and they are lost. Maybe they try to scratch, but their legs and feet refuse to lend themselves o such work. For a moment, maybe, they will pursue a heedless fly, but they soon give up the chase in despair. They have left their artificially heated house, and the fresh air has been too much for them. Out for half an hour and their days are ended. If chickens must be reared in hot-houses and such like places, they must be kept there until they are killed. Better get them used to roughing is from the shell, if they are to develop into fit breeders; but, best of all, use common sense by taking care of them only by assisting Nature.

Changing the Run.

No one who knows nything of poultry will dispute our assertion that the ideal way of rearing chickens is to have them on fresh land. It is the invariable plan with the pheasant rearers to bring their birds up on new grazing landeach season and twice on the same ground, we are assured, means utter ruin to the undertaking. If such be the case, there is, then, much difference between pheasants and fowls, and the ideal and the real are not always the same.

Some writers on poultry subjects have gone so far as to say that chickens will not thrive unless they can be brought up under the ideal conditions. From the theoretical point of view, and only from such, that is as it should be. But—we might have printed the word in very bold type—it has proved to be an utter fallacy when put to the test.

Admittedly, those poultry-keepers who are able to have the pick of a hundred acres or so will not be doing any harm by getting their young birds on the land that has never been used as a poultry range, or on that which has been allowed to lie fallow of fowls for a year or two By all means let them take full advantage of it and put their chickens "out to grass" as soon as possible.

It does happen, however, that every poultry keeper who goes in for rearing chickens and is successful at it cannot bring the birds up under the ideal conditions. In fact, the vast majority are debarred from "fresh fields and pastures new," and year after year they have to use the same chicken ground, while some even have to use a corner of the hen-pen as a chicken run.

The Ideal.

We feel convinced that in too many cases the term "fresh land" is taken in its literal sense. Let us admit "right here" that the ideal in everything is the goal for which to aim. However, when it cannot be attained there is no need to give up in despair. Very well, then. If we, as poultry keepers, cannot have the ideal chicken ground, we should never despair of rearing healthy stock.

It is hardly reasonable to expect robust off-spring from their thin-blooded and ill-cared for adults, or to imagine that healthy chickens will result from attempting to rear them on land that is already badly tainted by poultry. No matter whether the attempt be made in town or country, such fowls and conditions will never lead to success.

In a Garden.

It must be acknowledged that the chief advantage of a wide range and fresh rearing ground for chickens is that, on such places, the birds are able to find much nourishing food; and this, naturally enough, brings the cost of their rearing to the minimum. But, such being the case, it does not follow that fowls cannot be reared unless they are given a free run. Many broods of sturdy chickens are brought up each season in ordinary back gardens; and this we know from actual experience, not merely from hearsay.

Feeding.

Feeding in small places wants proper supervision. Care must be taken to provide the chickens with plenty of fresh young green food—it is one of the items they can and do procure when they are at large. Meat, too, in some form, will compensate for the animal life of the unlimited grass range. Trimmings of a liver well boiled and thoroughly minced never come amiss, while magots from a "worm" pit, allowed to cleanse themselves through earth, are always appreciated by the chickens, and do them a power of good.

Let us repeat that all soft food must be given from long and narrow troughs, and the same removed at the end of each meal. Grain and seeds are best scattered over and forked into the scratching material, and if a few seeds do germinate, all the better. Grit must not be overlooked, but do not place it before the chicks until they are three days old. It must not be mixed with the soft food, but put into a shallow tray so that the chickens can help themselves—Natnre teaches them to "go" for it.

The only essential is good management—which includes proper feeding. Granted this there should be room in the ordinary back garden for at least a couple of broods of chickens—and enough room and good soil to enable them to develop into the best of stock birds. Where the poultry quarters must necessarily be limited to a small area, a greater amount of care must be exercised than is the case when chickens are reared on the unlimited range. Nevertheless, to bring up your poultry in such circumstances is not a difficult undertaking.

Some Essentials.

The first essential is to keep the sleeping quarters clean by removing the droppings each morning and freshening the bedding whenever necessary. Then if the run is of grass, have it flicked over each evening with a besom. On a small earth plot "fresh land" can be provided in the form of garden mould or sweepings from flint road. A barrowload shot into a heap

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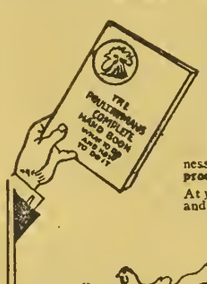

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The Peerless Way Makes Poultry Pay

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in the run once a month or so will prove beneficial. There is always something worth having in hillocks of these materials, and they keep chickens "on the go" for weeks on end.

We have the strongest belief in large quantities of vegetable produce for fowls kept in confinement, although we would cut old cabbage out of the list. We advise poultry-keepers to cultivate plenty of lettuces, at least those who have space, for the birds in the hot summer months. After the salads have been prepared for the house, all outer leaves, as well as plants which run to seed, make capital green food for fowls of all ages. Sunflower seeds could be sown now for the growing chickens in July and August. The seeds had better be sown in good soil, and the plants, when sufficiently forward, transplanted to where they are wanted to grow.

How to Tell the age of Hens and Pigeons.

There has been a great development of late years in the Canadian poultry industry. This development has been brought about by many factors, chief among which are the untiring and highly successful efforts of breeders; the experimental work carried on at the various poultry plants of the Dominion and Provincial Experimental farms and Agricultural Colleges, the information given out by these institutions, the poultry exhibits, in which the people of Canada are now taking a great interest, and, last but not least, the profits of the industry, little thought of in the past, but now well recognized and appreciated.

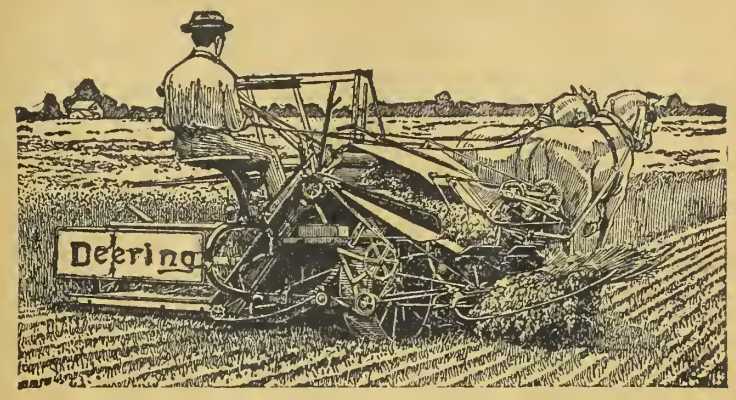
Production is increasing at an extraordinary rate while the quality of the product shows wonderful improvement. The value of the flock depends upon the production of the birds selected, but the productiveness of any bird decreases after a certain age is reached. It is very important, therefore, that the breeder be able to tell with some degree of certainty the age of the fowls which he desires to retain or purchase for breeding purposes, otherwise he will be exposed to the risk of having individuals that are past their prime and that do not pay for their keep.

Record books have been established for horses, cattle and many other animals, where information pertaining to pedigree, age, etc., are kept for reference, but it has remained to Victor Fortier, Assistant Dominion Poultry Husbandman, Central Experimental Farm, Ottawa, after much personal observation and study, to publish a method whereby the age of hens can be accurately estimated. This information, which is meant especially for the breeder and the judge, has been published under the direction of the Hon. Martin Burreell, in a profusely illustrated bulletin, which is No. 16 Second Series of the Central Experimental Farm. Copies will be mailed to those who apply for them at the Publications Branch, Department of Agriculture, Ottawa.

Rooster Day.

In the interest of the infertile egg, the poultry specialists of the Department of Agriculture have started a campaign for the elimination of the rooster among poultry flocks during the season between May 1 and December 1. In this connection, Saturday, May 16, has been set aside as rooster day in Kentucky and Tennessee, when every poultry dealer in these states has agreed to pay the same price for roosters as they do for hens and pullets. There is an enormous loss in eggs as the result of the fertile egg, especially during the summer and fall months, and it is for this reason the Department of Agriculture recommend that the rooster be kept away from the hens during these seasons. It is estimated that one third of the tremendous annual loss of eggs is due to the fertile egg.

Deering New Ideal Binder



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The reel is adjustable for tall, short, down or tangled grain. The special T-shape cutter bar enables the operator to tilt the platform close to the ground when necessary. The bottoms of the guards are almost level with the bottom of the platform, preventing trash being pushed in front of the knife.

Either smooth section or serrated knives can be used. Three packers and three discharge arms aid in doing efficient work. The main frame is made of tough, strong steel bars, forming a unit which the hardest usage can not twist out of shape. Then there is the famous Deering knotter—simple, accurate, unfailing.

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These stanchions have hitherto always sold at $1.50. We were able to buy several carloads of steel at a low figure. Farmers will get the benefit of this purchase. They will go back to the regular price of $1.50 when this steel is used up.

The high hinge and the simple, secure lock make the *O.K. Canadian* undoubtedly the best stanchion on the market.

Act quickly, for this offer will be discontinued when our present supply of steel is all used.

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FOR HOME AND COUNTY

This Department is devoted to the best interests of the Homes of the Maritime Provinces. Contributors to these columns are leaders in the "For Home and County" movement. This Department is yours. Use it to the best advantage by sending us timely suggestions, short articles dealing with your experiences, and reports of your Institute meetings.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

The week passed away in a most delightful manner. It passed rapidly, as may be suposed, to one entertained as I was; and yet it gave me so many occasions for knowing Steerforth better, and admiring him more in a thousand respects, that at its cose I seemed to have been with him for a much longer time. A dashing way he had of treating me like a plaything, was more agreeable to me than any behaviour he could have adopted. It reminded me of our old acquaintance; it seemed the natural sequel of it; it showed me that it was unchanged;. it relieved me of any uneasiness I might have felt, in comparing my merits with his, and measuring my claims upon his friendship by an equal standard; above all, it was a familiar, unrestrained, affectionate demeanour that he used toward no one else. As he had treated me at school differently from all the rest, I joyfully believed that he treated me in life unlike any other friend he had. I believed that I was nearer to his heart than any other friend, and my own heart warmed with attachment to him.

He made up his mind to go with me into the country, and the day arrived for our departure. He had been doubtful at first wheter to take Littimer or not, but decided to leave him at home. The respectable creature, satisfied with his lot whatever it was, arranged our portmanteaus on the little carriage that was to take us to London, as if they were intended to defy the shocks of ages; and received my modestly proffered donation with perfect tranquillity.

We bade adieu to Mrs. Steerforth and Miss Dartle, with many thanks on my part, and much kindness on the devoted mother's. The last thing I saw was Littimer's unrued eye, fraught, as I fancied, with the silent conviction that I was very young indeed.

What I felt, in returning so auspiciously to the old familiar places, I shall not endeavour to describe. We went down by the mail. I was so concerned, I recollect, even for the honor of Yarmouth, that when Steerforth, said, as we drove through its dark streets to the inn,that, as well as he could make out, it was a good, queer, out-of-the-way kind of hole, I was highly pleased. We went to bed on our arrival (I observed a pair of dirty shoes and gaiters in connection with my old friend the Dolphin as we passed the door), and breakfasted late in the morning. Steerforth, who was in great spirits, had been strolling about the beach before I was up, and had made acquaintance, he said, with half the boatmen in the place. Moreover, he had seen, in the distance, what he was sure must be the identical house of Mr. Peggotty, with smoke coming out of the chimney; and had had a great mind, he told me, to walk in and swear he was myself grown out of knowledge.

"When do you propose to introduce me there, Daisy?" he said. "I am at your disposal. Make your own arrangements."

"Why, I was thinking that this evening would be a good time, Steerforth, when they are all sitting round the fire. I should like you to see it when its snug, its such a curious place."

"So be it," returned Steerforth. "This evening."

"I shall not give them any notice that we are here, you know," said I, delighted. "We must take them by surprise."

"Oh, of course! It's no fun," said Steerforth, "unless we take them by surprise. Let us see the natives in their aboriginal condition."

"Though they are that sort of people that you mentioned," I returned.

"Aha! What! you recollect my skirmishes with Rosa, do you?" he exclaimed with a quick look. "Confound the girl, I am half afraid of her. She's like a goblin to me. But never mind her. Now what are you going to do? You are going to see your nurse, I suppose!"

"Why yes," I said, "I must see Peggotty first of all."

"Well," replied Steerforth, looking at his watch, "suppose I deliver you up to be cried over for a couple of hours. Is that long enough?"

I answered, laughing, that I thought we might get through it in that time, but that he must come also; for he would find that his renown had preceded him, and that he was almost as great a personage as I was.

"I'll come anywhere you like," said Steerforth. "Or do anything you like. Tell me where to come to; and in two hours I'll produce myself in any state you please, sentimental or comical."

I gave him minute directions for finding the residence of Mr. Barkis, carrier to Blunderstone and elsewhere and, on this understanding, went out alone. There was a sharp bracing air; the ground was dry; the sea was crisp and clear; the sun was diffusing abundance of light, if not much warmth; and everything was fresh and lively. I was so fresh and lively myself, in the pleasure of being there, that I could have stopped the people in the streets and shaken hands with them.

The streets looked small, of course The streets that we have only seen as children always do, I believe, when we go back to them. But I had forgotten nothing in them, and found nothing changed, until I came to Mr. Omer's shop. Omer and Joram was now written up, where Omer used to be; but the inscription, Draper, Tailor, Haberdasher, Funeral Furnisher, &c., remained as it was.

My footsteps seemed to tend so naturally to the shop door, after I had read these words from over the way, that I went across the road and looked in. There was a pretty woman at the back of the shop, dancing a little child in her arms, while another little fellow clung to her apron. I had no difficulty in recognizing either Minnie or Minnie's children. The glass door of the parlor was not open; but in the work shop across the yard I could faintly hear the old tune playing, as if it had never left off.

"Is Mr. Omer at home?" said I, entering. "I should like to see him for a moment if he is."

"Oh yes, sir, he is at home," said Minnie "this weather don't suit his asthma out of doors. Joe, call your grandfather!"

The little fellow, who was holding her apron, gave such a lusty shout, that the sound of it made him bashful, and he buried his face in her skirts, to her great admiration. I heard a heavy puffing and blowing coming towards us and soon Mr. Omer, shorter-winded than of yore, but not much older-looking, stood before me.

"Servant, sir," said Mr. Omer. "What can I do for you, sir?"

"You can shake hands with me, Mr. Omer, if you please," said I, putting out my own. "You were good-natured to me once, when I was afraid I didn't show that I thought so."

"Was I though?" returned the old man. "I'm glad to hear it, but I don't remember when. Are you sure it was me?"

"Quite."

"I think my memory has got as short as my breath," said Mr. Omer, looking at me and shaking his head; "for I don't remember you."

"Don't you remember your coming to the coach to meet me, and my having breakfast here, and our riding out to Blunderstone together; you, and I, and Mrs. Joram, and Mr. Joram too—who wasn't her husband then?"

"Why, Lord bless my soul!" exclaimed Mr. Omer, after being thrown by his surprise into a fit of coughing, "you don't say so! Minnie, my dear, you recollect! Dear me, yes; the party was a lady, I think?"

"My mother," I rejoined.

"To—be—sure," said Mr. Omer, touching my waistcoat with his forefinger, "and there was a little child too! There were two parties. The little party was laid along with the other party. Over at Bluderstone it was, of course. Dear me! And how have you been since?"

Very well, I thanked him, as I hoped he had been too.

"Oh! nothing to grumble at, you know," said Mr. Omer. "I find my breath gets short, but it seldom gets longer as a man gets older. I take it as it comes, and make the most of itt. That's the best way, ain't it?"

Mr. Omer coughed again, in consequence of laughing, and was assisted out of his fit by his daughter, who now stood close beside us, dancing her smallest child on the counter.

"Dear me!" said Mr. Omer. "Yes, to be sure. Two parties! Why, in that very ride, if you'll believe me, the day was named for my Minnie to marry Joram? 'Do name it sir,' says Joram. 'Yes, do, father,' says Minnie. And now he's come into the business. And look here! The youngest!"

Minnie laughed, and stroked her banded hair upon her temples, as her father put one of his fat fingers into the hand of the child she was dancing on the counter.

"Two parties, of course!" said Mr. Omer, nodding his head retrospectively. "Exactly so! And Joram's at work at this minute, on the grey one with silver nails, not this measurement —the measurement of the dancing child upon the counter—by two inches. Will you take something?"

I thanked him but declined.

"Let me see," said Mr. Omer. "Barkis's the carrier's wife—Peggotty's the boatman's sister—she had something to do with your family? She was in service there, sure?"

My answering in the affirmative gave him great satisfaction.

"I believe my breath will get long next, my memory's getting so much so," said Mr. Omer. "Well, sir, we've got a young relation of hers here, under articles to us, that has as elegant a taste in the dressmaking-business—I assure you I don't believe there's a Duchess in England can touch her."

"Not little Em'ly?" said I, involuntarily.

"Em'ly her name," said Mr. Omer, "and she's little too. But if you'll believe me, she has such a face of her own that half the women in this town, are mad against her."

"Nonse father!" cried Minnie.

"My dear," said Mr. Omer, "I don't say it's the case with you," winking at me, "but I say half the women in Yarmouth, ah! and in five mile round, are mad against that girl."

"Then she should have kept to her own station in life, father," said Minnie, "and not have given them any hold to talk about her, and then they could not have done it."

"Couldn't have done it, my dear!" retorted Mr. Omer. "Couldn't have done it! Is that your knowledge of life? What is there that any woman couldn't do, that she shouldn't do—especially on the subject of another's good looks?"

I really thought it was all over with Mr. Omer, after he had uttered this libellous pleasantry. He coughed to that extent,, and his breath eluded all his attempts to recover it with that obstinacy, that I fully expected to see his head go down behind the counter, and his little black breeches, with the rusty little bunches of ribbons at the knees, come quivering up in a last ineffectual struggle. At length, however, though he still panted hard, and was so exhausted that he was obliged to sit on the stool of the shop-desk.

"You see," said he, wiping his head, and breathing with difficulty, "she has not taken much to any companions here; she hasn't taken kindly to any particular acquaintances and friends, not to mention sweethearts. In consequence, an ill-natured story got about, that Em'ly wanted to be a lady. Now, my opinion is, that it came into circulation principally on account of her sometimes saying at the school, that if she was a lady, she would like to do so-and-so for her uncle—don't you see!—and buy him such and such fine things."

"I assure you, Mr. Omer, she has said so to me," I returned eagerly, "when we were both children."

Mr. Omer nodded his head and rubbed his chin. "Just so. Then out of a very little, she could dress herself, you see, better than most others could out of a deal, and that made things unpleasant. Moreover, she was rather what might be called wayward. I'll go so far as to say what I shall call wayward myself," said Mr. Omer; "didn't

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For Years, Restored To Health by Lydia E. Pinkham's Vegetable Compound.

Canadian women are continually writing us such letters as the two following, which are heartfelt expressions of gratitude for restored health:

Glanford Station, Ont.—"I have taken Lydia E. Pinkham's Vegetable Compound and never found any medicine to compare with it. I had ulcers and falling of womb and doctors did me no good. I suffered dreadfully for years until I began taking your medicine. I also recommend it for nervousness and indigestion." — Mrs. HENRY CLARK, Glanford Station. Ont.

Chesterville, Ont. — "I heard your medicines highly praised, and a year ago I began taking them for falling of womb and ovarian trouble.

"My left side pained me all the time and just before my periods which were irregular and painful it would be worse. To sit down caused me pain and suffering and I would be so nervous sometimes that I could not bear to see any one or hear any one speak. Little specks would float before my eyes and I was always constipated.

"I cannot say too much for Lydia E. Pinkham's Vegetable Compound and Liver Pills, for there are no medicines like them. I have taken them and I recommend them to all women. You may publish this testimonial." — Mrs. STEPHEN J. MARTIN, Chesterville, Ontario, Canada.

know her own mind quite; a little spoiled; and couldn't at first, exactly bind herself down. No more than that was ever said against her, Minnie?"

"No father," said Mrs. Joram. "that's the worst I believe."

"So when she got a situation," said Mr. Omer, "to keep a fractious old lady company, they didn't very well agree, and she didn't stop. At last she came here, apprenticed for three years Nearly two of them are over, and she has been as good a girl as ever was. Worth any six! Minnie, is she worth any six, now?"

"Yes, father," replied Minnie. "Never say I detracted from her!"

"Very good," said Mr. Omer. "That's right. And so, young gentleman," he added, after a few moments' further rubbing of his chin, "that you may not consider me long-winded as well as about it."

As they had spoken in a subdued tone, while speaking of Em'ly, I had no doubt that she was near. On my asking now, if that were not so, Mr. Omer nodded yes, and nodded towards the door of the parlor. My hurried inquiry if I might peep in, was answered with a free permission; and, looking through the glass, I saw her sitting at her work. I saw her, a most beautiful little creature, with the cloudless blue eyes, that had looked into my childish heart, turned laughingly upon another child of Minnie's who was playing near her; with enough of wilfulness in her bright face to justify what I had heard with much of the old capricious coyness lurking in it; but with nothing in her pretty looks, I am sure, but what was meant for goodness and for happiness, and what was on a good and happy course.

The tune across the yard had seemed as if it had never left off—alas! it was the tune that never does leave off—was beating, softly, all the while.

"Wouldn't you like to step in," said Mr. Omer, "and speak to her, sir? Make yourself at home!"

I was too bashful to do so then—I was afraid of confusing her, and I was no less afraid of confusing myself; but I informed myself of the hour at which she left of an evening, in order that our visit might be timed accordingly; and taking leave of Mr. Omer, and his pretty daughter, and her little children, went away to my dear old Peggoty's.

Here she was, in the tiled kitchen, cooking dinner! The moment I knocked at the door she opened it, and asked me what I pleased to want. I looked at her with a smile, but she gave me no smile in return. I had never ceased to write to her, but it must have been seven years since we had met.

"Is Mr. Barkis at home, ma'am?" I said, feigning to speak roughly to her.

"He's at home, sir," returned Peggotty, "but he's abed with the rheumatics."

"Don't he go over to Bunderstone, now?" I asked.

"When he's well he do," she answered.

"Do you ever go there, Mrs. Barkis?"

She looked at me more attentively, and I noticed a quick movement of her hands towards each other.

"Because I want to ask a question about a house there, that they call the—what is it?—the Rookery," said I.

She took a step backward, and put out her hands in an undecided frightened way' as if to keep me off.

"Peggotty!" I cried to her.

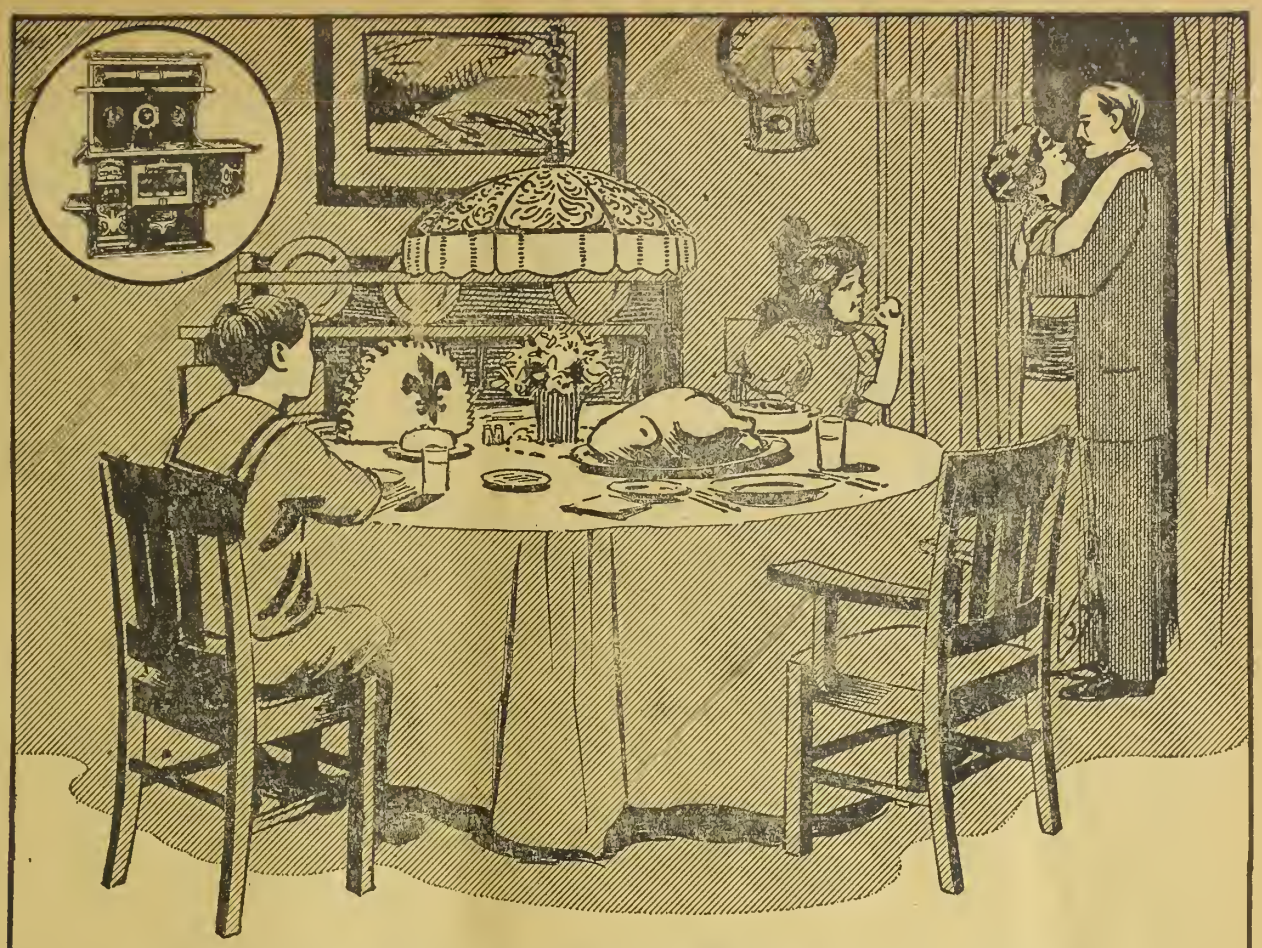
She cried, "My darling boy!" and we both burst into tears, and were locked in one another's arms.

What extravancies she committed; what aughing and crying over me; what pride she showed, what joy, what sorrow that she whose pride and joy I might have been, could never hold me in a fond embrace; I have not the heart to tell. I was troubled with no misgiving that it was young in me to respond to her emotions. I had never aughed and cried in all my life, I dare say, not even to her, more freely than I did that morning.

"Barkis will be so glad," said Peggotty, wiping her eyes with her apron, "that it'll do him more good than pints of liniment. May I go and tell him you are here? Will you come up and see him, my dear?"

Of course I would. But Peggotty could not get out of the room as easily as she meant to, for as often as she got to the door and looked round at me, she came back again to have another laugh and another cry over my shoulder. At last, to make the matter easier, I went up-stairs with her; and having waited outside for a minute, while she said a word of preparation to Mr. Barkis, presented myself before that invalid.

(Continued in next issue)



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Late suppers are seldom served from a kitchen that has an

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Our representative in your neighborhood will show you a Monarch and explain its conveniences. Write us for his name.

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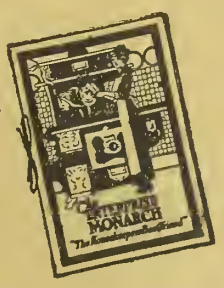

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RED ROSE TEA "is good tea"

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Land Agency or Sub-Agency for the District. Entry by proxy may be made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required in every case, except when residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead Price $3.00 per acre.

Duties—Six months residence in each of six years from date of homestead entry (including the time required to earn homestead patent) and 50 acres extra cultivation.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price $3.00 per acre.

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W. W. COREY,
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—58783.

THE SIN OF OMISSION

It isn't the thing you do, friend,
But the thing you leave undone
That gives you the bitter heartaches
When the work of the year is done,
When apples are all worm eaten
And the taters blighted and small
When the use of a "PERFECT SPRAY PUMP"
Would have saved them one and all.

Oh, the apples you might have had, my friend,
If you'd only sprayed the same,
Oh, the taters you've thrown away, my friend,
That would have been clear gain
These would have paid for your spray pump,
And have left you a happier man
Then buy the best "A PERFECT,"
And save them while you can.

THE "PERFECT SPRAY PUMPS" are manufactured by R. B. WESTHAVER, MAHONE BAY, N. S.

Equipped Farm, Complete Sawmill.

This is surely the chance of a lifetime; good 160-acre farm; 30 acres rich machine-worked fields; brook watered pasture for 20 head; estimated 200,000 ft. timber; fifty sugar trees; variety fruit; house of 10 large rooms, 2 barns, 60 and 40 feet; sugar house; new mill, full line saws, clipper, planer, etc., 60 h. p.; for quick settlement of affairs everything goes, 4 cows, farm tools, etc.; all for only $2000, half cash, for complete details of this and many other bargains, see page 4, "Stsout's Spring List," choice selections of real bargains at wonderful low prices throughout many states; send todoy for your free copy, it will show you where to find just the farm you want at the price you wish to pay. E. A. STROUT, Farm Agency. Station 2612, 294 Washington St., Boston, Mass.

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Only ¼ mile to railroad; 2 blooded cows, horse mowing machine, farm tools, wagons, harness, hay and fitted wood thrown in: immediate income; good living from start; 40 acres level loamy fields; spring-fed pasture for 10 cows; 1000 cords wood some timber, close to R. R., it's valuable; 7-room house, piazza, water at sink; large stock barn with horsefork; poultry and tool houses; borders large stream; if taken now only $2100; easy terms; details of this and a money-making seashore farm of 60 acres fully equipped for only $1700, page 4, "Strout's Farm Bargains", choice selection of real bargains at wonderfully low prices throughout N. S. and N. E. States, send today for your free copy. Address FARM c/o Maritime Farmer Office.

There never was a time when people appreciated the real merits of Chamlain's Cough Remedy more than now. This is shown by the increase in sales and voluntary testimonials from persons who have been cured by it. If you or your children are troubled with a cough or a cold give it a trial and become acquainted with its good qualities. For sale by all dealers.

Home Discipline

Since learning that I was expected to write upon this subject, I have been trying to make up my mind as to what meaning to give to these two words, and I have chosen to consider it as "Home Education."

We speak of young men and young women finishing their education, but this education I speak of is never finished. As children we are subject to home dicipline, and I think you will agree with me, when I say that parents are also diciplined.

In seeking an education the student usually has some end in view; it may be a desire to write B. A., M. D., L. L. D., after his name. So in this home education we have an object in view, that is in the home where we have the children, and I take it, that it was of this dicipline our committee wished me to write. Who would be satisfied with anything less, than to have the child develop into a self-controlled, honest, honorable, industrious, truthful and obedient citizen.

Now who is to be the diciplinarian to secure all these qualities, and what the best methods to obtain such results.

First, I believe in the large majority of cases it is the mother who is the disciplinarian. The father must of necessity be outside the home a great deal, and thus has not the same opportunity with the young child as the mother has, and it is in the very early stages, shall I say as young as six months, that the corner stone must be laid.

I do not want to be understood as saying that the father has no responsibility in the matter of home discipline. If it be an ideal home the child will understand and that very early in life, that the father and mother are one in considering his welfare and advancement. Since then, the mother is captain of the home, so to speak, and in almost constant touch with the child it is very important that she possess the qualities she would see in the child, not only must she possess these qualities, but she must impart or teach them to the child, and here is where the best method to be employed can be discussed.

Probably we would all use a different method to teach our child self-control, but I think we would all agree, that a very necessary time to begin would be when we saw the little child kicking vigorously to have his own way, just after his mother has told him he must do her way. The different dispositions will require different treatment, and in all probability the mother herself will have learned a little more about self-control before the little one is taught

Then we would have these future citizens honest and truthful. Some teachers tell us that most children find it hard to be truthful. Others say that all children are truthful and that it is only because of wrong methods of punishment, for offences committed, that they become untruthful. I would like the meeting to discuss this part of the education.

Again, you will say that the home discipline that did not insist upon the boy or girl being taught to be very industrious would be very lax. Perhaps this would be best accomplished by having the child perform some light task every day and being made to assume the responsbility of that task, increasing the work and responsibility (but being careful not to over increase) as the child grows and develops. Another very necessary subject to be taught is obedience.

Without obedience at home the teacher in school will have a great deal added to his or her work, and perhaps the end will be disobedience to the laws of God and the land.

You have read a great deal on how to secure obedience. In a few words—do not nag; make few commands or threats; remember not to promise anything you cannot fulfill and to fulfill all you promise.

DURABLE--Fire grates are three-sided; last three times as long. Shaped in the

McClary's Sunshine Furnace

to grind up clinkers when "rocked". See the McClary dealer or write for booklet. 32

I have only named a few of the many things the home discipline must teach,—just started the foundation. You will all be able to add some other quality to be taught. I will just add that these things are only taught a little at a time, but when we consider the end an honest, industrious citizen, we must concude that to be a good disciplinarian is a worthy accomplishment and a well disciplined home a nice place in which to visit for a few days.—A paper read by Mrs. Thomas Wheaton at a meeting of the Upper Sackville Branch of the New Brunswick Women's Institute.

Health

Exercise for the Lungs.

In many cases the lungs lack proper exercise. If one wants to keep well and fit through the winter months begin by daily standing in front of an open window and taking thirty deep breaths. Test your breathing capacity by taking a deep breath, filling the lungs until it is necessary to raise the chest and shoulders. Then exhale until the lungs are quite empty. Do this systematically for the above mentioned number of times, and you will find that colds will be less frequent, your chest measurement increased, and, altogether, more full of vigor. Inhale slowly and deeply occasionally when you are out of doors.

Effect of Sugar Eeting.

The researches of Doctor Sherman, of Columbia University, have shown that the large use of sugar by the people of the United States has led to a condition of lime starvation which shows itself everywhere in the premature decay of the teeth. The free use of sugar not only robs the teeth of lime but irritates the stomach, gives rise to hyperacidity, overworks the liver, and doubtless encourages a tendency to diabetes, a disease which is rapidly increasing in recent years. The injuries resulting from the use of sugar have been pointed out by many scientific investigators. Brandl demonstrated by experiments upon dogs that sugar is highly irritating to the stomach. Laborde showed that the action of pepsin is much injured by the presence of sugar. Bunge, of Basle, Switzerland, attributes the bad teeth, pale faces, and the general malnurition of the larger portion of the children of the rising generation to the incrasing consumption of sugar. Bunge urged an increase in the sugar tax as one means of lessening the use of this article of food.

Permanent Cure of Corns.

It s a very simple but a sure cure for corns. After bathing your feet in warm water, pull off or out the hard skin of the corn, rub with a little saliva every morning and evening until the skin is like unto the other. If possible, have your boots made to measure. Do not use any boot polish that contains turpentine or its equivalent, or acids; these harden the leather; hence the pinching of the toe. I know

News to most women!

Oven-tested flour is for sale. Instead of buying ordinary flour you can buy flour whose baking ability has been proven in an oven:

A ten pound sample is taken from each shipment of wheat at the mill. This is ground into flour. The flour is baked into bread.

If this flour bakes into bread high in quality and large in quantity we keep the whole shipment of wheat and grind it. Otherwise we sell it.

More bread and better bread from this flour is a certainty!

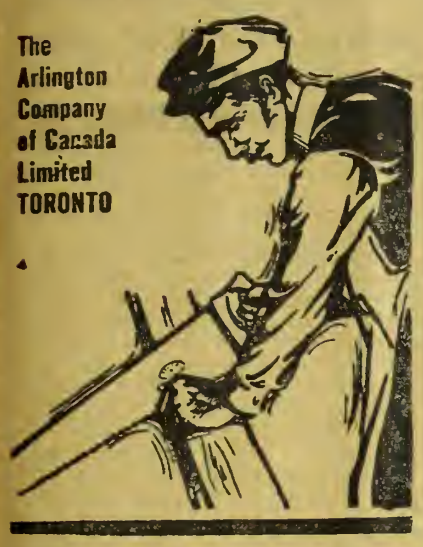
PURITY

"More Bread and Better Bread" and "Better Pastry Too" 528

"FOR THE MAN WHO WORKS"

Hard work is no excuse for an untidy appearance. A Challenge Waterproof Collar with its dull linen-like finish will keep you neat and well-dressed. Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

The Arlington Company of Canada Limited TORONTO



it, and have known it until five years ago, when I began to use the leather-dressers' finish. This keeps the boot in perfect condition, soft, pliable, causing no friction on the foot. Perhaps some of the readers of this paper will know of one, if so, get it in preference to the ordinary creams, and benefit by the result, as I have done.—M. A. W. D.

Care of Milk in the House

Milk and cream readily absorb odours and collect bacteria and other impurities whenever they are exposed to the air or placed in utensils that are not scrupulously clean. If this fact is generally understood, it can easily be see why it is so objectionable to store uncovered milk in refrigerators or cellars where it comes in contact with the vegetable or other food products possessing strong odours. Milk is almost a perfect food for human beings. It is also a perfect medium for the development of certain bacteria which may gain access to it from the dust laden air, from flies, and from unclean utensils. Some of these bacteria may be the germs of contagious diseases; others may cause digestive disorders, especially in infants and young children whose diet is largely milk.

High Heels

"Women themselves hardly realize," said a member of the West End firm of shoemakers, "that the day of the high heel is passing. It is a sign of the times that women are becoming less anxious to squeeze their feet into shoes too small for them." The institution of half and quarted sizes, it is explained, has helped a revolution in women's footwear. Formerly a woman, rather than admit to herself that she "took 5's" would force her feet into 4's. In the case of walking shoes the heel may be only one inch in height, and the wearer gains not only comfort, but a graceful and natural carriage.

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will strengthen your digestion and improve your apetite. Thousands have been benefited by taking these Tablets. Sold by all dealers.

The Sheep Measle Parasite

The sheep measle parasite has recently been found to be of common occurrence in the United States. It is of importance not only because of its more or less injurious effects upon sheep but also because of its location in the parts of the body used for human food, namely, the muscles. In cases of heavy infestation, this parasite is liable to cause the death of the affected animal, and under federal inspection carcasses which show more than a very slght infestation are excluded from use as food. Fortunately, cases of heavy infestation are rare and comparatively few sheep carcasses are condemned in their entirety on account of measles, the carcasses in most cases being fit for food after the removal of the affected portions.

It is a further fortunate circumstance that the sheep measle parasite has been conclusively proved by investigations in the Zoological Division of the Bureau of Animal Industry to be the intermediate stage of a dog tapeworm, and not the intermediate stage of the armed tapeworm of man, with which species it has generally been identified in the past. If it were the latter, public health considerations would require that even slightly infested carcasses should be excluded from use as food, and this would entail an enormous loss and a great reduction in the meat supply of the country, as available statistics indicate that at least one per cent and probably as many as five per cent of the sheep in the western United States are affected with the measle parasite.

Sheep become infected with the parasite as a result of swallowing its eggs which are scattered over the pasture in the excrement of dogs harboring tapeworms, and dogs in turn acquire the tapeworm as a result of eating the carcasses of infested sheep. The preventive measures are, first, the systematic treatment of dogs to keep them free from tapeworms, thus removing the source from which sheep become infected; and, second, the proper disposal of the carcasses of dead sheep and the complete prohibition of raw mutton as an article of food for dogs, thus preventing the possibility of the parasite reaching its canine host. The destruction of carcasses will laso reduce the chances of the transmission of the parasite to coyotes, which may also to some extent act as hosts, though these animals are probably much less important as carriers than the dogs which constantly accompany sheep on the range.—U. S. Dept. of Agr.

"After trying every flour on the market, I now use

REGAL FLOUR

exclusively because I have found that no other flour gives such invariably satisfactory results. With Regal I know I can make bread and pastry that will always excel. There isn't a doubt in a barrel of *Regal*. It's all good and always good. That's why I always use *Regal* and recommend it to other housewives. They take no risk in trying it for they can buy a barrel subject to the condition that if not satisfactory they can get their money back."

The St. Lawrence Flour Mills Co., Ltd.
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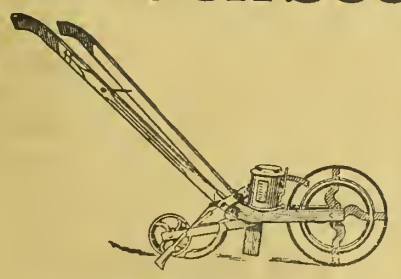

"THE BEST BY TEST"
GARDEN SEEDER

Does the work of two men in half the time. Makes the drill, sows, covers and rolls the seed while you walk.

No better seeder can be built for the fast and accurate sowing of turnips, cabbage, carrots, beets, corn and all other garden seeds.

Price $7.50 Delivered at Your Station.
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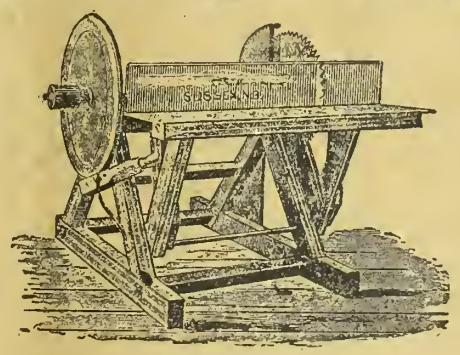

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"The best made" is the users verdict.

Made in four different sizes: Long Swing, Long Swing Improved (with extra long table and roller) the Flat Roller Table and Short Swing.

The frame is built of seasoned birch, well mortised and bolted, the table is made of heavy gauge steel plating, the balance wheel is a solid webb and weighs about 180 lbs. The pulley is keyed and set screwed to the arbor unless otherwise ordered. The arbor is of the best steel 1⅝" diam.

Both bearings supplied with compression grease cups and for convenience in handling we are putting skids under our machines this season.

Send for our Wood Cutter catalogue.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, Hay Presses and Plow Castings.

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Students can enter at any time as we will not this year have any summer vacation, the number in attendance from a distance making it inexpedient to interrupt their work.

Besides, St. John's cool summer weather makes tudy during the warmest weather just as pleasnt as at any other time.

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Send for **FREE 1914 Catalogue,** 90 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

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ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you **Free Postpaid** by return mail. **Do not wait.** Write it **now.**

HYSLOP BROTHERS, Limited
Dept. R TORONTO, Canada

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will strengthen your digestion and improve your apetite. Thousands have been benefited by taking these Tablets. Sold by all dealers.

How to Teach Our Children Economy.

Economy is a frugal and judicious use of money and the taking care of what belongs to us so that nothing will be uselessly wasted.

It should be practiced and taught in every home, but care should be taken not to allow children to confuse economy with stinginess— while the former is to be encouraged, the latter is deplorable. Unselfishness cannot be too strongly urged upon in the training of children and there is ample scope for its practice in our own families. It tends to dispel all stinginess and to create a stronger charity towards our neighbors. On the other hand extravagance is to be condemned and we should strive to live within our means, no matter how small they may be. If we ourselves are extravagant the younger members of the household will copy our example and when they are called upon sooner or later to depend upon their own resources they will have great diffictulty to make ends meet.

It would be false economy to deprive our families of plenty of good nutritious food, as the growing child needs to be properly nourished to grow strong and healthy. If we are to economize in the food line, let it be with rich cakes and pastries, as these are luxuries and expensive and not very nutritious. I have heard of instances where parents were of the opinion that their children needed only light diet and would allow them to grow up on porridge, cakes, pancakes, etc. In these cases the health is very often sacrificed and a large amount of money spent on medicine.

Children should be taught to take care of their clothing, which is a very important branch of economy. Each child, boy or girl, should be taught to sew on buttons and mend small rents in their clothing, and also to keep their clothing clean. Children should be warmly and comfortably dressed, but expensive trimmings can be dispensed with. Their clothing should be worn at the right season—that is a child should not be allowed to wear heavy winter clothing in hot weather, as it is expensive and should be only worn when necessary and then the cheap cotton materials are much more comfortable.

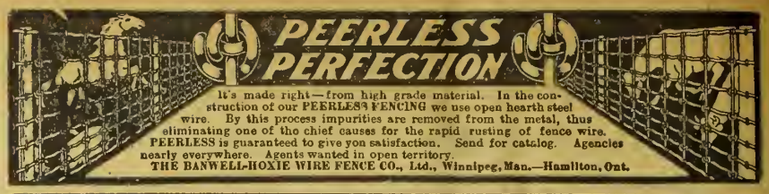
If all children knew how to take care of their clothing what a convenience it would be for them when they go among strangers to attend school or learn a trade. How much more economical it is to mend a small rent in our hose than go out and buy new ones, and to sew on our own buttons instead of hiring it done.

It is a wise plan to let each child have control of a small sum of money. At least let each have his own bank and encourage him to take care of his money. Let him do his own buying but under your advice.

They should be taught to do the work in their own sleeping rooms. This is economizing work for their elders and when they go to board with other families they will be a comfort rather than a nuisance in their temporal homes.

A child is very small when he or she cannot save steps for their parents, and a little praise goes a long way in encouraging a child to be useful. Of course, children must not be given too much work, as they need recreation, especially in the open air, in order to protect their health, but this like other things must be limited. Duty must be considered before pleasure. An industrious child usually grows up to be a useful citizen, while an indolent one turns out unhapvy.

It certainly needs strenuous effort on the part of parents or superiors to carry out these ideas, but they



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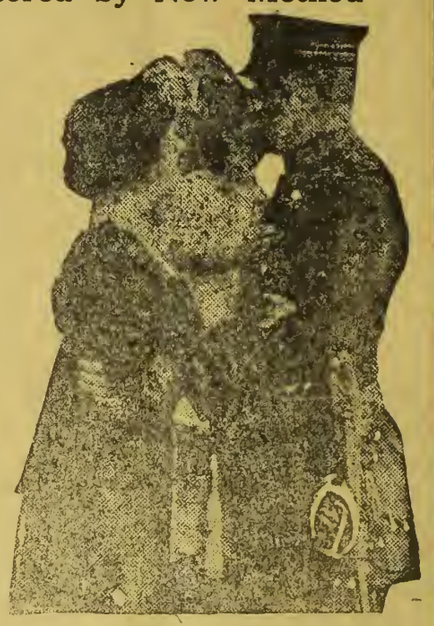
THE BANWELL-HOXIE WIRE FENCE CO., Ltd., Winnipeg, Man.—Hamilton, Ont.

Special Advice For Men

Vitality Restored by New Method



The attached coupon entitles you to one illustrated copy of my pocket compendium and guide for the self-restoration of lost strength. (See description below) Upon hearing from you, this valuable little book of private information for men will be sent by return mail in plain sealed envelope. Please call or write today.

There is a new and marvelous method for restoring lost manly strength, for renewing the vigor of youth, which every man should know of, a self-restorer which operates without the use of drugs or medicines, a new way to treat yourself and by which it is my firm belief any man anywhere who is content to lead a decent life, free from excesses and dissipations may be almost certain to restore his full manly vigor snd strength, if he but makes the little effort that is called for in connection with the use of a little vitalizing appliance which I have patented and am now distributing all over the world.

Please remember that a man is not one day older than he actually feels, and therefore no matter what your age, if you are young or elderly, married or single, large or small, if I can show you reader, how you can yourself actually add to your system, nerves and blood the very nerve force or vital vigor which may have been drained away, and which is necessary to make you strong, vigorous, and capable again, then I have shown you the real secret of perpetual youth, and how you can again be filled with vitality and again be just as powerful in your influence and just as thoroughly manly in your capacity as the biggest, fullest blooded, most successful fellow of your acquaintance.

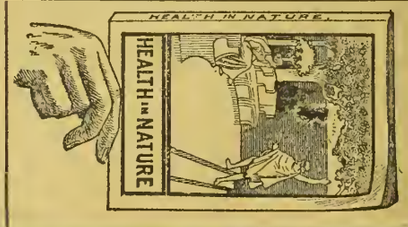
HEALTH IS HAPPINESS

I call my vitalizer a HEALTH BELT because it is worn around your body in the position of an ordinary belt. It sends a great, soft, strength-giving supply of a force I call vitality into your body nights while you sleep. I would like you to call or to write and get my free book, that you may know the whole wonderful account of what my HEALTH BELT is doing for others who were looking for a safe and sure means to restore vigorous health and to rid the body of pains, aches and weaknesses.

Note—My HEALTH BELT, with special attachment, is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

86-PAGE BOOK SENT FREE

My 86- page illustrated booklet (pocket size) was compiled by me to answer fully and correctly those questions which are asked privately by any man needing new strength and who seeks personal advice pertaining to the ailments and weaknesses he wisbes to overcome. The book, fully illustrated, with photo reproductions contains much that a single or married man should know. It also fully describes my HEALTH BELT and tells how you may secure one to use in your own case, should you decide you want to use one. Remember the book is sent absolutely free, in plain, sealed envelope. Why not write for a copy today?



DR. M. F. SANDEN.
140 Yonge St., Toronto, Ont.

Dear Sirs—Please forward me your book as advertised, free.

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12 Tumors Removed Without An Operation

Silver Lake, Ont., Sept. 20, 1909.

Dear Mrs. Currah,—I am enjoying better health than I have for eight years, and I think I am entirely cured. I have none of the old symptoms. I am very grateful for my present health, and think Orange Lily is the greatest treatment for women the world knows. Its use in my case caused 12 tumors or growths of some sort to be expelled. Some were as large as a hen's egg, and others smaller, down to the size of a walnut. You may use my case in your advertisement, for it is the solid truth, and pen cannot describe all the good it has done for me. Mrs. Louise E. Bolteridge.

This letter gives an indication of the positive benefits that always follow the use of Orange Lily. It is an applied treatment and comes in direct contact with the suffering organs. It produces results from the start in all cases of women's disorders, including painful periods, falling of womb, irregularities, leucorrhoea, etc.

I will send a sample box containing 10 days' treatment absolutely free to any suffering woman who has not yet tried it if she will send me her address. Enclose 3 stamps and address MRS. FRANCES E. CURRAH, Windsor, Ont. 4

FOR SALE BY LEADING DRUGGISTS EVERYWHERE

You Can Cure CONSTIPATION By The Use Of MILBURN'S LAXA-LIVER PILLS.

A free motion of the bowels daily should be the rule of every one, for if the bowels do not move daily constipation is sure to follow and bring in its train many other troubles when the bowels become clogged up. You get Headaches, Jaundice, Piles, Heartburn, Floating Specks before the Eyes, Catarrh of the Stomach, and those tired weary feelings which follow the wrong action of the liver.

Mrs. Elijah A. Ayer, Fawcett Hill, N.B., writes:—"I was troubled with constipation for many years, and about three years ago my husband wanted me to try Milburn's Laxa-Liver Pills as they had cured him. I got a vial, and took them, and by the time I had taken three vials I was cured. I always keep them on hand, and when I need a mild laxative I take one."

Milburn's Laxa-Liver Pills are 25c. a vial, 5 vials for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

It would surprise you to know of the good that is being done by Chamberlain's Tablets. Darius Downey, of Newburg Junction, N. B., writes, "My wife has been using Chamberlain's Tablets and finds them very effectual and doing her lots of good." If you have any trouble with your stomach or bowels give them a trial. For sale by all dealers.

will eventually be repaid for their teaching, as children need constant guarding and training to bring them up properly.—A paper read by Miss Grace C. Fraser at a meeting of the Rexton Branch of the New Brunswick Women's Institute.

To Clean Straw Hats.

The following suggestions for cleaning straw hats, taken from the "Millinery Trade Review,' may be helpful to some who wish to remodel their last summer's hat.

The milan and rough straw braids in natural color may be cleaned by washing in a solution made by dissolving one tablespoon of oxalic acid in one pint of water.

To test the strength of a solution pour a little on a pine board. If it bubbles the solution is too strong, and more water must be added.

With small bristle brush scrub the hat quickly, beginning at the centre of the crown and working round until side, crown and brim have been washed. Rinse quickly in clear water. Place hat on end of a broom handle and whirl rapidly in the air or sunlight, so the straw will dry quickly.

When the hat is dry press in shape under a damp cloth. The acid will take off most of the gloss.

To clean the natural colored leghorn wash thoroughly with a paste made of the juice of one lemon and two tablespoonfuls of sulphur. After it has dried, brush the dry powder off

Little can be done for the white chip hat—that is sunburned and soiled, except to cover with gauze or other thin material.

A mixture of plaster of paris and gasoline made the consistency of thick paste may be covered over the soiled portions of the hat. When dry remove with a stiff brush. This will help to cover up the soil rather than to cleanse.—Charlotte E. Carpenter, Colorado Agricultural College.

Carpet Beating.

For carpet beating most of us have to fall back on the time-honored way of beating by sticks. A thorough cleaning can never be effected without some small damage to the fabric, but it certainly can be lessened if there is a solid surface underneath, and for this reason spreading on a grass plot and beating on both sides with ordinary stout canes is preferable to hanging on a line. When beaten, a carpet should be folded lengthways ready for relaying on a layer of felt, straw, or paper over the boards. To prevent undue wear in certain places the furniture should be rearranged or the carpet itself occasionally turned about. This is easily done with a square. In the case of a fitted carpet the seams may be unpicked (save at the edges) and the centre widths transposed, in the same way that sheets are turned sides to middle.

Home Hints.

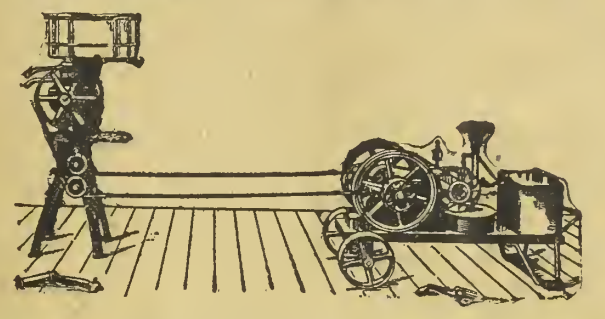
To teach children truthful habits, always tell the truth yourself.

Every housekeeper should keep on hand a stock of asbestos mats; they cost only a trifle, and are almost indestructible. When put under pots and pans they will prevent food from burning; they are also excellent to put over things in the oven when there is danger of burning them.

When a baking dish gets burnt in the using it should not be scraped. Simply place a little water and ashes in it and the burnt surface will come off easily without injuring the dish.

When storing blankets wrap them in plenty of newspaper and lay slices of yellow soap in the folds. Moths dislike soap and printers' ink.

International Harvester Cream Separators



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PIGS and calves thrive and grow fat when fed with warm, skim milk. You cannot get warm skim milk to feed them unless there is a cream separator on your farm. There is money enough in this one advantage to pay for a cream separator the first year. This is specially true if you buy a close skimming, durable International Harvester cream separator—Lily, Bluebell or Dairymaid.

These separators have all the points which make cream separators good. They have the balanced bowl, the self-adjusting neck bearing, the tool steel spindles, the bronze bushings, the spiral gears, the low supply can, the high skim milk spout, and the open, sanitary base, without which no separator can be satisfactory.

Some dealer near you handles I H C separators. If you do not know, write us and we will tell you who he is. We will also send you our cream separator book which tells you why it pays so well to buy an I H C separator.

International Harvester Company of Canada, Ltd

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

PURE BRED SIRES

THE LIVE STOCK BRANCH

Dominion Department of Agriculture.

WILL PURCHASE during 1914, a number of CANADIAN BRED Stallions, Bulls, Boars and Rams.

Animals must be of right type, in good breeding condition and of the following ages.

Stallions, three to five years.
Bulls, not under one year.
Boars, not under six months.
Rams, not under six months.

All stallions will be purchased subject to veterinary inspection and bulls subject to the tuberculin test.

Breeders in Eastern Canada having CANADIAN BRED male animals for sale, filling the above requirements and registered or eligible for registration in the Canadian National Live Stock Records, are requested to communicate with the Live Stock Commissioner, Department of Agriculture, Ottawa.

The purchases of stallions and bulls will be made during the current spring months. The purchases of rams and boars will be deferred until the autumn.

Communications must state age and breeding of animals offered and price asked.—60271.

FLORICULTURE.

Correspondent wrtes rom St. Stephens, N. B.:—Please tell me the names of the plants from which leaves enclosed were cut; also if they are good house plants. What is the best plant for a cemetery grave that will flower all summer and when should it be planted? Will Nasturtiums planted as late as this be of any use this summer; also do they require sunny or shady places?

The leaf that looks like a spotted maple is Abutilon Saritzii The grass like leaf is Drecina Indivisa and the Geranium is Madame Tallerci—all good house plants. The best annual flowering plant for covering the surface of a grave is probably the dwarf Alyssum (Tom Thumb of Little Gem) They make a carpet of sweet smelling white flowers alll summer, should be planted the first of June, after all danger of frost is over. Nasturtiums planted the middle of June would be all right only a little late. They require a sunny situation to give best results as regards bloom.

L. T. T., Lancaster, N. S., writes:—Last year my hardy roses had hardly leaved out before the insects appeared. They turned the leaves all white, eating out all the green part. What can I do for them if they come this year.

The insect is the Rose Slug and it is most extraordinary to have them so early. Sprinkle them as soon as you find them with a solution of one large spoonful of hellibore to a gallon of water. This should be applied once a fortnight from the time the fist ones appear.

"Hyacinth" of St. John, writes:—Would you kindly give me a little information about a Weigalia shrub that grows on our lawn. It is quite an old bush and has grown to be very one-sided. There is a large number of new shoots coming from the bottom. It did not flower at all last year and the old plant does not seem very healthy. The back is covered with a sort of moss.

You had better cut out the old one-sided wood and select about ten of the strongest shoots. Cut out the others leaving your shoots in such shape in the fall. Give it a good mulch of strong manure. If the old wood did not bloom last season it is not likely to do so again especially if mossy, which indicates age and decay, so the sooner it is removed the better.

Amateur, Amherst, writes:—I have a fine bed of tulips just going out of bloom. I wish to plant the bed with scarlet Geraniums. As the bulbs are quite thick to gather it would probably be necessary to remove the bulbs. How should I do so without injuring the bulbs?

As soon as the Tulips are done blooming dig them up carefully (do not cut the leaves off), dig a hole in an out-of-the-way corner of the garden. Plant as close as you can pack them, covering so that the leaves are out of the ground. As soon as the leaves and stalks turn yellow and wither up—usually about the middle of July—dig them up and place in a dark, cool place. Packing in dry sand is excellent. Dry them in the shade before putting away. They will then be in good condition for replanting in October again. Another good way is to let them stay in this out of the way place until October, then dig them up and plant in beds.

Clean Barns Prevent Tuberculosis.

(Continued from page 568)

posed to sunlight. It is a disinfectant always ready to work without cost. Sunlight is also necessary to the health of animals. Man deprived of it for any length of time, as prisoners in jail, become pale, and lose the appearance of health. Cattle that are constantly confined in dark stables become lowered in vitality, and are ready to catch any disease with which they come in contact. For these reasons, the cow stables should have plenty of windows on two or more sides if possible, so that the sunlight can reach every part of the interior some part of the day.

"Pure air is also very important. In badly ventilated stables, the air is breathed over and over again, until it becomes more or less poisonous. Animals kept in such conditions become gradually reduced in vitality. This change may not be noticeable to the observer, but becomes apparent if the animal is exposed to disease. It readily contracts disease, and does not recover from it readily.

"Since the manure of tuberculous cattle often contains living tubercle germs in vast numbers, the importance of keeping it well cleaned out of the stable is readily seen. Such manure is not only dangerous to other cattle in the stable, but may be the means of conveying the disease to children. Often cows are seen with their flanks encrusted with dry dung. Parts often break off while the cow is milked, and some of it is likely to fall into the milk pail. The larger lumps are strained out, but the smaller particles remain, and also the tubercle germs which are small enough to pass through any strainer. These stay in the milk, and make it a fruitful cause of the disease in the young.

"Stables should be cleaned out often, and the manure put where it cannot be picked over by hogs or cattle. These animals are easily infected in that way. Cleanliness also includes keeping the walls and ceilings free from dirt, dust and cobwebs. These are all good resting places for disease germs.

"Whitewashing the interior of the stable at least twice a year is a great aid to cleanliness, and also has a distinct effect in destroying disease germs."

A New Agricultural School for New Brunswick.

(Continued from page 569)

course to be held in New Brunswick the attendance was very encouraging. A noticeable feature was its steady increase as the course progressed: those who attended one session remained if possble for the rest.

The Teaching Staff.

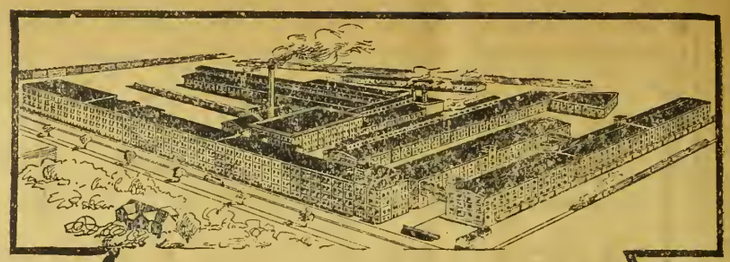
It is panned to have the men of the Provincial Department of Agriculture do the teaching in the schools of Agriculture, and the staff is now being strengthened for this purpose. At the short course this winter a large number of outside men of high standing were brought in to assist with special lines of work.

A Special Meeting

On Friday, March 27th, the last evening session of the short course took the form of a special meeting at which the speakers were Mr. R. Newton, the Principal, Mr. F. B. Carvell, Member of Parliament for Carleton County, in which the school is located; Mr. W. W. Hubbard, Superintendent of the Dominion Experimental Farm at Fredericton and the Hon. J. K. Flemming, Premier of the Province. Unfortunately, both the Minister of Agriculture, Hon. James A. Murray and the Secretary for Agriculture, Mr. J. B. Daggett, were compelled at the last moment to send messages regretting that circumstances prevented their attendance.

The Principal occupied the chair, and after welcoming the large assembly which packed the hall, spoke at some length on the function of an agricultural school. Referring to the modern problems of depletion of the rural population with consequent under production and high cost of living, he pointed out that farming must be made both more profitabe and more pleasant, and emphasized the right of the farmers' sons and daughters to special training in rural citizenship in order that they might make the most of their opportunities. Figures were quoted to show the need for and the possibilities of better farming, and some of the causes of under-production were discussed. It was shown that "better business" is the greatest need of modern agriculture, and, therefore, that courses in rural economics and business methods should be given a prominent place in the curriculum of an agricultural school.

Mr. Carvell, the next speaker, expressed the pleasure which it gave him to hear of the success of the first short course, and gave his hearty endorsation to the agricultural school work. He spoke of a visit to Denmark which he had made a short time ago, and of



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82-F649. Startling enough, surely, and the biggest of surprise bargains it is. Better hurry your order along, as the quantity is limited, and great opportunities are short-lived. A Skirt no woman need be ashamed of, for in fit, appearance and comfort it can not be distinguished from one more than double the money, or even more. You take no chance, for if not just what you want our guarantee of money back protects you. Made in five gores, plain panel back, button trimming. 60 inches around the lower hem. Navy only. In waistband sizes 22, 23, 24 or 25 inches. Lengths 37, 38, 39, 40 or 41 inches (with deep hem). The bargain price, each..... **1.69**

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the great possibilities in highly intensive farming, which that visit had demonstrated to him. The comparative neglect of live stock in New Brunswick was not due, he considered, to any lack of natural advantages for this kind of husbandry. With the introduction of better methods of farming he hoped to see greater production year by year of both live stock and field crops.

Mr. Hubbard spoke for some time with regard to the rural problem. As far as practical framing operations in this province were concerned, he considered the greatest need was for more and better live stock husbandry. The speaker made a very interesting comparison between the natural advantages of New Brunswick and the Prairie Provinces, showing that many young men who had gone west had failed to appreciate their opportunities at home. He also compared the cost of living of farm life with that of life in a town or city, using figures to draw attention to indirect revenues and large savings on the farm, with which it is not always credited. The speaker had given several addresses during the short course, and expressed his pleasure at being identified with the work.

The Premier's address was very enthusiastically received. He outlined the Government's policy with regard to the agriculture of the province, and for longer courses at Woodstock next winter. It must not be forgotten that about one-third of the people of New Brunswick were French Acadians, and an agricultural school with French instruction must be established. The aim was to work out a policy which would place agricultural instruction within the reach of every farmer's son in the province.

Lightning Rods.

A bulletin advocating the use of lightning rods on buildings has just been issued by the Ontario Department of Agriculture. Prof. W. H. Day, of the staff of the Ontario Agricultural College, is the author of this Bulletin, and he demonstrates, after a series of investigations cobering thirteen years, that lightning rods are the protection that science claims them to be. In Ontario in 1912 the efficiency of rods was 94½ per cent. From the reports of insurance companies Prof. Day found that in every 200 farm buildings insured, 42 were rodded, which is 21 per cent, but out of every 200 farm buildings struck by lightning only 3 were rodded. In this connection Prof. Day observes "we should have expected 42 if the rods were no good."

Lightning rods in Iowa are recorded as showing an efficiency of 98.7 per cent, and inspected rods in Michigan show an efficiency 99.9 per cent. Records in Iowa show that for the eight years 1905-1912 the average number of insurance companies carrying risks on rodded buildings was 55. The highest number of companies reporting in any one year was 68 and the lowest 46. The total lightning claims paid by all these companies for the whole eight years on rodded buildings was only $4,464.30—an average of $10.15 per company per year. On unrodded buildings they paid lightning claims amounting to the large sum of $341,065.32, which is an average of $775.15 per company per year, and the number of unrodded buildings was the same as the rodded ones.

In Michigan where a company insures only rodded buildings which have been inspected a risk of $55,172,075 was carried during four years and damage claims arising from the lightning during that time totalled only $32.

These and other proofs submitted by Prof. Day are practical demonstrations of the scientific fact that lightning rods properly installed are a protection. In giving directions for the proper rodding of buildings, the reader is reminded that lightning is electricity. Prof. Day asserts that rods should be in metallic connection with the building and that no insulators should be used. This method of attachment is directly opposite to that adopted when lightning rods were first used.

Parcel Post Hints.

Wrap and pack your parcels securely.

Most of the damage and losses are due to insecure packing.

Address your parcel correctly and plainly.

Write your own name and address in the upper left hand corner.

Packages containing eggs, should be marked "eggs."

Packages containing perishable matter should be marked "perishable."

Packages containing liquids, jellies, etc., should be marked "fragile"

Don't pack eggs, berries or similar product in a thin pasteboard box.

Eggs wrapped separately and surrounded in cotton or excelsior and packed in a strong corrugated wooden, pasteboard or metal box can be sent any distance.

Don't put any writing in the package unless it is a bill for the goods or a description of the contents of the package.

Do not send perishable matter so that it will arrive in the city on a Saturday evening or on Sunday — unless you use a special delivery stamp.

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HERE are some of the things that stand back of McCormick binder service. On a McCormick binder the reel has a wide range of adjustments and handles successfully, tall, short, down or tangled grain. A third packer assists in handling grain that is full of undergrowth or that is very short. The tops of the guards are nearly level with the top of the platform, allowing short grain to pass freely without obstructing the guards or knives.

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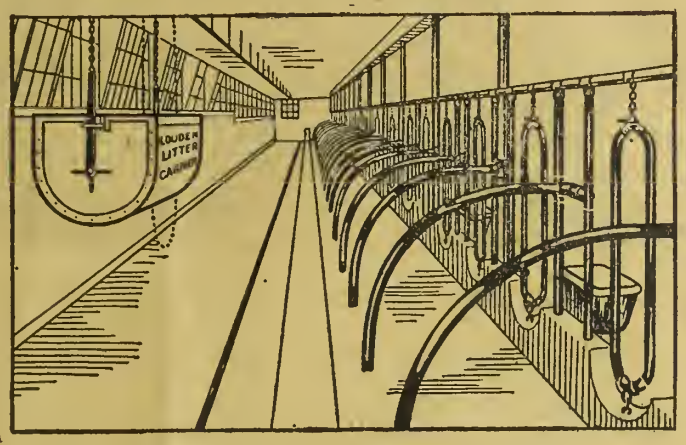

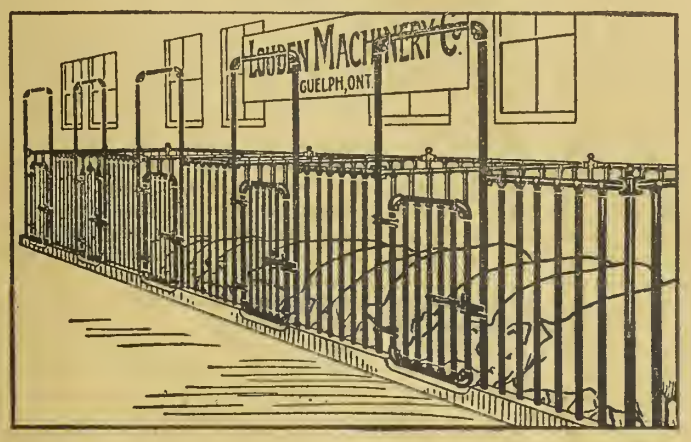

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Frrge Clay Mixture.

Farmers who have a home blacksmith shop may sometimes need a forge-clay mixture. The following item on this question is by J. W. Lawrence, of the Colorado Agricultural College:—"The following mixture for building up around the hearth of a blacksmith forge will be found very serviceable; it dries hard and will resist heat in a very satisfactory manner. Take ten pounds of sal ammoniac and ten pounds of cast-iron turnings and mix together dry. After mixing thoroughly make the mixture into a mortar by adding water and then apply to the forge top at once."

It is claimed that uncooked fresh mutton fat is better than oil as a preservative against rust in tools.

If a saw, hammer, plane or other steel tool is damp, do not put it away in that condition. Lay it on the warm stove for a few minutes until the metal warms up enough to dry off.

In order that a brood mare may deliver a strong healthy foal, she must have plenty of exercise. Ordinary farm work is the very best kind of exercise for her. There is no reason why she should not pay her board bill in the harness. Exercise does not mean heavy lugging on rough or slippery ground; it does not mean fast driving and over-heating, but regular, everyday work in the field, even right up to the day of foaling Accompanied with this should be careful feeding and watering. Like all other questions of live stock management, it calls for the use of "common sense."

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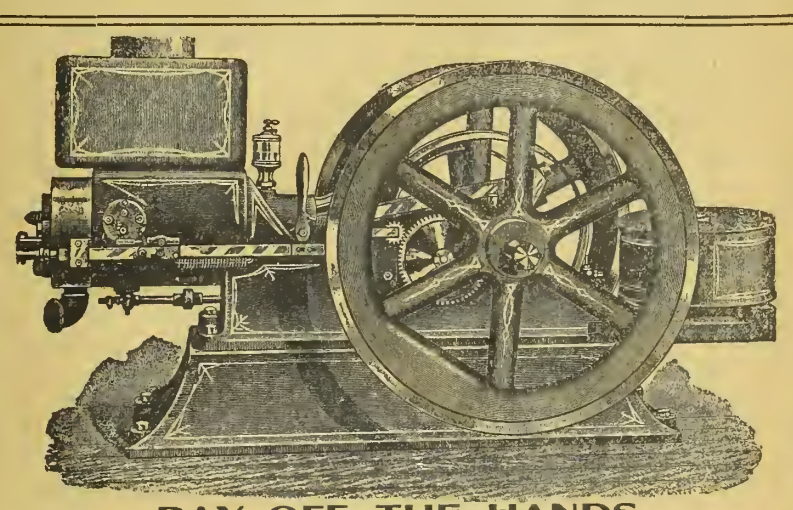

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Water-Proofing Concrete.

Concrete needs no waterproofing if properly mixed and laid. It is because the mass is porous that water leaks through. If we stop to consider the materials entering into concrete and the theory upon which its structure is based, this fact will become clear to us.

Concrete ordinarily contains sand, stone and cement. The stone alone would be extremely porous, for the spaces between the individual stones is quite marked. The theory is that the sand fills these spaces, yet even then there are spaces between the sand grains and water will pass quite readily. These spaces, however, are filled with the cement, the particles of which are so very much smaller than the grains of sand. The cement particles do more than merely fill the spaces between the sand grains; they cover the individual grains and cement them together, imbedding the stones within the whole mass.

It is apparent that if all the spaces are filled, water cannot leak through while if the mass is filled with tiny pores not only will water pass through but these pores or tubes will suck up water or absorb it from the ground and from the moisture which condenses from the atmosphere. Such will be the case if the concrete is 'lean,' that is, if it does not contain the proper proportions of materials or the proper sizes of particles In this case there are but two things to do in order to remedy the defect. Either the pores must be plugged up with some substance which is not porous to water, which is not dissolved by water, which may be easily and cheaply applied and which will not chemically attack the concrete, or a separate layer of waterproof material must be laid against the surface of the concrete, using the concrete merely for its strength and trusting entirely to this auxiliary layer to repel water.

The construction of waterproof concrete needs carefulness and thorough workmanship, but when we consider the difficulty of making a real lasting job of waterproofing after a wall has commemced to leak it will be seen that care in the mixing and laying is more than repaid. There are several good waterproofing proportions, differing but slightly but the 1-2-1-2-4-1-2 is most commonly used. This means one part of cement two and one-half parts of sand and four and one-half parts of stone. With these proportions four barrels of cement will make three cubic yards of concrete when mixed with sand and stone.

It is assumed that Portland cement is used. It may be purchased all ready for use. The sand and stone may be obtained anywhere. It is important, however, to have them clean with no mud or sediment clinging to them or mixed with them. To be sure of this they may be piled on boards laid with a sloping surface, and thoroughly drenched with water, turning them over several times in order to clean the bottom and interior layers. The sand must be coarse for the most economical results. The total spaces between the particles of fine sand are more and the total surface of the sand particles which the cement must coat, is greater with fine sand. Hence, the finer the sand the more cement must he used and the more expensive the concrete. Coarse sand with a small amount of fine sand mixed in gives the best results. It will often pay to buy sand of the proper character, rather than use a bank of fine sand already at hand.

Contrary to the prevalent idea, gravel makes a better concrete than broken stone. It is more dense and it id stronger after it is aged. Particularly is this true of quartz pebbles.

The concrete should be mixed a little wetter than is ordinarily done and the mixing must be thorough in order that the proportions may be properly intermingled. In laying, great care must be exercised not to separate the ingredients. cf the material is dropped from a wheelbarrow or poured from a bucket so that it drops several feet, the job may be spoiled because the stones will all fall together leaving the cement and sand stoneless. After laying, the concrete should be tamped slightly in order to drive out the air and fill the voids. Following this the surface layers should be spaded. That is, a spade placed in between the wall and the form and drawn up and down in order to slightly puddle the surface, driving back the gravel a little and leaving the surface with a grout as nearly airless and non porous as possible.

By following these suggestions, the concrete cannot be penetrated by water. But concrete that will not absorb moisture to some extent cannot be made. It is only possible by adding some waterproofing compound to the concrete when mixing or by the treatment of the concrete surface afterwards. The mixture laid under the conditions above given is dense, and close grained due to the excess of cement and is without air bubbles because of the excess water. It is filled with very tiny capillary tubes however, which although preventing the passage of water, will still absorb moisture just like brickwork. To prevent this absorption any one of the following methods may be adopted.

Here again we must consider whether or not it is old work or new work which we desire to protect. If old work, only surface coatings can be used and their object is a filling of the pores or tubes spoken about. Four substances are commonly used, namely, cement grout, asphaly, paraffine and an alum-soap compound.

One of the most effective waterproofings is known as the Sylvester used in waterproofing new work. A hot castile soap solution is made by dissolving three-fourths of a pound of soap in one gallon of hot water. An alum solution of half a pound of alum to four gallons of water is then prepared. The substances are thoroughly dissolved and alternately applied to the wall the latter being perfectly dry. The hot soap solution is first applied covering the work. A flat brush is recommended for this purpose by experts. After 24 hours a coating of the alum water is put on and allowed to dry for 24 hours. In this way alternate coatings to the extent desired may be used, allowing a full day to elapse between the coatings. There is a chemical process which takes place bteween the substances used, the resulting compound plugging up the pores in the cement. The cost of this process for two coatings of each material will be from 35 to 40c per square yard.

Paraffine, although rather expensive, is often used for small jobs. It may be melted and applied while hot the walls also being slightly warmed or it may be dissolved ia some liquid solvent sich as benzine.

Asphalt and other bituminous products are the easiest to handle and the surest of results in unskilled hands. They are applied as liquids, allowed to dry and a second coating given. Probably the cost for two coatings will not exceed 25 to 38c per square yard.

Cement grout is a mixture of cement and water very liquid and applied like paint. It is not very efficient on old surfaces, as it readily peels off after a time. For a temporary repair this or a "neat" cement coating—a mixture of cement, sand, and water or cement and water alone just plastic enough to handle with a trowel—is perhaps most universally used.

The surface coatings spoken of are as valuable for concrete blocks, brick and porous stone as for straight concrete work. Good brick needs very little attention although it will absorb three to five per cent. of its weight of water, but such brick is

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expensive and seldom met with in practice. The common brick used will often absorb 15 to 25 per cent. of its weight of water. Concrete blocks, especially, if made by the continuous tamping process, known also as the dry process are extremely porous.

While the above surface coatings appear to be satisfactory for simple work in large structures such as dams, reservoirs and sewers, much more care must be taken. Strong layers are used because of the heavy water pressure against them. Felt or burlap when saturated with tar or pitch, rolled in a continuous layer against the wall and held there, is not only a satisfactory water retainer but also prevents the leakage of foul gases which chemically attack the concrete.

A method, known as the integral method, is practical where it would be too expensive to use thorough workmanship on the concrete. This consists in the addition to the cement when mixed of some fine dry powder consisting of extremely small particles, usually alum and lime. These, because of their size may fill in the spaces between the cement and sand grains and make the whole structure more dense. Usually only the cement which lies near the surface is thus treated.

Still another treatment is to add some soap or oil emulsion to the mixture. This forms a jelly within the concrete and fills the pores.

Lastly, the well known Sylvester process spoken of above is used, Alum is added to the cement and castile soap is added to the water with which the mixture is made. Chemical action then goes on in the mass, forming a compound which, as before, fills the spaces.

Mnay other substances may be used. In fact, one farmer in waterproofing a cracked wall filled the cracks with cornstalk pith and wet it, causing it to swell and fill the cracks completely. The whole object of waterproofing is to fill all the holes, pores and cracks. Any method of doing this is entitled to consideration.—S. J. G.

New Spraying Possibilities.

Addressing the recent Maine farmers' week at the college Prof. B. S. Brown advanced the latest ideas on spraying. He said: A recent development in the use of insectticide is the introduction of zinc arsenite to take the place of arsenate of lead. Only a few years ago, paris green was the common source of arsenic for poisoning insects. Later it was found that there was so much free arsenia acid in paris green that it burned the foliage, and arsenate of lead was substituted. This first took the form of a paste, but later was used as a powder, and its strength was accordingly increased. Now zinc arsenite is being tried out as a substitute, in various places. It is much cheaper and contains a very considerably greater amount of arsenic, the poison principle. The arsenates of lead run 17 per cent. arsenc oxide, while the zinc arsenite runs 40 per cent. The latter will stay on the foliage equally as long as the other, and in many ways has been found superior. The one drawback so far is a tendency ofof the zinc arsenite to burn the more tender foliage. However, it has been found that if used with bordeaux or lime-sulphur, this injury is eliminated.

Another recent development in the use of spray mixtures is the gradual adandoning of the self-boiled lime and summer mixture for summer sprays, or foliage sprays. It has been found by various experiments that the regular stock solution of lime-sulphur spray, diluted to the proportion of about one to 40 gives just as good if not better results than the so-called self-boiled lime-sulphur mixture. The reason for this substitution is the cheapness of the strongly diluted mixture as compared with the self-boiled. Much less sulphur is wasted and the lime is much more consumed than in the self-boiled mixture. In addition to this, it does not deteriorate so easily, and can be made and applied at short notice. A dilution of 1 gallon of the regular solution of 31 degrees Baume to 40 gallons water is a safe mixture for all apple foliage. This is equally efficient for fungus troubles and for some of the more delicate insect pests.

Another of the more recent developments in spraying work is the substitution of the western method for the control of the coddling moth. The common practice in the east for its control is to spray the tree just after the petals fall and while the young apples are still standing erect, with a mixture of arsenate of lead, about four pounds to fifty galllons water, using the so-called mist of fine spray nozzle. The western method is to use zinc arsenite about one pound to fifty gallons water, using a high pressure power outfit and a course nozzle. The course spray, at high pressure, forces the poison directly into the open calyx. The results of various experiments have shown that one spraying, with the high pressure weaker solution and coarse nozzle gives a very considerably better result than the common eastern low-pressure mist spray does.

The West Virginia experiment station found 2 per cent. wormy apples where the high pressure was used, and 4 per cent. with the low pressure, and 30 per cent. wormy on the check plot. However, the high pressure was given only one spray while the low pressure had two. Hence, the saving in time and increased efficiency would warrant the trying of this experiment, under New England conditions.

In regard to spraying machinery, various changes have taken place in the last two or three years. For orchards of 1000 trees or more, power sprayers are much more efficient and more economcal than any other kind. A good power sprayer should hold not less than 200 gallons of mixture. The pump should maintain a constant pressure of 300 pounds to the square inch if necessary.—N. E. Homestead.

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MESSRS. CATESBYS LIMITED (of London),
Dept. "H" 119 West Wellington Street, Toronto, Ontario:

Please send me your new season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit—overcoat.*

Full Name .....

Full Address .....

*If you only want overcoat patterns, cross out the word "suit." If you only want suitings, cross out "overcoat."

Maritime Farmer. Coupon No- 4.

We Want Every Reader

of the Maritime Farmer to Sign and Mail this Coupon

Mail it and get a free set of Catesbys' suit or overcoat patterns, and be convinced that it is possible to buy a better suit in London, England, for $13,25 than could be bought in Canada for $25.00.

You've heard that clothing is much cheaper and better in England—you know that English frbrics are the finest in the world.

Think, then, of the advantage of securing a suit made of the best English woolens, cut in the latest Canadian, New York or London style (whichever you prefer), and tailored to your individual measure, delivered to your door, all duty and carriage charges prepaid, for about half what you would have to pay if you bought it in Canada.

Isn't it worth while, then, to get your patterns and see what there is in this offer? You can't lose anything by it, but you may save a whole lot.

All you need to do is to fill in the coupon and mail it to our Toronto office. By return we'll send our latest Style Book, 72 pattern pieces of fine English suitings, a letter explaining our system of doing business, and a self-measurement chart that is so simple you can't go wrong in taking your own measure.

We will also send you testimonials from Canadians who at first were as sceptical as you may be, but who are now satisfied and regular patrons.

Write now. If you don't want to cut this paper, send a postcard or letter. We'll mail book and patterns anyway. But to get them you must mention the Maritime Farmer.

CATESBYS LIMITED,

(Of Tottenham Court Road, London, Eng.)

119 West Wellington St., Toronto

The "Carrington," A very dressy model, Full three button, double breasted style, in tweed or fine serge. $13.25. All duty and carriage charges paid by us.

Had Salt Rheum.

Could Scarcely Do Work.

Skin diseases are invariably due to bad or impoverished blood, and while not usually attended with fatal results are nevertheless very distressing to the average person.

Among the most prevalent are: Salt Rheum, Eczema, Tetter, Rash, Boils, Pimples, and Itching Skin Eruptions.

Burdock Blood Bitters drives out all the humor from the blood, and makes it pure and rich.

Mrs. Ellwood Nesbitt, Apsley, Ont., writes:—"I had Salt Rheum so bad I could scarcely do my work. I took two treatments of doctor's medicine, but they did me no good. A friend told me his wife had had Salt Rheum, and that Burdock Blood Bitters had cured her, so I got a bottle, and before I had it all taken my hand was better."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Heaves

AND HOW TO CURE

—A Standard treatment with years of success back of it to guarantee results is

Fleming's Tonic Heave Remedy

Use it on any case—No matter what else has been tried—and if three boxes fail to relieve, we will Refund full amount paid. Further details in

Flemings's Vest Pocket Veterinary Adviser

Write us for a Free Copy

Best Ever Used.

Dear Sirs;—Enclosed find $1.00 for 1 package of Tonic HeaveRemedy. I used a package last year and completely cured a case of Heaves of some 3 years standing. H. B. BURKHOLDER, Lillooet, B.C

Per Box $1.00, 3 for $2.50

FLEMING BROS., Chemists
41 Church St. - Toronto

SPRING TONIC

For purifying the blood and cleansing the system there is nothing just as good as

Gates' Life of Man Bitters and Invigorating Syrup

WHY?

Because no other medicine known to medical skill will extract the water from the blood, removing it from the system in the natural way. They cleanse every organ in the body so that nature resumes her original standing.

Try them and be convinced of their purely vegetable and healthgiving properties.

Sold everywhere and by wholesale and retail druggists.

C. Gates, Son & Co.
Middleton, N. S.

Village Farm, Near Lake.

Owner with a new position in the West, must sell quickly; splendid 45-acre farm with family cow, heifer, poultry, wagons, harness, machinery, tools, all household goods, beds, sewing machine, dishes, etc. included; a great chance to move right into a home all settled; just a step to all village advantages; rich soil machine worked; lake-watered pasture: ample wood, timber and fruit; fine 2-story, 8-room house, newly painted and papered; good barn, shed, ice and poultry houses; only $1850, easy terms. For full details see page 4, "Stroud's Spring List of Farm Bargains," just out; choice selections of real bargains at wonderful low prices throughout N. S. and N. E. States; send today for your free copy, Address Farm, care of Maritime Farmer Office.

Advertise in the Maritime Farmer

"Ruthlands"

(Contiued from page 567)

tised with disk harrow, with oxen because of their extra suitability for such work. About the first part of June a cover crop of vetches or clover is sown, and this plowed under in the fall. Fertilizing is done by using part barnyard manure, and part Slag, Potash, and Nitrate Soda. Pruning is practiced in all times of the year, except in frosty weather.

A nursery of 85,000 young trees is one of the industries of this farm, where clean stock can be had, guaranteed free from the insect pests of imported stock

A Pair of Oxen on "Ruthlands" Farm, weighing 4,000— A Ton each

Four, and sometimes five sprays of Lime-sulphur is used on the orchard. Two power sprayer are used for this, with a capacity of 300 and 500 gallons respectively. Each sprayer is supplied with a 2½ h. p. gasoline engine, for spray force. With this outfit considerable can be accomplished in a day.

While the young trees are growing, root crops are cultivated between the rows, such as potatoes, turnips, mangels and corn. Twelve hundred bushels of pottoes are grown each year, eight thousand bushels of turnips, fifteen hundred bushels of mangels, and one hundred and fifty tons of corn. These, with from 175 to 200 tons of hay is used on this farm each year.

The farm is run by a foreman, with an average, in summer, of from 20 to 25 hands, in winter this number is reduced to five hands.

A silo, 16 feet in diameter, and 34 ft. high, supplies considerable food for the cattle. The corn is hauled from the fields and cut up by a 15 h. p. gasoline engine, and blown through a pipe into the silo. Towards spring, when the vegetables are used up, the silo is opened, and it is wondeful with what relish the cattle enjoy it.—R. E. Caldwell, Annapolis Co., N. S.

The Compost Heap.

(Continued from page 571)

balancer, and the manure thus made to go farther.

The uselessness of commercial fertilizers on light, porous soil, is well known. On the other hand, the value of barnyard manure lies in retaining the moisture on the light soil, and the clay soil, on the other hand, is made more porous, and also provides a breeding and feeding ground for valuable bacteria.

If farmers have, of necessity, to purchase commercial fertilizers, they cannot be too careful in assuring themselves that they are securing a high-grade article, there are so many practically worthless "slags" on the market that farmers should protect themselves as much as possible by buying from reliable dealers.

Where the plowing under of clover, and other green crops are practised as a means of supplying the soil with valuable humus and nitrogen, with the addition of barnyard manure and the com post, very little, or no fertilizers will be necessary.—R. E. Caldwell, Annapolis Co., N. S.

We pay highest Prices For RAW FURS And Remit Promptly

FREE

Sixty Thousand trappers send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada. Write to-day

HALLAM'S TRAPPERS GUIDE
French or English

A book of 96 pages, fully illustrated. Game Laws revised to date—tells you how, when and where to trap, bait and traps to use, and many other valuable facts concerning the Raw Fur Industry, also our "Up-to-the-minute" fur quotations, sent ABSOLUTELY FREE for the asking.

Address JOHN HALLAM, LIMITED Mail Dept. 437 111 Front St. East, TORONTO

Increase Your Dairy Profits

by giving your dairy herd the most comfortable quarters that can be built. Be your own dairy inspector and insure the absolute purity of your dairy products by building your stable and spring house of a material that insures sanitary conditions, and which, at the same time, is economical.

Build with Concrete

It is the most economical material for every kind of farm building, for it requires no repairs, never wears out and never needs painting. Dairy stables of concrete are clean and sanitary. They keep the herd warm and comfortable in winter, and tend to increase both the quantity and quality of the milk.

Whether you build a stable, silo, spring house or other farm building, concrete is the cheapest material to use.

"What the Farmer Can Do with Concrete" is the title of a beautifully illustrated free book that tells all about concrete farm buildings and how to build them to save money.

Farmers' Information Bureau

Canada Cement Company Limited

718 Herald Building
Montreal

The Victoria County Seed Fair.

The Victoria County Seed Growers' Association held their Annual Seed Fair in Dionie's Sample Rooms, at Perth, N. B., on Thursday, March 26, 1914.

A fine day and good roads brought out a larger number than usual. Interest in the Seed Fair seems to be growing, judging by the larger number of exhibits. Mr. S. J. Moore, Gov. Seed Inspector, did the judging in a very satisfactory manner and pronounced the grain of excellent quality.

A number of the public spirited business men of Perth and Andover, kindly offered special prizes, which added much to the interest of the Seed Fair.

Following is a list of the prize winners:

Wheat, Red Fife—1, D. Innis; 2, J. W. Jamer; 3, Archie Smith.

Wheat, White Fife—1, D. Innis; 2, Archie Smith; 3, W. S. Phillip.

Wheat, White Russian—1, B. Bell 2, Alex. Phillip; 3, Archie Smith.

Oats, Banner—1, J. W. Stevenson; 2, J. R. Turner; 3, D. Innes; 4, Robert Henderson.

Oats, Russian—1, F. E. Henderson; 2 Robt. Henderson; 3, W. S. Phillip; 4, Alex Phillip.

Oats, Any Variety White— 1, Thos. Stevenson; 2, D. Innes; 3, J. W.

With good health at your back you can do anything.

If you are troubled with Headaches, Dyspepsia, Biliousness and kindred sickness you can't expect to accomplish much.

Dr. WILSON'S
HERBINE BITTERS

that "True Blood Purifyer" has been proved, during the last fifty years, to be the one best remedy for those diseases.

25c. a bottle at your store Family size, five times larger, $1.00.

The Brayley Drug Co. Limited,
ST. JOHN, N. B.

Deadshot Wormstick, 10c. in candy form for children. Sure and harmless. 1

Stevenson; 4, F. E. Henderson.

Oats, Black—1, D. Innes; 2, J. W. Stevenson.

Barley, 2 rowed—1, J. W. Stevenson; 2, D. Innes.

Barley, 6 rowed—1, J. W. Stevenson; 2, D. Innes; 3, F. E. Henderson.

Buckwheat, Rough— 1, J. W. Stevenson; 2, Archie Smith; 3, T. H. Manzer; 4, D. Innes.

Peas, large white—1, D. Innes; 2, Archie Smith; 3, J. W. Stevenson.

Peas, small—1, D. Innes 2, F. E. Henderson.

Beans, Yellow Eye—1, John A. Graham; 2, J. W. Stevenson; 3, B. Bull; 4, D. Innes.

Beans, any variety—1, J. W. Stevenson.

Timothy Seed—1, J. W. Stevenson, 2, Thos. Stevenson; 3, Archie Smith.

Potatoes, Cobblers—1, F. E. Henderson; 2, J. W. Stevenson; 3, Robt, Henderson; 4, W. G. Ervine.

Potatoes, Mountain—1, T. H. Manzer, 2, H. G. Ervin; 3, J. R. Turner, 4, J. W. Stevenson.

Potatoes, Carmen—1, J. W. Stevenson; 2, F. E. Henderson.

Potatoes, Bliss Triumoh—1, D. Innes; 2, Robt. Henderson; 3, F. E. Henderson; 4, W. S. Phillip.

Potatoes, White, any variety—1, J W. Stevenson; 2, Thos. Stevenson; 3, I. H. Manzer; 2, Archie Smith.

Potatoes, Red, any variety, E. H. Sisson; 2, D. Innes; 3, J. R. Turner; 4, F. E. Henderson.

Potatoes, Blue, any variety—1, Thos. Stevenson, 2, D. Innes; 3, F. E. Henderson; 4, Daniel Wark.

SPECIAL PRIZES.

$5.00 for best collection of Farm Produce grown on Dominion Fertilizer, given by C. Gallupe—Won by Donald Innes.

5 lbs. Coffee, ($2.00) for best ½ bushel. Timothy Seed, given by A. W. Stevenson—Won by J. W. Stevenson.

$2.00 for best ½ bus. Long Red Potatoes, given by Johnson & Whitcomb—Won by E. H. Sisson.

$4.00, for best all round collection of Farm Produce, given by Fraser Lumber Co.—Won by J. W. Stevenson.

$2.00 for best bus. Wheat, any variety, given by J. D. McLaughln —Won by Donald Innes.

$2.00 for best ½ bus. Mountain Potatoes, given by J. E. Armstrong — Won by Herbert Manzer.

1 Sett Bells, ($2.00), for best bus. White Oats, given by Marsten & Gilman—Won by J. W. Stevenson.

1 Book, ($1.00), for best ½ bus. of White Beans, given by Jas. Anderson —Won by J. W. Stevenson.

1 pair Slater Shoes $5.00) for best bus. Barley, given by A. Fine—Won by. J. H. Stevenson.

$1.00 for best bushel Black Oats, given by G. P. Baird Co.— Won by D. Innes.

1 Horse Blanket ($2.00) for best ½ bus. Cobbler Potatoes, given by J. J. Weldon—Won by F. E. Henderson.

Alarm Clock ($2.00) for best bushel Rough Buckwheat, given by H. W. Dickinson—Won by J. W. Stevenson.

$1.00 for best ½ bus. Yellow Eyed Beans, given by G. Miles McCrea—Won by John A. Graham.

75c. for 2nd best ½ bus. Yellow Eye Beans, given by W. A. Hanson—Won by J. W. Stevenson.

1 Tin Boiler ($1.00) for best ½ bus. Large Peas, given by H. F. Stewart —Won by Donald Innes.

$1.00 for best bushel Round Red Potatoes, given by N. J. Wootlen—Won by Donald Innes.

1 Shirt, Collar and Tie ($1.50) for 2nd best collection Farm Produce, given by Five Rose Co—Won by Donald Innes.

$1.00 for best ½ bus. Beardless Barley, given by Wade Drug Co.— Won by F. E. Henderson.

1 Pair Gloves ($1.00) for best collection Potatoes, given by J. W. McPhail—Won by F. E. Henderson.

$2.00 for best bus. Potatoes, Cobs. or Mountains, most free from disease, given by Porter Manzer Co.—Won by Herbert Manzer.

5 lbs. Tip Top Tea ($2.00 for best bus. Red Fife Wheat, given by C. W. Dickinson—Won by Donald Innes.

$1.00 for best ½ bus. Field Peas, given by Victoria County News — Won by F. E. Henderson.

F. E. Henderson, Secy.

Value of Skunks to Agriculture.

The skunk is an animal of great economic importance. Its food consists very largely of insects, mainly of those species which are very destructive to garden and forage crops. Field observations and laboratory examinations demonstrate that they destroy immense numbers of white grubs, grasshoppers, crickets, cutworms, hornets, wasps and other noxious forms. The alarming increase of the white grub in some localities is largely due to the extermination of this valuable animal.

Some of the most destructive insects in agriculture are such as do their work below ground and out of reach of any method that the farmer can apply, and it is against many of these that the skunk is an inveterate enemy. Notwithstanding all of this there is probably not an animal that is as ruthlessly slaughtered as is this one, whereas it is equally entitled to protection with, if not more so than some of our birds which enjoy this privilege—By U. S. Department of Agriculture.

"Yes sir; you will get more for your money in service and satisfaction, by using

Brandram-Henderson's "English" Paint

than you can get with other paint:

Longer Protection, because B-H "English" is primarily an endurance paint and will successfully withstand the effects of weather longer than others;

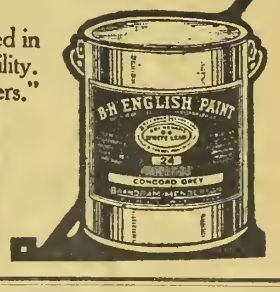
Greater Economy, because you will not have to repaint nearly as soon as with other paints; and

Greater Satisfaction, because B-H Paints retain their beauty and weather resistance for years.

The Reason, for this is that all B-H "English" Paints that can be made on a white base contain

70% Brandram's B. B. Genuine White Lead
30% Pure White Zinc.

A combination that produces paints unexcelled in covering capacity, beauty, brilliancy and durability. This formula is positively guaranteed by the makers."



BRANDRAM-HENDERSON LIMITED
Montreal-Halifax-St. John-Toronto-Winnipeg

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton - New Brunswick

MARKETS.

HALIFAX

GRAIN—Oats, 49c. to 51c. bus., bagged, 52c. to 54c.; Peas, whole, $7.00 bbl.

FEEDSTUFFS—Bran, $29.00 to $30.00 ton; Shorts, $30.00 ton; Middlings, $30.00 tot $31.00 ton; Linseed Meal, $37.00 to $39.00 ton; Gluten Feed, $32.00 to $34.00 ton; Corn Meal, $1.65 to $1.70.

GRASS SEEDS—Timothy, 8c. to 11c. lb.; Com. Red Clover, 19c. to 24c. lb.; Mam. Red Clover, 20c. to 21c. lb.; Alsike, 17c. to 20c. lb.

HORSES—Drafters, $250.00 to $275.00; Roadsters, $200.00 to $250.00; Carriage, $175.00 to $200.00.

DRESSED MEATS—Beef (carcass) 8c. to 13c. lb.; Mutton, 8c. to 9½c. lb.; Veal, 8c. to 10c. lb.; Pork, 9c. to 12c. lb.

DAIRY PRODUCTS—Creamery Butter, 28c. lb.; Dairy Butter, 24c. lb.; Cheese, 15c. lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c. doz.; Fowl, 15c. to 18c. lb.; Ducks, 18c. to 20c. lb.; Geese, 17c. to 20c. lb.; Turkeys, 22c. to 23c. lb.; Turkey Gobblers, 15c. to 17c. lb.

FRUIT—No. 1 Nonpareil apples, $5.00; Strawberries, 25c. box.

MISCELLANEOUS—Hay, $16.00 to $17.00 ton; Wool, 25c. to 27c. lb.; Beef Hides, 12c. to 13c. lb.; Calf Skins, 18c. to 20c. lb..; Sheep Skins, 75c. to $1.50 each.

VEGETABLES—Potatoes, $1.25 bag; Turnips, $1.50 bag; Parsnips, $2.00 bbl.; Cabbage, crate, $3.75; Tomatoes, $4.00 case; Cucumbers, $1.20 doz.

LIVE STOCK—Lambs, $4.50 to $5.00; Steers, butcher, good, 7c. lb.; Steers, butcher, common, 6c.; Hogs, 125 to 200 lbs., 9c.

Strawberries are becoming quite plentiful on this market. When they first made their appearance about a month ago they were selling wholesale at 40cents, two weeks ago they dropped to 30 cents, and to-day they are selling at 25 cents.

The butter market is weak, a further decline in creamery prints to 28 cents has taken place, and although the demand is good, the price continues to sag. Eggs are firm at 20 cents per dozen. The receipts of the new season's considerably, this week's quotations supply has lowered the price of cheese being 15 cents for wholes and 15½ for twins.

In the vegetable trade, turnips are up from $1.50 to $2.00. American cabbage, and cucumbers are being freey offered at $1.20 per dozen.

GETTING PROFITABLE ADVERTISING RETURNS.

Mr. M. U. Freeman, Kempt, N. S., writes the Maritime Farmer to discontinue his advertising as he has sold his bull advertised in our columns. Mr. Freeman ran a small ad. in the Farmer which cost him a few cents and disposed with his animals without trouble. His experience has been that of hundreds of other users of condensed advertising in the Maritime Farmer. Although this advertising only costs one cent a word it does the work well and our experience is that the Maritime Farmer advertisers can always over sell their stock many times.

The Maritime Farmer has received a letter from a well known poultry dealer this week, stating that his advertisement in this paper has resulted in the sale of far more settings of eggs than he can supply. We can add nothing to these testimonials except to say that if you have anything at all to sell it will be most profitable for you to use the Maritime Farmer columns.

RASPBERRY PLANTS

We have a limited quantity "Herbert" "Hing" and "Cuthbert" Raspberry Plants at $2.00 per 100.

Also offering a nice grade Holstein Heifer 2 years old (¾ Holstein.)

ORCHARD HILL FARM,
Brown's Flats, - N. B.

AT SLAUGHTER PRICES—White Wyandottes selected stock, pullets and hens, Barred Rocks from our breeding pens, and eggs at reduced prices. Baby chicks. EVANGELINE POULTRY YARDS, Wolfville, N. S.

The Prince Edward Island Banner Oat Club.

A meeting of the Prince Edward Island Oat Club was held in Summerside on Wednesday, May 13th to settle up its business for the year. After the minutes of the previous meeting had been passed, the President, Rev. J. J. MacDonald, of Kinkora, called upon the Seretary for the Financial Statement, which was accepted as read, and on the Inspector for his report. Professor Davison, Instructor in Field Husbandry, who did the inspection work for the Banner Oat Club, gave the amount of oats that had been passed by him. A large amount contained some barley and some black oats, while some was off colour and some contained too large a percentage of small kernels. All this was rejected. Less than 2,000 bags came up to the standard and were allowed to go on the market with the quarantee of the Banner Oat Club. Prof. Davison in concluding his report said that he wished to express his appreciation of the assistance that had been rendered him in his inspection work by Joseph Read & Co.

Several of the members had something to say in regard to the inspection, but Prof. Davison was upheld in his rejection of everything that was not strictly first class, and he was given a very hearty vote of thanks for his thorough work, after his report had been accepted. A vote of appreciation was also given Joseph Read & Co. for their co-operation with the Inspector in his work. This Company bought the product of the members of the Banner Oat Club just as it came from the mill, and the loss arising from the grading, etc., etc., fell on them, but as the Inspector stated, they accepted without a complaint his rejection of oats, and graded to the standard he required.

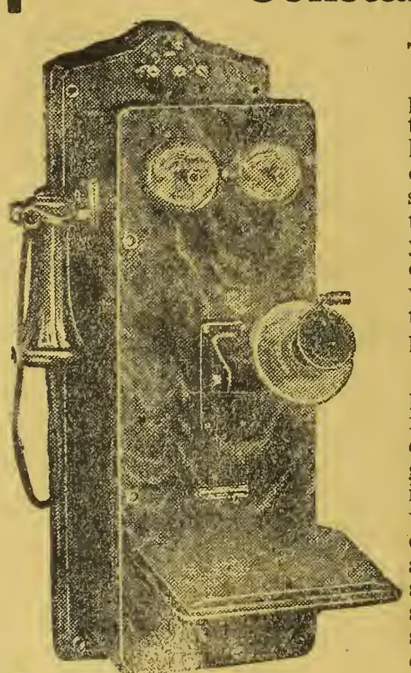
A resolution was also passed appreciating the assistance that had been given by the Commissioner of Agriculture, after which the meeting adjourned to the call of the Chair.

This club is worthy of more than passing notice. It was organized in the autumn of 1912 for the purpose of encouraging the production of Banner Oats. Twenty competitors in the Fields of Standing Grain Competitions, who had entered Banner Oats, and who had been given the full score for Freedom from other Varieties and other Kinds of Grain, agreed to pool their oats and sell it together. It was to be graded to a certain standard and marketed at a certain price. It gave the best of satisfaction last year, but the difficulty of grading it was experienced by many members. Accordingly at the first meeting of the Club in the autumn of 1913 an offer was made by Jos. Read & Co., to buy the total output at 50 cents a bushel as it came from the mill, and was readily accepted. The Club, however, was to have control of the oats which was passed by its Inspector. The Department of Agriculture agreed to allow Professor Davison, Instructor in Field Husbandry, to do the Inspection. He found a lot of grain coming in with barley and black oats in it, and some of it contained such a large percentage of small oats that he felt it could not be properly graded for good seed. Accordingly, he rejected the greater part of what was offered and passed less than 2,000 bags. The Club feel that there is a great future ahead of it as many farmers have purchased seed with the intention of entering this year. This standard is high. The grain must be inspected in the fields and must score not less than 19½ points out of twenty for freedom from other varieties and other kinds of grain. It must again be inspected after it has been cleaned and graded ready for sale and must be of good color, giving germination test of not less than 90 per cent., contain not more than one kernel per pound of other varieties and other kinds of grain, be free from the seeds of noxious weeds and contain only a small amount of the seed of other weeds and not more than 20 per cent. of small oats. The Club feel that by adhering rigidly to this high standard they will put a quality of oats on the market that will ensure a ready sale at a good price.

TO-DAY AND EVERYDAY

You'll Like the Flavor
35¢-40¢-50¢ Per Pound

Independent Systems Constantly Growing



THE number of municipal government and independent local telephone systems in Canada is constantly growing. The independent telephone movement, in spite of tremendous opposition is a huge success. If your locality is without telephone service, write us and we will tell you the steps to take to organize an independent telephone system.

We are the largest Independent Telephone Manufacturers in Canada. We carry complete stocks of guaranteed telephone materials, and can make shipment within 24 hours after receipt of order. Our telephones are superior to others in design, material and workmanship. Send for Free Trial so that you can test and compare with others.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines. Also No. 4, describing our magneto telephone is free on request.

Let us quote you on your year's supply of Dry Cell Batteries.

Canadian Independent Telephone Company, Limited

1820 Duncan St., - - Toronto, Canada

Also Manufacturing Agents for the Magnaphone Co., under Mr. George R. Webbs' Canadian Patents No. 123363, No. 124537, No. 131145.

LYONS' DRUGS

THE ORIGINAL CUT RATE DRUGGIST. WE LEAD, OTHERS TRY TO FOLLOW

Corner Craig and Bleury Sts., Montreal

LARGEST MAIL ORDER HOUSE IN CANADA

Wire or Write for Drugs or Sundries. Our Delivery System and the new Parcel Post Regulation will do the rest.

MAIL ORDERS Accepted at Any Time

We guarantee delivery of all goods or refund your money. We have the largest stock of Trusses, Body Belts, Crutches, Enamel, Medical and Rubber Goods, Optical Goods, Hearing Instruments, Elastic Stockings and Shoulder Braces in Canada. Private Parlors for fitting. Lady attendants. We are the only firm in Canada who sell all patent medicines, prices protected or otherwise, at cut rate.

The Celebrated WHITE CROSS Electric Vibrator

If you send this Maritime Farmer Advertisement to us.

Don't pay a high price for any Vibrator until you see our regular $20.00 Vibrator, of which we are selling 1,000 as an introductory offer at $10.00. Doctors, Nurses, and Medical Representatives are invited to see this wonderful instrument. We are agents for this and other medical instruments described in our books which are sent by mail 10c. each.

THERE WILL BE LESS PAIN

When the People are educated to know the full value of the Electric Vibrator. The X-Ray is a wonderful invention and has benefited thousands; The Finsen Light is a great discovery and is working wonders, but the Electrical Vibrator has done more than all other inventions combined in relieving pain and building up the system. This benefit will be multiplied many times with our machine, as it is now possible for Every Individual to Use One in His Own Home. Everyone who can read will be able to get full benefit of the machine with the aid of our Chart and Directions.

THE GUARANTEE

The Factory gives a written guarantee with each machine, guaranteeing the Vibrators for one year against any mechanical or electrical defects, and in case they should get out of order during that time they will repair them free of charge. For individual use, and with ordinary care, our Vibrators will last almost a lifetime.

Vibration is a great factor in many inventions of to-day. The vibration of the Violet Rays is about 100,000,000 per second. The vibration of the telephone receiver is about 6,000,000 per second. Wireless telegraphy is vibration. Vibration is one of the greatest stimulating agents ever discovered. and has been used where failures had been made in using other methods.

Blood circulates through the human body because of vibration. Without vibration man would cease to live; vibration in the human system, means vigor. The man or woman who has the most natural vibration is stronger and healthier. The keenest brain is the brain that vibrates the fastest. Tests have proved that the vibration of brains such as Webster's was from 10 to 50 times greater than the vibrations of the brains of the laborer...In every ray of light there is vibration; in every sound that comes to the ear there is vibration, and in every object we see there is vibration. Vibration is life, and he who has the most natural vibration is he who lives the longest.

The White Cross Electric Vibrator aids in supplying the life-giving vibration to those who do not have sufficient natural vibration.

WITH THIS INSTRUMENT YOU CAN TAKE

Body Massage
Facial Massage
Scalp Massage
Ear Massage
Eye Massage
Swedish Movement
Vibrating Chair Treatment
Electric Body Treatment
Combined Vibratory and Electric Treatments
Light Galvanic
Electric Baths in Your Own Tub
Electric Scalp Treatments
Electric Facial Treatments
Electric Light Examinations
Operating Electric Needle for Removing Moles, Warts, Superfluous Hair and other Facial Blemishes.

We furnish Charts and full Directions for taking Treatments, written by an Expert, with each machine.

BODY TREATMENT

The White Cross Electric Vibrator should be in every home. It is essential to health and happiness. There is nothing that will aid circulation and develop the muscles, put the bloom of health on the cheeks, produce a clear, beautiful and rosy complexion as vibration. It keeps you well and strong, which is so essential, especially to women, for they have not the privilege or opportunity a man has of obtaining sufficient exercise.

To be strong, beautiful and healthy use the White Cross Electric Vibrator.

Thousands of Electric vibrators have been sold in well-to-do families for medical purposes and have accomplished great results, while thousands for Lack of Money, have had to unnecessarily suffer from Rheumatism, Catarrh, Headaches, Neuralgia, Etc., Etc. Our complete line and low prices enable everybody to buy a vibrator, whether they have the electricity in the house or not.

A Vibrating Chair in every home is now possible with our machine. We make an attachment clamp to hold the vibrator and this clamp can be fastened to Any Chair by anyone in a minute. The Vibrating Chair is the finest thing out for General Stimulation and That Tired Feeling, as well as for treatment of the back, shoulder and neck.

Vibration and Electricity are the Most Natural Remedies known. Wth our patented Electric Vibrator you can concentrate two of the best curative powers known to the medical profession to one spot. For many cases it will not take but a few minutes before the patient is relieved.

AN ELECTRIC VIBRATING CHAIR

By means of a special clamp just brought out, the Lindstrom, Smith Company, Chicago, afford means of attaching their Vibrator to an ordinary wooden chair, thus transforming it into a vibrating chair. The clamp is fastened to the back of the chair with a thumb screw, and a little auxiliary clamp device surrounds the body of the Vibrator and holds it in the position shown. Sitting in the so equipped chair and leaning backwards imparts a general stimulation to the body.—Reprinted from the "Electrical Record."

WHAT PROMINENT PHYSICIANS SAY ABOUT VIBRATORY MASSAGE

Electro-vibratory massage causes absorption by contracting and dilating the capillaries and equalizing the circulation—Kellogg.

Vibratory massage reduces inflammation, stimulates muscles, removes pain, relieves congestion, and relieves a congested area and starts a general circulation.—Butler, "Internal Medicine."

It is recognized by the medical profession at large that pressure and massage causes absorption.—Osler.

In chronic constipation vibratory massage produces stools in from three to five minutes when used over the ascending transverse colons.—Mathews.

By vibratory massage the number of pulse beats may be regulated, the effect may be permanent after several treatments the rhythm of the heart may be influenced; there is increase of diuresis and diminution of Dyspnoea.—Journal Amer. Med. Assn.

Electro-vibratory massage produces at once the warm, prickling, burning, sensation, and the reaction is always pleasant and agreeable.—Herdman.

Take care of your skin. Massage is a wonderful help.—Prof. Hindhede.

Vibration or mechanical massage, as a placebo, is very good; as a stimulant in general I consider it good. The pneumatic vibration of the tympanic membrane Has Restored Good Hearing to Myself and many others.—"Massage in Trauma," by Fred Engelbrectson.

DISEASES THAT ARE NOW TREATED SUCCESSFULLY BY VIBRATION

Amenorrhea
Ankylosis
Angina Pectoris
Asthma
Backache
Bells Palsy
Bronchitis
Catarrh
Catarrh Deafness
Chorea
Circulatory Disorders
Cold in the Head
Cold Hands and Feet
Colic
Constipation
Cough
Dandruff
Deafness, Catarrhal
Diarrhoea
Digestive Disorders
Disorders of Nutrition
Dizziness
Dyspepsia
Dyspnea
Earache
Ear Noises
Facial Neuralgia
Facial Tic
Falling Hair
Fissure in Rectum
Floating Kidney
Frequent Urination
Gall Stones
Gastralgia
Goitre
Gout
Graves Disease
Headache
Heart Troubles
Hemorrhoids
Indigestion
Insomnia
Intercostal Neuralgia
Infantile Paralysis
Intestinal Catarrh
Lameness
Lame Back
Locomotor Ataxia
Loss of Appetite
Lumbago
Melancholia
Migraine
Muscular Atrophy
Nasal Catarrh
Nervous Affections
Nervous Prostration
Neurasthenia
Neuralgia
Obesity
Pain in Abdomen
Pain in Chest
Paralysis
Piles
Post Fracture Conditions
Rectal Fissure.
Rheumatism
Sciactica
Sensitive Spine
Shortness of Breath
Sore Throat
Spinal Curvature
Stiff Joints
Stiff Neck
Stomach Troubles
Sprains
Toothache
Watery Eyes
Weak Eyes
Weakness
Wind
Wrinkles
Wry Neck
and many other diseases

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house. They 61

Keep the Children Well

Carry Your Lantern in Your Pocket

Our Electric Flash Light Premium

Something Quite New

Given Away With Maritime Farmer Subscriptions

These lights are always ready for use. The only safe portable light for barns and outbuildings.

The Maritime Farmer one year and one of our 1½x6½ Tungsten barn lights, handsomely finished, for $1,30 (Light alone sells everywhere for $2.00).

The Maritime Farmer one year and one of our vest pocket lights complete for $1.25 (Light sells everywhere for $1.80).

We have other valuable flash light premiums which we will gladly furnish on application. We can supply them at about half-price, with the Maritime Farmer.

We have secured the agency for the Maritime Provinces for a leading house and can thus supply these premiums at these wonderfully low prices.

If interested write us.

The Maritime Farmer,

Sussex, :: New Brunswick

STOCK NOTES

J. Frank Roach, Sussex, has recently sold some very fine Ayrshire Heifers and Bulls to parties in Westmorland County.

Lea & Clark, Victoria, P. E. I., report:—We are running three heifers in the R. O. P. that are making splendid records. One three-year-old has finished with a record of 16,000 lbs. milk and 600 lbs. butter fat.

John Jackson, Sussex, purchased a setting of Silver Wyandotte eggs from The Magnolia Avenue Poultry Yards, Sussex, from which he was successful in getting a 100 per cent hatch.

George E. Fisher, of Chatham, N. B., has recently purchased from D. P. McArthur, of North Georgetown, Quebec, a very fine Ayrshire bull sired by the imported bull "Auchenbrain Starlight," one of the greatest producing strains of Ayrshire in Scotland. His dam "Eileen" holds the highest record in Canada for butter fat, 635 pounds in a year, and 13,825 pounds of milk in one year, being the third highest milk record. Mr. Fisher is to be congratulated on securing such a header for his herd.

We wish to call attention to the breeding of the Guernsey Bull advertised for sale in this issue, by W. H. Hodgson, Fredericton, N. B. His sire, Nonpareil of Glen View, combines the blood of "Hedwig's Nonpareil", which many of our readers will remember as the Grand Champion Guernsey male at all Maritime Fairs; Imp. Fairy of Seagrove, Imp. Jessica of Dentonia and the original Masher, on Guernsey. His dam, Glen View's Comely, combines the blood of Comely 3rd by Best Bower by Sheet Anchar, dam Imp. Belvidera and Imp. Comely.

This young bull is individually as good as his breeding and has all the coloring and quality a high class Guernsey should have and is offered for sale for the low price of $30.00.

On another page of this paper will be found the ad. of Logan Bros. They are offering a few exceptionally good Holstein bulls ready for service. One is 17 months old, from "Johanna Louise", whose dam made the highest score a few years ago that was ever made in the Maritime Winter Fair. She has several daughters with high official records. A sister of this bull made 18.3 lbs of butter in 7 days at 2 years and 8 days old, and his sire's dam and grand-dam have both made high official records the present year, going as high as 106 lbs. of milk in a day.

Another bull offered by them is a grandson of "Francie 3rd", the famous cow owned by D. C. Flatt & Son, Hamilton, Ontario. These bulls are large and exceptionally fine individuals and are offered at very reasonable prices.

They have a very fine yearling stallion "Homestead Marmion", that was a winner at the recent Horse Show, and would be a great bargain for a farmer wanting to start in the Clydesdale business.

A RECORD LAMB CROP—CAN YOU BEAT IT?

Jas. Tait, Jordon Mt., N. B., reports a 210 per cent lamb crop. From ten ewes he is rearing 21 lambs. Who can beat this record? Let us hear from sheep breeders who have been successful in getting big increases in their flocks.

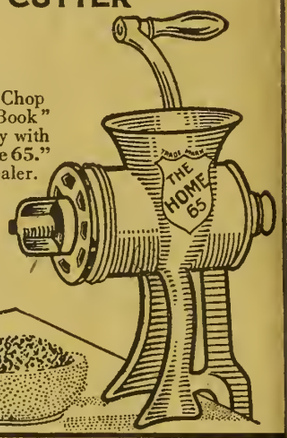
YOU COULD MAKE DOZENS OF TASTY DISHES IF YOU HAD THIS

Maxwell

"HOME 65" FOOD CUTTER

A handle to turn—that's all. Cuts up meats, vegetables, foods of every kind quickly and without trouble.
Cap fits close, rendering the machine *perfectly watertight.* None of the food juices can escape, and you can open the cylinder after use and clean the machine quite easily. Four different cutting plates (or 3 plates and a nut grater) with every "Home 65."

A free "Food Chopper Cook Book" is given away with every "Home 65." Ask your Dealer.



MAWELL'S LIMITED
ST. MARY'S, ONT.

13

Big Ben

They Say He's Worth 8 Million Dollars

Yes Sir! American farmers and business men, and their wives and children have said, "He's worth eight million dollars," for they've paid that much to 20,000 jewelers to get him to come to work in more than three and a quarter million homes (3,250,000).

Big Ben is only four years old, but he's made a bigger success for himself than any other clock alive.

You'll find him on all the big farms—helping to get the farm hands out on time—helping to get the bigger, better yields. You'll see him 'round the house telling the womenfolks the time all day so they can have the meals on time.

You'll see him in the parlor on the mantelpiece—7 inches tall, sturdy, handsome, triple nickel-plated, ticking quietly and *'tending to his knitting.*

In the bedrooms in the morning you'll hear him calling different people different ways—in "that" room, with one straight "hurry-up" five minute ring, and in "that other room," with ten short "reminder" calls lasting ten minutes. Tell him how you like your call—he'll accommodate you.

Call on Big Ben at your dealer's. His price is $3.00. Let him show you what he does. If your dealer hasn't Big Ben, a money order for $3.00 addressed to his makers—*Westclox, La Salle, Illinois*—will bring him to you anywhere in Canada duty charges prepaid.

Farmer Ads Bring Results----Try One Today

Horses For Sale

Heavy Team Horses 1250 to 1550 in fine condition.

Apply to

F. L. GILLIS,

NORTON, R. M. D. No. 1

or

Chas. T. White & Son,

SUSSEX, N. B.

BABY CHICKS

We can fill limited number of orders for B. P. Rock & W. Leghorn chicks this spring. Prices, April $20.-00 per 100. May, $15.00 per 100. Cash before shipment.

NEW LAID EGGS

We pay best cash market prices for new laid eggs delivered weekly.

LIVE POULTRY

Price per lb. on live market poultry quoted at any time also on dry picked, undrawn dead poultry.

BROODERS

Write us for prices on most modern Colony-house Brooder Stoves. Also a few second-hand Model indoor brooders for sale very reasonably.

KINNEAR POULTRY CO

Sussex, N. B.

Trees! Trees!

We make a specialty of growing hardy fruit trees, in all the leading varieties, suitable for the Maritime Provinces, at lowest possible prices, consistent with quality.

Write for Catalogue and Price List to Riverside Nursery.

Arthur Harris & Son,

Annapolis Royal, N. S.

BRED - TO - LAY

White Wyandottes

Pen headed by imported Cock, bred from a hen with record of 258 eggs a year. Eggs for hatching $1.25 per 15.

Barred Plymouth Rocks

McDonald College Bred-to-lay strain. Eggs $1.00 per 15. $3.50 per 100.

ORCHARD HILL FARM,
Brown's Flats, - N. B.

FERTILIZERS

We carry the famous
HARAB FERTILIZERS
Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,
Moncton, - - N. B.

FARMER ADS. BRING RESULTS.

Harrowing Growing Grain.

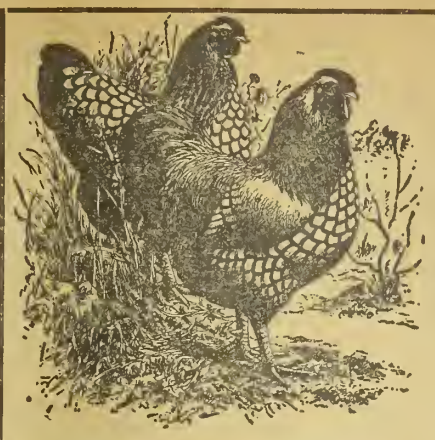
A much discussed question among farmers at this time of year is that of the use of the harrow on growing grain. That the practice is becoming more popular each year is shown by the fact that there are many more farmers who follow it, and fewer who condemn it than there were a few years ago.

In conversation with a group of farmers recently, the writer was impressed with the opinions of these men, in that all who had tried the harrow on young grain were loud in their praise of its merits as a destroyer of small annual weeds. No arguments were placed against it. One claimed that he had experimented in harrowing wheat, by leaving half the field untouched after harrowing the other half as soon as the grain was firmly rooted. The result was that he had raised the yield four bushels per acre on the harrowed portion of the field. A central Saskatchewan farmer claims that the portion of a wheat field which he harrowed after the wheat was up was the only part of the field that had ripened sufficiently to cut before fall frosts had arrived, although this latter is rather hard to account for. Good judgment must be used in the use of the harrow on growing grain. It is not a job to give a green hired man. Some of the directions to follow might be mentioned as follows: Before using the harrow, allow the wheat to become firmly rooted, unless thinning out is desired, as the small annual weeds root near the surface, and are easily torn out. Choose a bright, warm day for the job, and use a light harrow, going in the same direction as the field was sown.

The harrowing of grain is particularly to be recommended on old, weed infested soils. On new lands where loose sods cover the surface, such beneficial results would not be derived, and as fewer weeds are usually present on such lands this practice may not be considered. Disastrous results would also follow the use of the harrow on a crop growing on a wet field.—Nor' West Farmer.

Whitewash Used by C. P. R.

"Our specification for whitewashing surfaces exposed to the weather is as follows: Pour water over fresh burnt lime and stir it in liquid form until thoroughly slacked, dissolve and add separately to each half bushel of lime two pounds of coarse salt and two pounds sulphate of zinc (white vitriol). The quantity of water used should be sufficient to bring the mixture to the consistency of thick paint. Whitewash will adhere better if it is put on while it is still hot from slacking and should be prepared in as small lots as practicable. The addition of a small quantity of ultramarine blue will overcome any tendency for the wash to turn yellaw."—L. O. Genest, General Storekeeper, C. P. R.



"SILVER LACED WYANDOTTES"

Stock and Eggs for Hatching for Sale.

The Silver Laced Wyandottee is a breed combining quality and beauty, prolific layers, fine table fowl and rank high among breeders of poultry.

The Magnolia Poultry Yard's stock of Silver Laced Wyandottes were winners of first breeding pen at the Amherst Fair in 1913, among strong competition This is only one of the reasons why you should buy this stock. The work is personally supervised by the owner, and the stock this spring has never been in better condition.

Write for information and get your pick of the stock now.

The Magnolia Avenue Poultry Yards

E. KYLE, Prop., Sussex, N. B.

ORPINGTONS FOR SALE

I have for immediate delivery the following Pens for sale:

No. 1 Beautiful pen of Blacks, 3 Pullets, 1 Hen and Cockerel, great color, shape and splendid layers. Price $10.00

No. 2, Pen of Whites, 9 Hens headed by a pure white Cockerel of good size and shape, Clover Farm's strain, beautiful head points. You will get layers and winners from this bunch. Prices $12.00.

Pen Buffs, 7 Hens headed by Cockerel, great shape and color. Price $10.00.

I must sell, thus the price.

C. H. WISENER, PICTOU, N. S.

The Noted Clydesdale Stallion

"Baron Kelvin"

Reg. No. 12462

will make the season of 1914 at the farm of J. W. Calbeck within one mile of Summerside, P.E. Island, and at Charlottetown. He has an unbeaten record in the show ring both in Scotland and Canada. In 1911 he won the championship at Toronto and Ottawa, defeating the best horses in Canada and in the same year he won first prize and championship at Ogdensburg, N. York, open to all breeds of draft horses. He is a massive horse, weighing about one ton and with superb quality. Service fee $15.00 for the season with return privileges should mare not prove with foal.

Also the trotting and carriage stallion

Capt. Aubrey

(48050)

the fastest trotting sire in Canada. Fastest producing son of "Peter the Great" in America Race record, 2-07¼. Trial 2.06¼. Record at 4 years, 2.15¼ on ½ mile track. Bay stallion 15.3½ hands weighing 1200 lbs., foaled in 1904.

Sire of "Aubrean" 2.17½ at 4 years and several others in the Standard List. Will stand for service at the farm of J. W. Calbeck Summerside, P. E. I. and in Charlottetown.

Service fee $25.00 with return privileges. Further particulars and cards of both the above horses upon application to

C. A. MITCHELL,
School St., Charlottetown.
or the owner,
JOHN RICHARDS,
Bideford, P. E. I.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association

W. A. CLEMONS, St. George, Ont.

EGGS FOR HATCHING

Japanese Silkies, Silver Bearded Black Polish, Golden Spangled Polish, Partridge Cochins, Silver Laced Wyandottes, Silver Spangled Hamburgs, Black Minorcas S. C., $2.50 Setting.

White Plymouth Rocks, Buff Plymouth Rocks, White Leghorn, $2.00.

Barred Plymouth Rocks, Light Brahmas, Rhode Island Reds S. C., White Wyandottes, Buff Cochin Bantams, $1.50.

All exhibition prize winning stock.

ROBERT J. MELVIN,
Yarmouth, N. S.

EGGS FOR HATCHING

Brom Bright Highest Class Exhibition Barred P. Rocks. The leading winners of America's largest shows—the Best. The verdict of three world's fair, Cockered and Pullet Mating. Regal W. Wyandottes winners at Kentville Poultry Show of 5 firsts, 2 seconds, 1 third, and 6 Specials. Winner of Silver Cup.

Setting $2.00 per 13.

Kentville Poultry Yards,
KENTVILLE, N. S.

HALF PRICE

During the month of June, we will sell sittings of (15) eggs from the World-Record pens. Barred Plymouth Rocks. Price for eggs from pen No. 1, $5 00. Average per pen last year 245 eggs. From pen No. 2, $3.50. Lady Morley's record last year was 292 eggs, the only sworn to record published. The authenticated World's Record.

W. B. COROWELL,
Morla Poultry Yards, Arcadia, N. S.

EGGS EGGS EGGS!

I have cut the prices in two. Parks strain of heavy laying Barred Plymouth Rocks, are without doubt the greatest laying strain of this grand old breed. Bred for egg production for over twenty years. For balance of season I will supply eggs from my best pens for only $1.00 for 15, other pens 75c., $5.00 per hundred.

J. P. Prichard, Summerside. P. E. I.

FOR SALE.

To prevent inbreeding I offer for sale my Jersey bull O'Rorke No. 1757, coming three years old, a sure stock getter and a large percent heifer calves, good size, quiet and all right in every way. Apply to

H. B. Schofield, Lakeville, N. S.

FOR SALE

1 American Registered Jersey Bull, 1 year old, also 2 American Registered Bull Calves.

C. M. ROGERS,
Draffan Farm, - - Hebron, Yar. Co., N. S.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

FOR SALE—47 inch solid tooth rotary saw. A. D. MORRISON, Loch Side, N. S.

HEAVY Horses for sale. Apply to F. L. GILLIS, Norton. N. B.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

FOR SLAE—Two young heavy horses, ROBT. J. STEWART, Coles Island, Queens Co., N. B.

VALLEY FARM HOLSTEINS FOR SALE—3 registered Bull Calves from 8 to 14 weeks old. W. G. CAMPBELL, Salisbury, N. B.

WOULD YOU MARRY IF SUITED? Best Matrimonial Paper Published. Mailed Free. THE CORRESPONDENT, Toledo, Ohio.

FOR SALE—Two Guernsey Bulls, one yearling one three years old, both nice animals. Apply C G. COX, Canard, Kings Co., N. S.

BLACK, WHITE, AND BUFF ORPINGTON Eggs for Hatching from birds that have size, shape, color and great layers, only $2.00 per setting of 15 eggs. C. H. WISENER, Pictou, N. S.

FOR SALE—Ayrshire bull from two weeks to two years. One Holstein two past. JOHN A. HUGHES, Petitcodiac, N. B.

100 POST CARDS, POSTPAID, 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Two six H. P. gasoline engines, both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R J. Pictou Co., N. S.

FOR SALE—Six months Guernsey bull for $30.00. Sire "Nonpareil of Glen View" 39081 21472 A. G. C. C., dam "Glen View's Comely" A G. C. C. W. H. HODGSON, R. F. D. 3, Fredericton, N. B.

ROSE COMB BROWN LEGHORNS for sale after June 15 to make room for young stock. Winners in show room and laying contests. Eggs for hatching $1.50 per 15. Matinglist free. ERNEST PRINGLE, Stanley, N. B.

WE WILL PAY YOU $120 to distribute religious literature in your community. Sixty days work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used. INTERNATIONAL BIBLE PRESS, 182 Spadina Ave., Toronto

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

FOR SALE—2 Pure bred Holstein Bulls, one 3 years and one 2½ years, good size, best of breeding. For extended pedigrees, price and photos, write WALTER PAYNE, Lake Edward, N. B., Breeder of Holstein Cattle.

FOR SALE—Simplex turbine power separator, capacity 3800 lbs. per hour; guaranteed to be in perfect working order; will sell at a bargain. THE DUNSTAFFNAGE CHEESE AND BUTTER CO., LTD., Dunstaffnage, P. E. Island.

LIVE STOCK FOR SALE—Holstein Bull $150 Registered Vo. 17, No. 17730 "Sir Tensen Faforit" calved August 26th, 1913. Sire "Sir Mercena Faforit Lad" No. 8015, Dam "Lady Tensen Canary" No. 16494. Beautifully marked mostly Black, growing fast. A Bargain, beauty to head your herd. Will soon be a big bull. Registered Stock carried by railways half rates. J. S. GIBBON, Riverside Farm, East Riverside, Kings Co., N. B.

Corning Turnip Seed For Sale

About 1000 pounds of the famous Gr. Top "Corning" Turnip Seed, crop 1913, grown from selected roots.

Price 50c., Postpaid 55c.

S. P. GOUDEY,

Yarmouth, - - Nova Scotia

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Lawndale Stock Farm Shorthorns

Herd header (Milking Strain) "Royal Knight" by "Knight of Glenside" brother of World's Champion, "Rose of Glenside" 18,075 lbs. milk in one year.

Herd header, (Beef Strain) "Pontiac" by "Prime Sailor" and the sire of some very excellent individuals with many prizes to their credit.

We have at present an extra lot of heifers in the pink of condition. Also a few cows. We have them from 9 years old to this year's calves.

Information cheerfully supplied, address

I. M. LOVITT, M. D.,

Yarmouth, N. S. P. O. Box 352

Highfields' Poultry Farm

S. C. White Leghorns

Eggs for sittings from magnificent pens of birds imported direct from England and the U. S. A. and inspected and mated under the personal supervision of Mr. Seth Jones, Provincial Poultry Superintendent.

No. I pen headed by cockerel bought from Mr. Jones' pens and mated to pullets of the best type imported from U. S. A., **$2.50 per Sitting.**

No. II and III pens headed by cockerels bought from the Cypher's Co. mated to American pullets **$2.00 per Sitting.**

No. IV pen, birds imported from England direct, bought from Murray Linduer's well known yards and mated by him, **$2.00 per Sitting.**

No. V pen, Massive English pen of fine type, bred to lay, **$2.00 per sitting.**

No. VI pen Cockerel (Barron's world famed egg laying strain) mated with selected hens, **$1.50 per Sitting.**

White Wyandottes

No. I pen, birds imported direct from England bought from Murray Lindeur's well known yards, bred to lay **$2.00 per sitting.**

No. II pen, birds of good style, **$1.50 per Sitting.**

No. III pen, good utility birds, **$1.00 per Sitting.**

HIGHFIELDS' FARM,

Hampton, - - N. B.

Nursery Stock at Growers' Prices

Apple, Pear, Plum, Cherry and Ornamental trees. Strawberry, Raspberry, Currant and other Small Fruit Plants. Best of Government Inspected Stock, sold direct to the planter at lowest prices.

Bees and Bee-Keeper's Supplies.

Write us today a list of your wants.

E. L. COLPITTS,

Petitcodiac, - New Brunswick

FOR SALE

A handsome Gray African Gander, a first class leader for exhibition $6.00.

Bronze Turkey Eggs from prize winners, $3.00 per sitting of nine.

Barred Plymouth Rock Eggs from winners at Chatham, N. B., $1.50 per 15.

H. W. ROSE,

Hotel Dieu Farm, - - Chatham, N. B.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

BARRED ROCKS

The leaders in this breed in Eastern Canada. After June 1st we shall offer eggs from choicest pens at $1.50 per sitting. One dollar for eggs from utility pens. Ten to twelve colonies of bees for sale.

CRAIG BROS.,
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Young Jersey Bulls for Sale

From Cows in the Record of Performance and also from prize winning cows

JOSSELYN & YOUNG

HOUDANS

The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, while breast meat.

I have two beautifully mated pens, the progeny of last season's Boston, New York and Ontario Prize Winners.

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Pen A. $2.00 per sitting, 3 sittings for $5.00.

Pen B. $1.50 per sitting, 3 sittings for $3.50.

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SUSSEX, N. B.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

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Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVUE STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

Show Stock, and Producers all our own Breeding.

We have a grand bunch of Rams for sale at reasonable prices.

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BRAMPTON JERSEYS!

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In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once

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Do You Need a Good Holstein Bull

We have three, 14 to 16 months, good lookers, good condition, well bred and the right age for service, also females all ages at reasonable prices.

LEA & CLARK, VICTORIA, P. E. I.

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High class Holstein cattle. 2 young bulls 18 months old, sired by Prince Dorinda, No. 4887. His first daughter to be officially tested. (Elmwood Flossie Netherland 24903) gave in 7 days 366.9 lbs. milk and 12.48 lbs. butter at 2 years 4 months. Also a few bull calves from 3 to 5 months old.

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HAZEN FOLKINS,

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Eggs For Hatching.

From the choicest matings in Eastern Canada, in Barred P. Rocks (Cockerel and Pullet matings, White Wyandottes, Rhode Island Reds, S. C. White Leghorns and Brown Leghorns. For sale at once, several high class breeding cockerels of above breeds. Address

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AND

CO-OPERATIVE DAIRYMAN

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, JUNE 9, 1914. Number 17.

Supplying the Farm Home With Fresh Meats

HOW to provide a suppy of fresh meat for summer consumption on the farm is a problem which is causing much concern in many farm homes. In the past salt or brine cured meat has been largely used, but this soon palls on the palate, and it is felt that some means of providing a regular supply of fresh meat must be found. In some of our rural comunities where the associative instinct has been developed this want has been satisfied through the establishment of Beef Rings, and the results obtained from these organizations have been so satisfactory that it is felt that the scheme is worthy of a trial in many other districts. This pamphlet has been prepared to aid parties desirous of organizing such rings.

Beef Rings are local organizations through which a number of farmers (usually 16 or 20) unite to provide fresh beef for their own tables. Each member supplies an animal in his turn, as determined by lot. One member is appointed butcher and under his direction an animal is slaughtered each week and the carcass is systematically divided among the members. The 20 member ring operating for twenty weeks, from May 1st or 15th, is usually the most satisfactory as it supplies meat through the harvest season, which is really the time when it is most needed.

For a 20 member ring the animals supplied should dress between 400 and 600 pounds, thus supplying each member with between 20 and 30 pounds of meat per week. If this quantity is too large for some families, two small families may take one share between them and supply only one animal. An exceptionally large household which could use a double quantity of meat could take two shares and supply two animals.

A fixed price per pound is usually set at the annual meeting. Each member is credited at that price with the dressed weight of the animal he supplies and charged at the same price for all meat he receives, settlement being usually made from the butcher's accounts at the close of each season. Some rings require that all animals supplied up to the end of the second week in June shall be stall fed. As it costs more to produce than the grass fed animals which will be suuplied during the rest of the season, a premum of two or three cents per pound over the regular price is paid and charged for this meat.

The animal to be slaughtered should be delivered to the butcher at least twelve hours before the time set for killing and should not be allowed o have any solid food for at least twenty-four hours prior to killing. Friday evening is the usual time selected for slaughtering. The carcass is allowed to cool over night and is cut up early Saturday morning. In the cutting up it is so divided that each member will receive a roast, a boiling piece and a steak. The members, or their representatives come to the butcher on Saturday morning and receive their allotted shares. Three or four farmers living close together may take turns in delivering the meat for the group and thus realize a considerable saving.

The financial outlay involved in the operation of a Beef Ring is small. For his services, in slaughtering the animal dividing the carcass and keeping account of the quantities of meat received and supplied, the butcher usually receives the hide and a set fee of one or two dollars per head. This fee is paid by the member supplying the animal at the time it is delivered for slaughter. In adition to this a small annual membership fee is charged, the funds from this source being invested in equipment, such as a derrick for raising the carcass, butcher knives, saws, meat hooks, etc. A frame shed in which the meat can be paced after it is cut up is often provided. The secretary requires a supply for stationery, the buutcher needs an account book, etc., these are all paid for from the annual membership fee.

Beef Rings have been successfully operated for several years in different parts of the province, and if reasonable care is exercised in selecting trustworthy members there is no reasson why similar success should not attend their inauguration in other districts. If you wish to organize such a ring in your locality talk the matter over with your neighbors, call a meeting of those interested, adopt a constituton and bylaws, elect your officers and get the scheme under way at once so that the members who may not have suitable animals on hand may have an opportunity to procure them before the season's operations begin.

The following constitution and bylaws are suggested as being suitable for the regulation of a Beef Ring.

Co-Operative Beef Rings

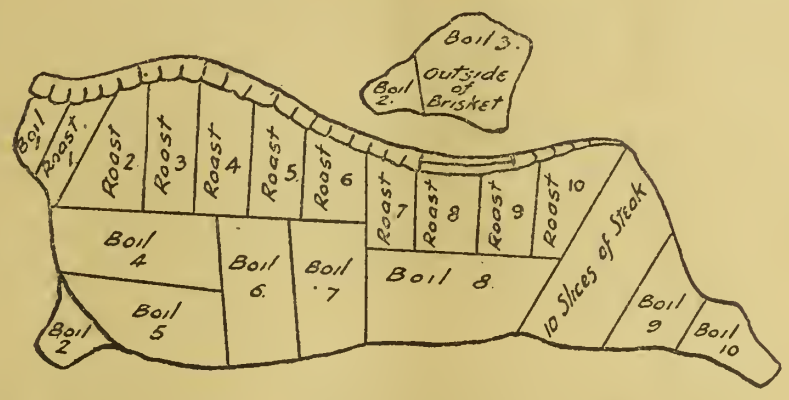


PLATE No. 1

Division of half carcass for twenty member ring.

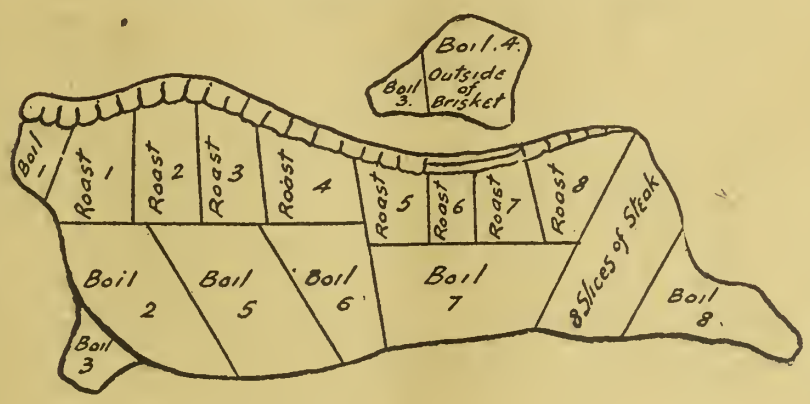


PLATE No. 2

Division of half carcass for sixteen member ring.

SUGGESTED CONSTITUTION FOR A BEEF RING

Name.

Article 1.—The name of this organization shall be The.....Co-operative Beef Ring.

Obect.

Article 2.—The object of the organization shall be to furnish the members with fresh beef at regular weekly intervals during the summer season.

Place.

Article 3.—The place of operation shall be in the vicinity of.....and all regular and special meetings shall be held at.....

Time.

Article 4.—The time over which this organization shall extend shall be indefinite (or state a number of years as may be desired).

Membership

rAticle 5.—Any person resident in the vicinity of.....may be admitted to membership in this Beef Ring upon payment of the annual membership fee of ($1.00 sugested) and subscribing to the constitution and bylaws.

Anual Meeting.

Article 6.—An annual meeting of this Beef Ring shall be held each year in the month of , at such time and place as may be determined by the officers.

Elections.

Article 7.—All elections shall be by secret ballot.

Officers.

Article 8.—The officers of the ring shall be a president, vice president and secretary-treasurer. These officers shall be elected annually by and from the members of the Ring at the annual meeting and, unless removed from office by a two-thirds vote of the members present at a duly called special meeting, they shall hold office for one year.

Duties of Officers.

Article 9.—The duties of the president, vice president nd secretary-treasurer shall be such as usually pertain to those offices.

Special Meeings.

Article 10.—The president may, when he deems necessary, and shall, upon receipt of a requisition in writing from five members, call a special meeting of the Ring.

Vacancies.

Article 11.—When a vacancy shall occur through any cause in any of the offices established by the constitution and bylaws of this Ring it shall be filled at the next regular or specal meeting of the Ring.

Audit.

Article 12.—The books of the ring shall be audited each year before the date of the annual meeting, and an auditor for the current year shall be elected at the annual meeting.

Amendments.

Article 13.—Amendments to this constitution may be made at any regular or special meeting by a two-thirds vote of the members present provided that

ten days' notice of the meeting, specifying the proposed change in the constitution has been given by announcement mailed to the members.

Bylaws.

Article 14.—Bylaws governing the operation of the Ring may be made from time to time in the manner prescribed for making amendments to the constitution.

Quorum.

Artice 15.—Seven members shall constitute a quorum and may transact any business which may properly come before the meeting.

SUGGESTED BYLAWS FOR A BEEF RING.

1. At the anual meeting a person qualified for the position shall be appointed butcher, and upon him the following duties shall devolve:

(a) He shall examine all animals suplied by members and may reject any animal which in his opinion does not conform with the regulations of the Ring, or is unsuited for the purpose, but such rejection shall be subject to an apeal to the officers of the Ring.

(b) He shall slaughter the animals supplied at the time appointed and shall weigh the carcass when dressed and credit the member supplying the animal with the weight.

(c) He shall divide the carcass among the members, according to the plan adopted, giving each member as nearly as he can judge an equal portion and keep strict account of the amount furnished each member.

(d) At the end of each season he shall furnish to the secretary-treasurer at least three weeks previos to the annual meeting, a statement in detail, showing the amount of meat received and delivered to each member.

2. For his services the butcher shall receive the hide of each animal slaughtered and the sum of dollars, which sum shall be paid to him by each member at the time when his animal is delivered o the butcher.

3. Each member shall furnish an animal for slaughter in his turn as determined by lot, or otherwise arranged, at the annual meeting.

4. Animals supplied for slaughter shal be such as will dress between 400 and 600 pounds and shall not be more than three years old in the case of females or four years old in the case of steers. Bulls shall not be accepted nor cows giving milk.

5. Each member shall deliver his animal at he place of slaughter at or before 9 a. m. on the day appointed for slaughter.

6. The member furnishing an animal shall be entitled to and receive the rough tallow, head, heart and liver of the same.

7 The season's operations shall com mence in the week in May and shall extend over weeks. Each week an animal shall be slaughtered on evening, and members shall come to the butcher for their meat before o'clock on the folowing morning.

8. All animals supplied up to the end of the second week in June shall be stall fed, and meat from these shall be valued, for purposes of settlement, at cents per pound. The meat from all other animals suppled shall be valued at cents per pound.

9. Each member shall leave with the butcher each week a bag plainly marked with the member's name; upon cutting up the carcass the butcher shall place each member's portion in his respective bag.

10. All Acounts with the Ring shall be settled at the annual meeting. Otherwise interest at per cent. per annum will be charged from that date until the date of payment.

11. No member shall have the privilege of withdrawing from the Ring without the consent of the majority of the members, and in o case will a member be allowed to withdraw until his acount with the Ring is settled in full.

DIVIDING THE CARCASS.

The carcass is first cut in two in the ordinary way by sawing lengthwise through the backbone. Each half is then cut up and divided among half of the members in the Ring. Plate No. 1 illustrates the method of dividing one-half of a carcass among ten members, e. g. one-half a twenty member Ring. Plate No. 2 shows how the division is made for a sixteen member Ring. On any given slaughter date, the member supplying the animal should receive share No. 1. The member whose turn it is to supply the next animal should get share No. 2, and so on through. In a twenty member ring shares No. 1 and No. 11 will be alike, one being cut from one-half of the carcass and the other being the same cuts, but from the other half of the carcass. In a sixteen member ring shares No. 1 and No 9 will likewise be alike.

The following is suggested as an equitable division for a twenty member ring. Of course the heaviness of fleshing will vary in different animals and the cuts will have to be varied accordingly, but by exercising care the butcher will soon be able to make a satisfactory division.

	Roast	Boil	
Members No. 1 and No. 11	1	5	1 slice of steak
Members No. 2 and No. 12	2	6	1 slice of steak
Members No. 3 and No. 13	3	7	1 slice of steak
Members No. 4 and No. 14	4	8	1 slice of steak
Members No. 5 and No. 15	5	9	1 slice of steak
Members No. 6 and No. 16	6	10	1 slice of steak
Members No. 7 and No. 17	7	1	1 slice of steak
Members No. 8 and No. 18	8	2	1 slice of steak
Members No. 9 and No. 19	9	3	1 slice of steak
Members No. 10 and No. 20	10	4	1 slice of steak

For a sixteen member ring the division could be made as follows:

	Roast	Boil	
Members No. 1 and No. 9	1	5	1 slice of steak
Members No. 2 and No. 10	2	6	1 slice of seak
Members No. 3 and No. 11	3	7	1 slice of steak
Members No. 4 and No. 12	4	8	1 slice of steak
Members No. 5 and No. 13	5	1	1 slice of steak
Members No. 6 and No. 14	6	2	1 slice of steak
Members No. 7 and No. 15	7	3	1 slice of steak
Members No. 8 and No.16	8	4	1 slice of steak

Bulletin of the Department of Agriculture, Regina, Saskatchewan.

Australian Method of Handling Wool

A Wonderful System Which Leads to High Wool Prices

An educational propaganda is now being conducted among the wool-growers of the State of Utah. President J. E. Cosgriff, of tthe Continental National Bank of Salt Lake City, has been instrumental in bringing from Australia the well-known wool-expert, W. F. Risch, formerly employed by the Dominion government of Canada, but later appointed as wool expert for Australia, extracts of which we publish for the benefit of our readers:

Shearing by Contract.

Nearly all of the shearing in Australia is done by shearing contractors who clip for so much per head. This contract system has developed scores of organizations of expert shearing crews and has reduced the shearing to an exact science.

The Australian flockmaster works for a clean, high grade clip of wool from the moment he begins to prepare for the shearing. His drive to the central shearing shed is made in easy stages, so as not to overheat the flock. This brings his sheep to the shearing shed with cleaner wool than would be possible if he drove hurriedly, thereby forcing excessive yolk up into the wool, where it catches and holds the dirt and dust stirred by the moving sheep. Upon arrival at the shearing shed the sheep are run into what is known as the "sweating" pens, where they are held over night under conditions that starts the yolk up into the fleece in just he right quantity.

Shearing.

The shearing pens are splendidly built and are mostly in the form of a T. The sheep of but one flockmaser are handled in the establishment at any one time. The flock is driven from the mustering pens to the sweating pens, and then to the feeding pens, where they are segregated—the ewes, rams, hoggets and wethers going into separate pens.

From these pens they go to the catching pens. These are pens arranged down he sides of the center of the building, and before each pen stands the man who does the shearing. The sheep are put into individual catching pens to obviate the custom practised by so many shearers in crews not properly organized of rushing about among the sheep to try and secure the easiest sheep to shear. This excites the sheep and keeps the shearing place in a constant turmoil. Under the Australian system of catching pens, each shearer knows exactly what sheep he is to clip, and he proceeds with his work accordingly.

The moment a sheep is shorn he is rushed through a chute that leads down under the shearing shed floor and thence into counting pens, where he is branded and counted and sent on his way to the rest of the flock.

Meanwhile, some very interesting things have been happening back in the main room. The shearer first clips the belly wool. The instant it falls to the floor—and that floor is as clean as a library table top—it is quickly but carefully gathered up and thrown into a basket provided for belly wool. The same process is performed with the hocks. These are inferior classes of wool and are kept separate.

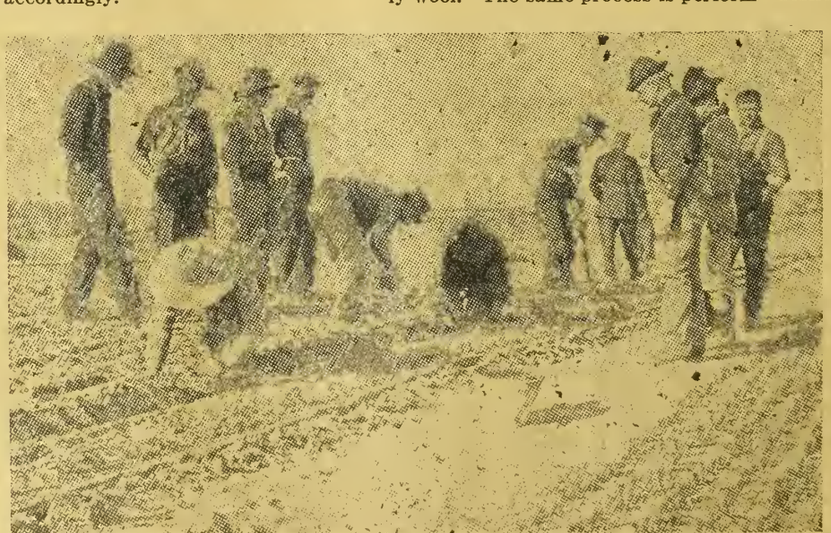
Then comes the main fleece, and it comes off in one piece. As it drops to the floor a boy who is expert in handling fleeces picks it up in such a way that it is not broken or greatly disturbed and spreads it on one of the rolling tables. The instant the shearing of the sheep has been completed, and the sheep sent down under the building, a boy sweeps up the space in which the shearer has worked and the latter is ready for another.

From the shearer the wool is taken direct to men known as skirters and rollers. Here the fleeces are spread out and skirted—or, in other words, trimmed of these portions which are desirable of retention with the entire fleece. Each portion trimmed off goes into a certain basket and is kept separate.

After the fleeces have been rolled and skirted they go to the wool classer's table. This man is one of the most importtant employees of a shearing organization. Under his eye is classed all the wool that goes through the shearing station. He is lightning quick in his judgment. Not only must he class all the main fleeces, but he supervises the classification of the inferior portions of the fleeces.

And right here it might be well to explain the distinction, as understood in Australia, between the classing and the grading of wool.

Grading is the placing of wool fleeces into different grades, according to their indication of breed and quality, while classing is the placing of skirted fleeces into different classes according to their length, quality, soundness, condition and tint.



Scene in Ontario Government Forest Nursery at St. Williams, Norfolk County, Showing Pine Seedlings Being Transplanted Into Nursery Rows From Seed Beds.

From the classer's table the fleeces go into different bins. The classer's table is always clean, as he works with tremendous rapidity and must make no mistatkes.

The men who assist him by classing the poorer parts of the fleeces all deposit their work in baskets from which they are later taken to be pressed by the baler. This is an ingenious machine that bales the wool in a wonderfully rapidd and precise manner. Then the bales are branded and sent through to the shipping platform outside the shearing station. The art of classing wool and supervising its baling and pressing calls for keen judgment. The moment the last of one flockmaster's sheep is shorn word is sent to the superintendent of the shearing station, and the work begins at once of clearing away every vestige of the clip just finished. When all of the shearing operations have been completed on a flock of sheep, the shearing station is as clean as a ballroom floor from one end to the other.

Those portions of each fleece which are apt to carry burrs and other foreign matter which adheres to wool, are picked clean by hand.

Great Care Taken

The method of handling the fleeces so that they are not broken is pretty nearly perfection. In the pressing and baling, the fleeces are so laid that they retain their form and as each bale comes out to the shipping department it is marked as to quality and grade, and with the owner's name.

From the shipping platform the owner carts away his wool to a railroad depot, and makes whatever other disposition of it that best suits his purpose or convenience for the time being. The only hands through which his wool will pass, however, before reaching he manufacturer, is that of the wool broker. There is no expensive, profit-making middleman in the Australian system. The wool brokers sell on a commission and the wool broking establishments are wonderful institutions in Australia and New Zealand. They have perfected a system for the expeditious handling of the wool that accomplishes the work of getting the wool from the grower to the manufacturer in a minimum period and at a minimum expense.

The secret of the success of the system lies almost wholly, of course, in he proper preparation of the wool for market, at its source. You see, the work of separating the wool into its different classes has already been done and the manufacturer, by inspecting samples of each class knows exactly what he is buying. The main porions of the fleeces, or in other words the best of each fleece, bring the price such wool can always command when it is segregated. The first and second pieces, the necks, the belly wool, the hocks and other wool of a lower grade bring lower prices, of course, but the higher price of the best of the fleece predominates.

Or let me illustrate it his way—he bulk of the fleece of a sheep is high grade wool that should bring anywhere from 24 to 28 cents a pound. The poorer portions of the fleece bring from 16 to 18 cents. When wool is properly shorn and prepared for market, the high grade portions of each fleece are segregated, and the grower therefore, receives from 24 to 28 cts a pound for his wool. This is the case in Australia, remember, and not in your western states here.

Intermountain sheepmen, on the contrary, receive the lower price of from 16 to 18 cents a pound for their wool, because their fleeces are poorly clipped to begin with; they are neither skirted, classed or picked; they are thrown promiscuously into bags and tramped by men in heavy boots, thereby breaking the fleeces and permanently injuring them so far as their market value is concerned, and finally, because the buyers have no means of knowing how much high grade wool is mixed with the lower grades of dirty wool. These buyers average the good with the bad, they hammer the price for the whole clip down to about the level the poorer portions of the clip should bring, alone, were they properly prepared.

The difference is so evident, and the superiority of the Australian system seems so obvious, that I hesitate to draw further comparisons.

Scene in Norfolk County, Ont., showing how the sand land, which formerly grew fine timber has proved useless for farming, and how the young pine trees recently set out are growing and holding the sand from blowing.

Weeds and Their Eradication.

Editor The Maritime Farmer:—

At this season of the year it behooves every farmer to guard against the introduction of weed seeds on his farm One of the greatest difficulties in the way of producing a more abundant supply of clean clover and grass seed, as well as seed grain, is the prevalence of weeds In order to produce the best quality of farm crops and seed grain, growers must be continually on the alert to keep the weeds on their farms in check and to prevent the introduction and spread of new varieties. In various ways weeds lower the yield, depreciate the quality and value of a crop and at the same time they add to the cost of production. They rob the soil of plant food and of moisture, and crowd out more useful plants, being hardier and more prolific. They increase the cost of every farm operation while they cause depreciation in the market value of the crops because of the presence of weeds in the hay, of weed seeds in the grain. The eradication of the worst weeds is costly in time, labor and wear of machinery. Most weeds are conspicious and all are unsighty on the farm. They depreciate the value of the land. Some of the weeds are harmful to stock and are injurious to the products of the farm. Weeds also attract noxious insects and harbor fungus diseases.

Grass, clover and other seeds, commercial feed stuffs, etc., often contain many weed seeds. New weeds are thus continually being introduced on the farm. They are spread from distric to district by means of various transportation facilities. The wind carries some weed seeds some long distances, not only in summer, but also over the snow in winter. Streams distribute them along their courses. Besides these different ways hey are also widely scattered by seed eating birds, and by the coats of cattle, sheep and other farm animals.

Weeds are classified according to the length of time they live. Thus, annuals are one-year plants; biennials, two-year plants; perennials, are many year plants, that is, they live on from year to year. In eradicating weeds it is most necessary to know under what head they come as the treatment best suited for the eradication of annuals is different to the best method of destroying biennials or perennials.

Annuals complete their growth in a year. As a rule, they have small fibrous roots and produce a large quantity of seed. Annuals may be eradicated from land, however badly infested it may be, though any method which will hasten the germination of the seed, and after the young plants have a start they may easily be destroyed.

Biennials require two seasons to complete their growth, the first being spent in collecting and storing up a supply of nourishment, which is used the second season to produce flowers and seeds. Biennias must be either plowed or cut down before the flower. Mowing at short intervals in the second year, so as to prevent the development of new seeds, will clear the land of this class of plants; but a single mowing will only induce them to send out later branches, which, if not cut, will mature many seeds.

Perennials are those plants which continue to grow for many years. They are propagated in many ways, but all produce seeds. The most troublesome perennials are those which extend long underground stems or rootstocks beneath the surface o f the ground. Among this class may be mentioned Canada thistle, Sow thistle, Bladder Campion, Field Bindweed and a few others.

Representatives of shallow rooted perennials are couch grass, yarrow and pasture sage. Some perennials extend slowly from the root, but produce large quantities of seed, examples of this class may be found in the Ox-eye Daisy, Dandelion and Goldenrod.

This class of weeds are by far the most troublesome of all. To insure their proper eradication they require rigorous treatment, and sometimes the cultivation of special crops. Imperfect treatment, such as shallow plowing often does more harm than good, by breaking up the roots and stimulating further growth.

The rootstocks of some perennial weeds are often very persistent. Some sections quickly taking after they are distributed by plowing or by cultivation. Most perennials will succumb, however to any system of cultivation that will prevent the growth of leaves. Plants take in most of their food through their leaves, perennials which have been established for many years have a supply of this food in their bulbs, and rhizomes. This is what makes this class of weeds so very hard to disestablish once they obtain a foothold on the soil. The first growth in spring is produced mainly by drawing on this supply, plants therefore are in their weakest condition immediately after they have completed their first growth in the spring. This, therefore, is the proper time to plow in order to most effectively clean the soil.

To keep farms free from weeds, few methods give such good results as a systematic, short rotation of crops with a seeding down to grass at short intervals. Weeds are most in evidence in districts where cereals are the chief crop. Thorough cultivation with a systematic rotation of crops, combined with the maintenance of as many sheep as can be kept to advantage, s a certain and profitable means of keeping weeds under control.

Lands foul with some kinds of weeds particularly annunals, may advantageously be seeded to grass for hay or pasture. The cltivation of hoed crops becomes too expensive a labor when the ground becomes pollutted with weeds. Grain crops may also be unprofitable because of weeds.

Seeding to grass and cutting the hay crop early will prevent most kinds of weeds from ripening only a small number of weeds.

Besides the classification of weeds as annuals, biennials and perennials, weeds are also divided into two general classes known as noxious and common weeds. The weeds known as noxious weeds aret ose which are of the most harmful nature. The limits of this class are not very clearly defined as a weed, which, although of common occurnce in one district, may be of such a harmful nature in another district as to warrant its being cassed in with other noxious weeds.

Among the most prevalent of noxious weeds may be mentioned the following:—

Curled Dock.—This is a perennial weed with a deep top-root. The stem is from two to three feet in height and terminates in a number of wandike racemes. The root leaves are six to twelve inches long and are oblong in shape with waved margins. This is a common weed in pastures and waste places. The seed resembles a miniature beechnut in shape. The seeds of cured dock are ery often found in Canadian-grown cover seed.

Field Bindweed.—This is a deep-rootd perennial with extensive, underrootstocks. The leaves are abou one inch long, heart shaped and on the end of very slender stalks. The flowers are pink in color and rather large be-

(Continued on page 634)

COST OF PRODUCTION OF FIELD CROPS.

In calculating net profits from the rotations, some interesting figures have been obtained regarding the cost of producing the various crops grown. In explanation of the rather high cost in some cases it may be explained that in 1913 some of the fields did not yield up to the average production for previous years. Corn and turnips were the chief sufferers.

Cost of Production of Field Crops, Nappan, N. S., 1913.

Crop	Yield per acre		Cost to Produce		
			Per acre	Per ton.	Per bushel.
	Tons. Lb.	Bush. Lb.	$ cts.	$ cts.	cts.
Turnips	29 23	767 03	45 57	1 98	5 94
Mangels	19 685	644 45	49 51	2 56	7.98
Ensilage Corn	12 1,380	.....	39 33	3 10	
Potatoes	.....	376 00	49 36	.....	13.13
Oats	.....	59 24	17 25	.....	28.9
Wheat	.....	29 30	14 42	.....	48.9
Barley	.....	33 44	13 83	.....	40.8

W. W. Baird, Superintendent in Bulletin No. 75, Ottawa.

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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JUNE 9, 1914.

DATES OF ISSUE.

June..... .....9—23
July .....7—21.

MAKING MONEY ON THE FARM.

Making money on the farm is made possible more by farm management than any qualities of soil or location of land. It is true that the quality of the land and the advantage of good, all-year markets have their influence and contribute greatly to the profitable operation of farming. All persons engaged in similar occupations are not money makers. The faculty of money making or business management is strongly developed in one person, while in another it may be scarcely perceptible.

This feature of adaptability to occupation, or lack of it, is a most pronounced condition in western farm life today, because of the land ownership craze that has prompted persons of all classes of education and training to become land occupants, through the inducements of homesteading the cheap government lands, and the very rapid advance in farm land values over the western farming country. There is nothing now so desirable in the estimation of the man of average intelligence as to be the owner of land, the owner of a good farm.

Thousands of persons have in recent years become land owners and land operators, assumed the occupation and management of farms without ever having had any farm training or experience in the management of farms, and are not making the farm pay. While this is true, there are other persons who use the farm as a basis of trading and dealing operations, and by shrewd management in this line of work are making money. The farmer who can see a bargain in what others produce and avail himself of opportunities of buying and developing, has an opportunity independent of the usual producing advantages of farm stock breeding.

We often hear of the young farmer who goes around among his neighbors and buys up a bunch of calves during the autumn season and winters them through on his cheap feed, and in the spring has a fine lot of yearlings that have attained, at little expense, 200 pounds or more of growth, and sold at a big profit. This is one of the ways that some of the farm business sense of a dealer is used in making the farm pay off other people's production. The farmer who is always on the lookout for something to buy in the line of live stock at a bargain is in the line of his opportunity of making money on the farm.

THE IDEAL PERMANENT HOME.

A recent issue of Farm and Dairy says:—

"We quite frequently hear or read of country communities where some of the older settlers who have worked long and faithfully now wish to retire and enjoy the fruits of their labors. In nine cases out of ten they move to the adjoining town or city, handing over the old homestead either to a son or married daughter.

"While we like to see the young people staying on the farm, and we need them as a part of the community, we also need the older members of the families who have been standbys for many years. And does it not seem reasonable that the ideal place for the silver-haired people to spend their latter days should be in the country, which they have learned to love during the years that they have toiled in order to secure the cnmpetence that now ensures their comfort.

"We have all heard similar expressions to that made by a young man recently to the effect that he liked nothing better than to have a good chat with some of the old residents around his home and get their ideas and experiences on the problems which every young man has to confront. Thus we need the older folks in a community to act as an inspiration to the young life.

"Why not then, when the time comes for father and mother to retire from active work, plan to build a home for them on the farm—an ideal permanent home? It is quite possible to do this nowadays when we have the facilities for installing such conveniences as light, water, heat, the telephone and rural mail delivery. Then, too, the nearest neighbors of father and mother will be their own sons and daughters.

"In order to keep both young and old in the country, however, and have them contented, it is the duty of every one in a community to put their shoulder to the wheel and strive to make their community more nearly ideal. To do this we must use brains as well as hands in order to get best results. We should also strive to have everything around the farm as comfortable and neat as possible and cultivate refinement and progressiveness. If we have these conditions, need we look elsewhere for an ideal permanent home?"

THE EDUCATED FARMER.

There are some discussions as to the value of education to the farmer. The farmer with a high school education is believed by many to be better fitted for the successful management and operation of the farm than the man with less school training. The habit of study and investigation acquired by application in school and class work fits the farmer for carrying on his investigations and labors on the farm, and therefore aids in developing an inclination for scientific agriculture, which must prevail sooner or later.

The extension work of the agricultural college, with the farm demonstrator and the various helps that will be added to the opportunities of farm training through this means of education, will all be available to the farmer within a very short time. The trend of education is now toward getting a knowledge of the land and the growing of its crops. The educated farmer need have no fears of being handicapped through the influence of his superior school training, unless he has delayed too long in taking up the work of farming. The best farmers are those that took up the work in their young manhood or boyhood and have given careful attention to the acquiring of a knowledge of right principles and the enforcement of this in all their farm operations.

ARE YOU TAKING ADVANTAGE OF YOUR OPPORTUNITIES?

The time is coming when it will be a humiliating confession to acknowledge that the farm is poor. Science is showing us how to build up our farms and society is demanding that we produce more at less expense. If we fail to meet our opportunities as producers we will be forced to give up the farm to those who know how.

Agricultural Colleges and Schools, Farmers' Institutes and other sources for Agricultural education is at your very doors. Are you making the best use of them?

EFFICIENT FARM MANAGEMENT.

No system of farm management is satisfactory that does not provide for the future as well as the present. A crop this year and a failure next year is not economical unless the manager expects to leave the farm before the next crop is planted. It should be the desire of the manager to conserve fertility constituents and vegetable matter in such a way that the income will increase as the years pass, rather than diminish. A regular but an increasing income is better than soil deterioration, even though the first year's crop be large.

Every rotation should be planted so that one or more legumes will occupy the land one or more times during four years. The legume will enrich the soil in nitrogen and make it produce a larger crop of non-legumes such as roots, oats, wheat and grass.

Not all the surplus income from the farm should be returned to it in buildings, fences, wells, improved machinery, etc. The home should have its share of improvements, which may be termed an investment. These are an investment, because they bring in dividends in human happiness as a result of comfortable living.

Little is gained by selecting large, stocky trees instead of small, well-developed trees for transplanting. Nurserymen know that small or medium-sized trees are better than large, over-grown trees, but as so many customers demand the large, they must be catalogued and kept on hand. Smaller trees live better, grow faster and make a more symmetrical tree. This rule holds true with both shade and fruit trees.

Another Prosperous Young Farmer, or How a Young Man Became Independent.

Mr. C. W. Daniels is a very wide-awake, prosperous young farmer, and if the story of his life were written, it would surpass many a novel hero tale.

There are experts in every walk of life, and on the other hand, there are those who, through lack of industry, application and thrift, often make a sad failure of it.

In the lure of the "West" the young man sees the "green field afar off" which often looks blue when he gets there, overlooking the more remunerative attractions at home; the possibilities and opportunities lying at his very feet, where he could start a bank account, while enjoying the advantages of an intelligent community to mingle with, all the comforts, and convenience of home life; a nearby market offering good prices for all he can produce; and avoiding all the discomforts, and privations which invariably follow a life in the West.

These advantages are certainly worthy of grave consideration by the young man beginning life—for one has only one life to live, and it is one's duty and privilege to make the most of it.

Such was the conclusion Mr. Daniels arrived at when he closed the bargain for 150 acres of what promised to be fairly good soil for mixed farming, in the vicinity of Middleton, Nova Scotia, in the centre of the fertile Annapolis Valley, for which he agreed to pay $1,400. Mr. Daniels only had a small part of this amount, and had he been like many a young man, he would have been very reluctant to take this step. But with full confidence in himself, ad the farming industry, he went forward. He felt by close attention and careful management, he could, in a few years, clear the farm of debt, and at the same time make profitable and permanent improvements.

Going to work with this end in view, he purchased five cows, and a few necessary farming implements. He soon found a ready market for his butter, as it proved to be of extra good quality, and he received ten cents per opund more for it than the curent market price. He has supplied a Halifax firm with it for several years, whose customers will use no other brand, and are willing to pay the extra price for it, which repays Mr. Daniels in encouragement, as well as being a valuable source of profit.

Mr. Daniels finds the Jersey-Durham cow the most profitable for butter yield; eight milking cows have averaged him, during the winter months, 80 pounds of butter per week. He derives the main source of profit off the farm, from butter and pork. It is always profitable to keep swine on the farm where cows are kept, to use up the skim milk and buttermilk which would otherwise go to waste. And Mr. Daniels has not failed to see the advantage of this, for he always uses his milk in this way.

From a litter of twelve pigs fed on skm milk and buttermilk with some vegetables, and a little corn meal a short time before marketing, averaged 150 pounds each, when four and one-half months old, which brought the handsome sum of $234.00. He finds this the most profitable way to handle pigs for profit; bringing them up quickly to about 150 pounds, which weight, comands the highest market price, and thus avoids the expense of keeping them a prolonged period of time, which when marketed, does not command as much per pound as the 150 pound pig. Mr. Daniels has another litter which he is bringing along the same way.

Of course, this milk may be fed to calves, with equally good, if not more profitable returns, and perhaps with less labour than is required for the raising of pork. Never was the market price for beef cattle so high as at the present time, a great opening and excelent returns are offered in this line for al who care to take advantage of it.

Some farmers in this vicinity already see the possibilities of this, and have gone into the raising of beef cattle quite extensively.

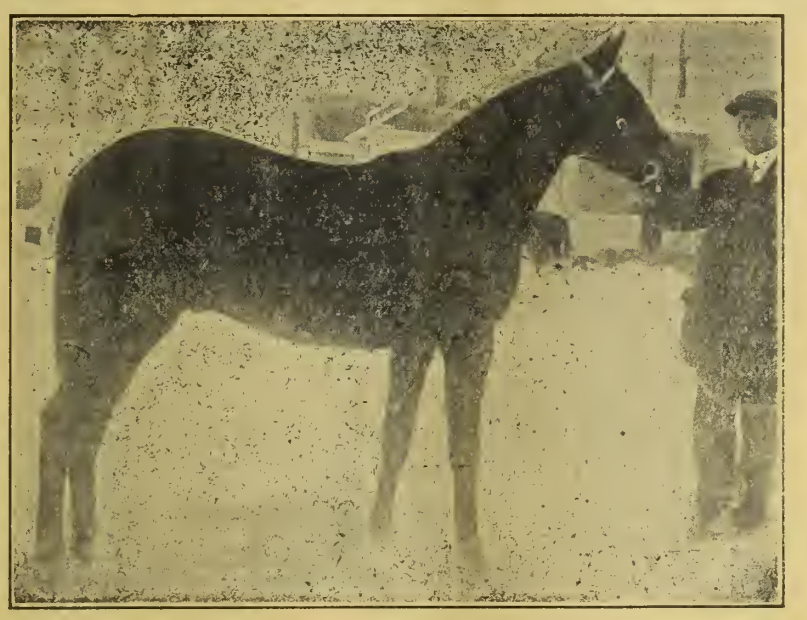
Mr. Daniels always aims at raising on the farm all the vegetables and grain required for his stock, and thus avoids the necessity of having to purchase, but very itttle imported feed. Hay, as well, is fed on the farm, thus avoiding the necessity of purchasing commercial fertilizers, which he claims forces everything out of the soil in a few years and leaves it in an impoverished condition, which is not so with the use of barnyard manure and compost.

Working along these lines, in thirteen years, he paid off the balance of debt on the farm, stocked it with up-to-date farming implements, a pair of team horses, twenty head of cattle, and built a modern, up-to-date barn, 50x80 ft. costing $2,000. All clear of debt, and now, hardly a month goes by without addding fifty dollars to his bank account.

There is about 100 acres of fruit trees on his farm, mostly apples and pears. The apples are shipped to England, which average him $2.50 per barrel clear ;but finds a local market for the pears, which brings a handsome return. But Mr. Daniels does not rely on the income from his fruit as the most profitable; he believes in mixed farming, and if one crop fails, the others make good. He finds if manure is spread on the snow, or in early spring, is inducive of good crops, in fact, really necessary. Thus spread, on fall ploughed ground, with five or six harrowings, thoroughly mixes it with the soil and puts it in good condition to be taken up by the growing crop.

Several of Mr. Daniels' neighboring farmers have taken courage by his success, and have gone into the butter industry, and are doing well.

These are the kind of young men Canada needs to-day. We often hear of pioneering in the Canadian West, but the oportunities which Eastern Canada offers should not be overlooked which often proves to be the more "all around" country in which to live.—Robert E. Caldwell.



ABBOTT KIP

A Prize Winner at the recent Maritime Horse Show. Abbott Kip is by Rudy Kip out of the Handsome Mare Grace Abbott. Bred and owned by A. E. Trites, Salisbury, N. B.

Rape for Pork Production.

High prices for all grain feeds and the failure of clover on many farms have caused a large number of feeders of hogs to look for forage crops, which with a light grain ration, will produce fairly rapid gains at a moderate cost. Investigations at the Ohio Experiment Station have shown rape to be one of the very best crops for this use if clover is not available.

Six pigs, weighing about 45 pounds each at the beginning of the test, were kept on slightly less than one-quarter of an acre of rape for eleven weeks. During this time the pigs received 825 pounds of a mixture of nine parts by weight, of ground corn to one part tankage, and gained 369 pounds in weight. Another plot, more fertile than this one, yielded an even more luxuriant growt of rape, and showed a larger carying capacity.

The rape from the better plot showed a replacement value of over $48 per acre when the grains produced and concentrates consumed by pigs, some receiving corn alone and some receiving corn and tankage on the rape, and by similar pigs fed corn and tankage in dry lot, were compared. In this calculation corn was valued at 56 cents per bushel, and tankage (60 per cent. crude protein) at $48 per ton.

If wet, rank rape is pastured, soreness of the skin, particularly about the **ears, is ocasionally developed. This** may be avoied to some extent by keeping pigs from the rape while very wet, or if it occurs may be relieved by the application of lard, oil, or other similar material.

Dwarf Essex rape is the variety best suited for forage. It may be sown broadcast or drilled solid at the rate of five to seven pounds of seed per acre or drilled in rows at the rate of three to four pounds of seed per acre, at any time from May 1 to July 15. Rape will do well in ordinary seasons in any part of the Maritime Provinces, if provided with a good seed bed, in fertile, well-drained soil.

On weedy land there is an advantage in drilling in rows far enough apart to permit cultivation; besides, there is likely to be less damage to the rape from tramping.

Under favorable conditions, rape should be ready for pasture in six to eight weeks from time of seeding. It will continue to grow until late fall. It may be pastured with a moderate number of pigs continuously or may be fed down rather cosely and then allowed to grow up again, whichever plan is most convenient.

Look the Farm in the Face.

It's a good thing at least once a year for every farmer to stand aside and look at his place as if it belonged to some other fellow, and pick out all the things this other fellow has left undone. Sticking too close to the work sometimes narrows a man's vision and makes him overlook important things. By going past a pile of rubbish four or five times a day you finally may come to think it belongs there, just as a man will sometimes plow around an old stump year after year as if it were established by divine mandate. There are precious few farmers who don't know that an old cobbled up gate loses them enough time and energy in a year to build half a dozen new ones, but still a lot of them never get started at the job of building new ones.

So it is to remember a lot of these little bothersome things that the whole family, from grandfather to little sister, ought to sail in for a week or two in the spring and clean up the place. There will be plenty to do. All of the chicken coops and sheds need cleaning up, as well as the barns. Paint and whitewash will work some marvelous changes in them. Usually there will be some brush to pile and burn. Where the wood pile was left last fall there will be a lot of chips and fragments scattered, and a little work will improve its appearance. Perhaps some few posts have rotted out so that the fence sags, and if so it is a good time to haul out some new ones and straighten up.

Soil Texture and Soil Moisture.

The term texture when applied to the soil refers to the size of the soil particles. Generally speaking there are three main classes of soil based on texture, sand, silt and clay, and all productive soils are, as a rule, composed of combinations of the above classes.

The amount of movement and the rate of movement of soil moisture are governed to quite an extent by texture. In sand we find that the action is rapid, but lasts only a short time. On the other hand, the movement in clay is very slow, but the water travels through a much greater distance. In soils of medium texture the action is intermediate throughout. In the average soil movement of water is confined to a few feet, but in some of the fine textured soils it may travel a considerable distance.—James D. Marshall.

Field Husbandry Experiments

The Experimental Farm at Ottawa and the Branch Farms and Stations make field husbandry investigations a very prominent part of their work. For the information of those who are interested the more important results of last season's work over the entire system have been summarized and issued in Bulletin No. 75 of the Expermental Farms. It takes up the question of rotation, cultivation, fertilizers, rates of seeding, cost of production, weed eradication and other points connected with field agriculture. The informa tion is presented by Farms and Stations and is, therefore, easily available for study. This bulletin is for free distribution at the Publications Branch of the Department of Agriculture at Ottawa.

Publications on Agriculture.

The Department of Agriculture at Ottawa has available for free distribution upwards of two hundred publications including repors, bulletins, and circulars. These have been issued, from time to time, by the several Branches and deal with almost every phase of agricultural science and pracice. A list of these has been printed in pamphlet form giving the title, author, and date of each. This ist is for free distribution and may be procured on application to the Publications Branch of the Department of Agriculture at Ottawa.

Formalin as Milk Preservative.

Tests with formalin as a preservative in composite milk and cream samples in an Ontario experiment show that about one-half the cubic centimeter of formalin will preserve a pint sample of milk or cream in good condiion for testing for a month.

HORTICULTURE.

New Fruit Commissioner.

Mr. D. Johnson, of Forest, Ont., whose appointment as Dominion Fruit Commissioner, a new position, has been announced recently, was born on a fruit farm at Forest, Ont., thirty-six years ago. He took charge of the orchards when only sixteen years of age, and for ten years served as foreman of the spraying, cultivation, picking and packing of the fruit. Ten years ago he became interested in the co-operative movement and took a leadng part in the organization of the Forest Fruit Growers' and Forwarding Association, one of the first and largest Associations established in Ontario, and was for six years its president and manager.

Four years ago Mr. Johnson withdrew from the Forest Association to devote all his time to Johnson Bros., fruit growers, shippers, and exporters, of which he was a half owner. This firm desired to cut out the wholesaler and sent its own salesman to the West who sold in car lots during the fall months. The firm's output last season from its own farm was six thousand seven hundred boxes of apples, wrapped and tiered, thirteen thousand eleven-quart baskets of peaches, eleven thousand baskets of plums, and ninety-five thousand seven hundred pounds of dried fruit. In 1912 their output was over four thousand barrels of apples.

In Mr. Johnson's orchards spraying is done with power sprayers. They make their own lime-sulphur, barrels and boxes. Their peaches and plums are sold largely by their own mail order system. All their apples are now packed in boxes. The lower grades of apples are worked into evaporated apple rings by their own plant in the orchard, and shipped in carloads to Europe and the West. The peelings and cores are dried and shipped to Germany. Arrangements are being made to convert the lower grades of tender fruit into jam.

Mr. Johnson was for some years on the executive board of the Ontario Fruit Growers' Association, and was for two years president. He was also president of the Co-operative Fruit Growers of Ontario for two years, and is now president of the Lambton Fruit and Vegetable Growers' Association, an organization composed of fifteen active co-operative fruit and vegetable associations in Lambton. Mr. Johnson was a delegate to the last Dominion Fruit Conference.

Thinning the Apple Orchard.

In the course of an address before the N. S. F. G. A. last winter, J. M. Robinson, Assistant Horticulturist at Kentville, N. S., said:—

"Thinning should always go hand in hand with spraying. The folowing table shows results obtained from twenty of the most careful sprayers in ten companies of the United Fruit Companies of Nova Scotia, giving the percent. of number of trees obtained. The percentage of poor fruit could have been greatly reduced by thinning, as can be seen by the figures taken from thined apples from very large trees at Kingsport. This is not necessarily a correct comparison but is given to show that the per cent. of number threes can be cut down by thinning:

	1912 pc. No. 3	1913 p.c. No. 3
Gravenstein, 20 best sprayers	36	35
Blenheim, 20 best sprayers.	15	28
King, 20 best sprayers	22	36
Ribston, 20 best sprayers ..	25	32
Gravenstein, thinned (1913) .		19
Blenheim, thinned (1913) ..		12
Ribston, thinned (1913) ...		16

"These figures show that although thorough spraying is done we often have fifteen per cent. or more of scabby and defective fruit on the trees. Often, too, a great man varieties set so full that it is impossible to get a high percentage of number one fruit and consequently the percentage of number threes is high, which generally gives poor markets. In each of these cases it will pay the grower well to thin.

"In paying visits to a number of orchards last season I was very much impressed by this fact. Blenheim and Ribston bore heavily generally and tough free from scab would not give good satisfaction in packing on account of the great number of small and poorly colored specimens. If from twenty to thirty per cent. of these apples had been removed a surprising difference would have resulted in the grade obtained.

"Again, the percentage of number three and cull grade is often nearly proportional to the percentage of scabby and defective fruit on the trees, and by thinning off sometimes fifteen to twenty per cent of this part of our crop the grade will be raised greatly and the yield not materially decreased. The expense of thinning moreover is not great and the work is easily done. In Kingsport last season trees bearing eight to ten barrels, were thinned in three-quarters to one hour each, or at a cost of approximately two cents a barrel, calculating labor at twenty cents an hour. The extra expense in grading unthinned fruit easily offsets this and the gain in grade is from thirty-five cents to fifty cents a barrel tree run.

"I consider thinning of great importance as it aids greatly in appearance, which is our weakest feature in fruit growing in the Annapolis Valley. Greater profits for money expended may also be had from thinning than from any other orchard operation."

Annapolis Valley Notes.

The season still continues cold, and is probably the latest on record, the leaf buds of apple trees just beginning to unfold by the twentieth of May. Readers will remember that in August of 1912 the Nova Scotia Government by special orders in Council passed a regulation prohibiting the importation of nursery stock from countries known to be infested with San Jose Scale unless such stock bore a certificate from Government officials that the nursery from which it came was free from this scale.

Under this regulation, no stock from Ontario was admitted into this province in 1913. But the Nova Scotia market for apple trees is very profitable for our Ontario friends, and consequently their nurseries received in homely parlance, "a lick and a promise," which was enough, however, to obtain the desired certificate from stock to be marketed in 1914.

When this stock began to come to Truro and Digby, the Nova Scotia ports of entry, this spring, it had to undergo a different kind of examination and was found to be pretty generally infected with living scale, and was, of course, rejected. The United Fruit Companies had taken large orders among their members, all of which had to be cancelled at the last moment. Because of this careful work, the Provincial Entomologist, Prof. W. H. Brittain, received a vote of thanks from the executive of the Nova Scotia Fruit Growers' Association that met at Kentville on May 5th, where the following resolution was passed:

Whereas, nursery stock, coming from points in the United States and Canada have been found to be infected with the San Jose Scale; and

Whereas, by prompt action and a great expense, this pest has been practically exterminated from Nova Scotia, after having been introduced on nursery stock from Ontario and the United States, and,

Whereas, the introdution of the San Jose Scale into Nova Scotia would seriously jeodardise the fruit growing industry of the province;

Therefore resolved, that the Executive of the Fruit Growers' Association, here assembled, petition the Nova Scotia Government to refuse entrance to all stock found bearing scale, whether from Ontario or from the United States.—M. K. Ells, in June Canadian Horticulturist.

Sprayed Fruit

The following letter has been going the round of the daily press:—

Sir,—Samples of imported apples of excellent quality and flavor were brought to me to-day in my professional capacity, with an inquiry concerning what was described as a peculiar green mildew near the stalk. It proved on analysis to be, not a mildew, but a deposit of copper sulphate (blue vitriol), with some admixture of lime, and was evidently left behind in spraying the fruit against parasites. The presence in apreciable quantity of rank poison, and this of a partially cumulative character, in fruit largely eaten by children is so grave a public danger that I urgently ask your assistance in calling attention to it. Apples having any sign of green deposit in the stalk cavity should not be eaten unless peeled. But surely some step should be taken to stop the importation of fruit thus dangerously contaminated.

M. S. Salamon B.Sc., F. C. S.
79, Mark Lane, E. C., March 21st, 191.4

The statements in Mr. Salamon's letter were of a nature to cause considerable alarm among fruit-eaters, and the "Standard" did good service in obtaining the opinion of the chief chemist of

In which you can have perfect confidence. You can always be proud of the results of your baking if you use

REGAL FLOUR

because with Regal, you have the right foundation for perfect bread and pastry—a better product because made of better material.

YOU CAN PROVE THIS

without risk by buying a barrel of "Regal" with the understanding that you will get you money back if the flour is unsatisfactory.

The St. Lawrence Flour Mills Co., Ltd.
Montreal, Canada

BANK OF NOVA SCOTIA ESTABLISHED 1832

"Safety First"

You hear these words everywhere, and the thought they contain should be heeded particularly by bank depositors.

Since 1832 we have provided the public with a safe place for their money. Our Reserve Fund of $11,000,000 is now 183% of our Paid-up Capital and we constantly maintain adequate holdings of Cash Assets. We invite Savings Accounts, large and small.

20

The Bank of Nova Scotia

Capital - - - -	$ 6,000,000
Surplus - - - - -	$11,000,000
Total Resources - -	$80,000,000

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

the Royal Agricultural Society, Dr. J. Augustus Voelcker, who told a representative that twenty years of experiments on the Woburn farms and in the laboratories of the Royal Agricultural Society had proved, so far as proof was possible, that the spraying of potato plants with blue vitriol and lime never left any trace of copper on the potatoes themselves.

"It was used," he said, "to fight potato disease before it was found to be remarkably efficeient in killing down other diseases of plants. It is not perfect either as a preventive or as a cure, but it seems to be the most efficient we possess. Tomatoes, grapes, apples, pears, wheat, almost every highly specialized plant you can think of, may suffer from this set of troubles, but I have never heard of any intelligent person spraying ripe fruit with the mixture. Plants and fruit trees get their dose long before the fruit is formed. Potato tops that get it are very far from the underground tubers, and seed which is treated with it before being sown has not shown any signs of growing plants that contain any trace of copper in their fruit."

Dr. Voelcker mentioned that experiments have been conducted lately showing the results of various metalic sprays on soils. These are now nearly completed, and will then be officially communicated by the Royal Agricultural Society. Dr. Voelcker added that he knew nothing of poisonous effects of copper on the human body. The dean of one of the London medical schools explained that soluble copper salts taken in any quantitty acted as an emetic, and were refused by the stomach. In very small quantities there was some evidence that they might produce deleterious effects. He had never known a case of copper sickness due to the presence of mineral poison on the skins of fruit.

Potato Disease.

There has been issued by the Department of Agriculture at Ottawa a remarkably well executed folder, Farmers Circular No. 4, entitled "Potato diseases transmitted by the use of unsound tubers," showing in natural colors, representations of specimens of diseased potatoes. Diseases and other blemishes represented are potato canker, powdery scab, hollow potato, internal brown streak, little potato disease, dry rot, wet rot, common potato scab, and stem and rot. Special reference is made to potato canker and powdery scab, the latter of which occurs already in Canada and should be carefully avoided. The folder points out that, under the destructive Insect and Pest Act of Canada, any person using for seed potatoes infected by potato canker or powdery scab is liable to prosecution. Potato growers who suspect the presence of either of the latter diseases are requested to send specimens to the Dominion Botanist, Central Experimental Farm, Ottawa. This folder, prepared by Mr. H. T. Gussow, Dominion Botanist, will be sent free to those who apply for it to the Publications Branch of the Department of Agriculture at Ottawa.

How Often and When to Spray.

It is difficult for one who has not lived in Nova Scotia to advise Nova Scotia growers how often and when to spray. We shall, I believe, all agree on at least two of the applications, namely one just before the blossoms burst, beginning with the earliest varieties, and then going right on with the later, and the other just after the blossoms have nearly all fallen, say eighty to ninety per cent. of them off. Without these two in a wet, cold May or June, no one need hope to control apple scab. One of these is almost as important as the other.

There will be a difference of opinion as to the other sprayings necessary. I think you should carefully test the value of one earlier application. Try it on at least one-third of the orchard and continue it for at least four or five years, as one year's results are often quite inconclusive. When this application should be put on is a debatable question. If you have oyster shell scale, blister mite or much canker to combat it should be before the buds burst or just as they are ready to burst. If these things are not troublesome I should feel like suggesting that the spraying be done not before but as the buds are bursting, or just after they burst, so that the unfolding leaves may be covered with the spray mixture and protected against scab until the application just before the blossoms open can be given.

As for any later sprays one must be guided by the weather. I think it probable that it will pay to spray again about ten days after the codling moth spray. It seems to me that better results will be got by not waiting for two weeks as ordinarily recommended, be cause each week after the blossoms fall the danger of apple scab begins to grow rapidly less and the all important thing is to get the apples safely through June because there is seldom danger in July.

All are aware that two years ago the injury by apple scab was done chiefly in the latter part of August and September. This injury could have been largely prevented by an application of spray mixture the last week in August, suplemented perhaps by another about two weeks later.—Prof. L. Caesar, before the recent N. S. F. G. A.

No Danger in Killing Live Stock by Spraying.

There seems to be considerable anxiety over the probability of injury to live stock from the poisoned spray that falls on the grass in the orchard. In most cases, each animal would need to eat about a wagon load of grass at a meal to get enough poison to cause injury. With the exception of hogs, live stock should not be allowed to pasture in the orchard. This is not on account of probable injury to the live stock but to the trees. If the orchard is in sod the grass should be removed and allowed to remain on the ground as a mulch to prevent the loss of moisture. Hogs may be very useful in an orchard by way of keeping the soil loosened up and by destroying the insect-infested apples that fall to the ground.

There is sometimes danger in poisoning poultry in an orchard, not from the fowls eating the poisoned grass, but from eating large quantities of worms that have been poisoned by the spray. Beneficial birds are also frequently poisoned in this way. In commercial orchards where the spraying is done early in the season, the insects are killed while very small and therefore do not contain enough poison to cause injury. The chief danger comes from spryng trees badly infested with full-grown insects of the canker worm type.—C. D. Jarvis, Director of the extension service, Connecticut, U. S. A.

Destroy the Tent Caterpillar.

The Tent Caterpilar has hatched and is feeding on the leaves of the trees. The tent or nest is usually located in the crotch of a limb. A very common method of destroying these nests is by burning them with a kerosene torch or rags attached to a pole and soaked with oil. This injures the bark of the fruit trees and may even kill some of the limbs and in some instances bad fires have occurred when this method was used. A quicker, better and safer way of destroying these nests is by wiping the nests from the tree with the hand, either with or without a glove or mitten on, or by tying a bunch of rags or burlap on a pole and wiping the nests out with this and then crushing the nest with the foot or dipping it in kerosene. In the case of fruit trees that are sprayed with arsenate of lead or paris green, there will be no need of the handwork.—S. P. Hollister.

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DAIRYING.

Veal Calves Give Skimmilk a Value of $1.64 Per 100 Pounds.

For several years past there have from time to time appeared articles in the various agricultural newspapers of the country, upon the utilizing of skimmilk as a by-product of the dairy farm. The subject is, however, far from exhaustion. Until few months there are no calves to feed and the surplus must be rendered valuable by feeding it to poultry and pigs. This necessitated at least two classes of calves to be fed in the manner best adapted to each, to say nothing of those fed for rearing as heifers.

It was found that the young calves, that were to be turned off as veals at or before they were five weeks old, gave the greatest profit for the skimmilk they consumed. Careful account was kept with each calf. He was charged with the money paid for him or his value at birth when born on farm and for the butterfat consumed, as nearly as it could be estimated, by weighing the whole milk fed. It was found that the gain on the veal ran from 90 cents to $1.50 per 100 pounds of skimmilk consumed, but very rarely below one dollar.

Our former methods of feeding veals were entirely changed. We used to change from new to skimmilk during the second and third week, substituting cooked middlings, oil meal, and corn meal for the whole milk, changing to coarse, cracked, or whole corn as soon as the calf would eat them; and then turned off the calves as veals at from six to eight weeks of age. We found that by this method the growth would be checked when the whole milk was changed for skimmilk and that a week or more time would be lost in growth.

We now feed the young calf four pounds fresh whole milk twice per day. This whole milk fed is maintained until the calf is turned off as a good veal. When four to six days old the quantity of feed is gradually and steadily increased by adding skimmilk each day, until by the time it is three or more weeks old it is receivig from eight to ten pounds mixed milk twice per day. For a healthy, vigorous, large calf this amount is sometimes slightly increased. In this the feeder must use his eyes and brains, for some calves will not stand over fourteen pounds per day. Each calf should be watched and fed acording to his capacity. At the slightest indication of bowel disturbance or indigestion the feed must be cut down from a quarter to a half, as needed. If care is taken, there need be no difficuty in one case in a dozen and prepared dried blood will quickly check that. The eight pounds daily of new milk will keep the calves steadily growing. We have found our calves so raised were nearly or quite equal to those of our neighbors fed on whole milk or allowed to run with the cows for the same period. As soon as the calves will eat coarse, cracked, or whole corn they are alowed all they will eat, also all the hay they will consume.

As the calf season begins to close and it becomes difficult to get enough of them to consume the skim milk, the whole milk is not fed after the third week and corn is substituted for it as son as the calves will eat the corn. They are alowed all the corn they will eat until they are seven or eight weeks old. About a week before marketing the feeding of new milk is renewed, feeding one-half new and one-half skimmed milk.

The mik is always fed warm. The temperature is raised to about 100 degrees by the adition of hot water well stirred in. It is highy important that at all times the feeding be uniform, especially in amount. We weigh all milk fed to calves, giving a regular amount at each feed. Weighing is as rapid as measuring and more accurate. At all periods due allowance must be made for age, size, and digestive ability.

The moisture added in warming the milk will be acceptable to the calf. In case of bowel disturbance, indicated by general appearance, loosening of bowels, diminished apetite, etc., from one to three teaspoonfuls of dried blood, prepared and sold by the packing establishment for feeding to cattle, will generally stop the difficulty after two or three doses. The quantity of milk is cut down one-half, and when the difficulty is stopped the feed is gradually returned to full feed.

At thirty days the account of the calf will stand about as follows:

Credit	
Average selling price	$14.00
Debit	
Cost of calf at birth	2.00
9.6 lbs. fat in the 240 lbs whole milk feed @ 35c. per lb.	3.36
Corn	.50
Hay	.25
Total cost	$6.11
To balance	7.89
	$14.00

As there are 480 pounds skimmilk fed during 30 days and the net return is $7.89, the skimmilk is worth $1.64 per 100 pounds.

It will be noted that the butterfat in whole milk is charged to the calf, placing the new milk on basis of skimmilk.

A good cow furnishes milk for two calves, making the skimmilk profit from each cow per month $15.78.

We average for the season about six calves per cow, therefore the proceeds of skimmilk are $7.89x6 or $47.34 per cow, a pretty good start for the income of one cow in one year, to say nothing of the skimmilk fed to pigs and poultry during the balance of the year.

The securing of calves is the farmer's job; if he gets them, the cow and feeder can do the rest. Of course, these figures are approximate, as calves differ in capacity and feeders differ in care, judgment, etc.—C. L. Peck, in Hoard's Dairyman.

Suggestions on Milking the Dairy Heifer.

Let us have foresight in preparing our dairy heifers for their first milking period. Handle the udder and teats so as to develop the udder. Do this at least twice a week for six weeks before calving. The heifer will then be quiet and gentle, and will not be afraid when her udder is touched after she has calved. You will also find the udder developed so that it will almost resemble a cow's udder.

It is natural for the cow to stand while being milked; consequently the heifer knows nothing about kicking until hurt or frightened into it. It is a good plan to halter break every heifer when they are young; be careful not to hurt or frighten them. If by accident you should, and they kick do not punish them for it. Kindness and gentle handling is the only remedy. Let your reasoning for the cause be based upon the principle that she never kicked until she was injured, and the remedy will at once suggest itself.

No cow was ever broken of kicking by striking with the stool or other weapon; this practice only puts the cow on her guard, and as you come near her with the stool she uses Nature's defence and kicks. Handle her gently; a sweet temper is to the dairy cow what sunshine is to trees and flowers. If her teats are sore, she is quite iable to kick or walk off, and you must have patience until they are healed. In my experience, I have never found a kicker in a yard where kindness was a characteristic of the family who handled the dairy; on the contrary, I have found plenty of them where loud words and general bad temper prevailed.

Give the cow some kind of food just before you comence to milk as the process of mastication will take her attention from the milker's operation, and she will not hold up the milk. The udder and flanks should be brushed or wiped with warm water in winter and

The New Champion Butter-Producer of the World

This is May Rilma, the great Guernsey cow owned by Chesterbrook Farm, Beruyn, Pennsylvania. In 365 days May Rilma prcduced 19,639.5 lbs. of milk containing 1,059.59 lbs. of butter fat. This is the greatest production in the world to-day, and was made by steady, persistent milking; in fact, May Rilma is making more butter in her thirteenth month than she did in her first.

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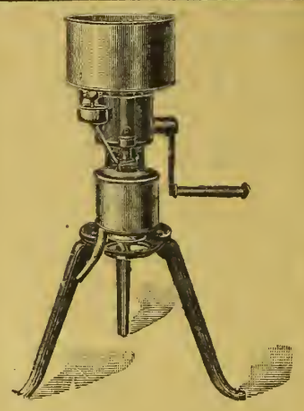

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cold water in summer to remove the loose hair or fine particles of dust or filth as these are usually laden with undesirable germs, which would otherwise fall into the pail.

Heifers do not like unnecessary noise or delay, and show their dislike by diminished quantities of milk. Commence milking the heifer at the same hour night and morning, and milk her in the same order. The first streams of milk should go into a separate dish; they contain many objectionable bacteria. Do not wet the hands wih milk. A practice I would recommend is to rub a little vaseline on the hands. This keeps the teats in nice condition, and overcomes the desire to wet the hands. The miker should be clean, kind and sympathetic, and free from any contagious diseases. He should not set off at a distance, like a coward, but his left arm should be in close contact with the leg of the heifer, so that she cannot kick. If she makes the attempt he will only get a push instead of a blow.

The milking should be done quietly, and in the quickest possible time, and the heifer should be milked clean and dry; otherwise the heifer will be ruined as a milker, besides losing the richest and most valuable part of the milk. —Philip Fockler in Farm and Dairy.

Individual Fair Play.

In a herd of 12 cows the average yield last year was 3,780 pounds of milk and pounds of fat. The 10 best cows in the district averaged 6,293 pounds of milk and 221 pounds of fat, while the 10 poorest gave only 2,818 pounds of milk and 107 pounds of fat.

When it is seen that the difference in the average of these two groups of 10 cows is 3,475 pounds of milk, while between the best and poorest individual cow there was actually a difference of 6,195 pounds of milk, it is quite evident that figuring out just a cold, dead, machine-like "average" is quite unsuitable and unfair when it comes to dealing with a living, nervous, sensitive cow.

That difference of $61.95 between the earning power of two individual cows indicates the cow's natural rebellion against mere mechanical treatment. Being an animated and complex bundle of nerves and tissues she needs study of her particular likes and dislikes, then her best results will be cheerfully given. She is not simply one of a team. but an individual whose peculiarities are well worth studying to ensure development.

The average may be used in giving due justice to each cow only when all in the herd are equally good. Just as long as these remarkable differences exist between individual cows, there will also remain the need for a record of cost of feed and production of milk of each one separately. Then the herd can be built up on the definite system of each one contribuing a good measure of profit, otherwise the deficiencies of several poor cows add to the heavy burden shouldered by two or three star workers of the team that do make large profits. Dairy records give fair play to each cow and help in judging individual merit.—C. F. W.

Milk Per Acre.

If it may be assumed that the farm of the average factory patron is fairly well adapted to dairying, that the patron himself is inclined towards dairying, rather than, let us say, fruit growing, and that his cows are fairly good, then it will be of interest to note how the farm is made to respond to this dairy inclination.

There are frequently noticed yields as low as 250 pounds of milk per acre cultivated including pasture, but some good patrons obtain 750 and 800 pounds per acre. Even this is little enough, for there are plenty of authentic records of 1,100 and 2,100 pounds of milk per acre. It should not be extremely difficult to obtain more than this, even 2,500 or 3,000 pounds.

This later figure is a long, long way ahead of the yields already mentionedd of only 250 pounds which may be found on many a so-called dairy farm in Canada, and is indicative of the possibilities in reach of the factory patron who is really anxious to attain first rank.

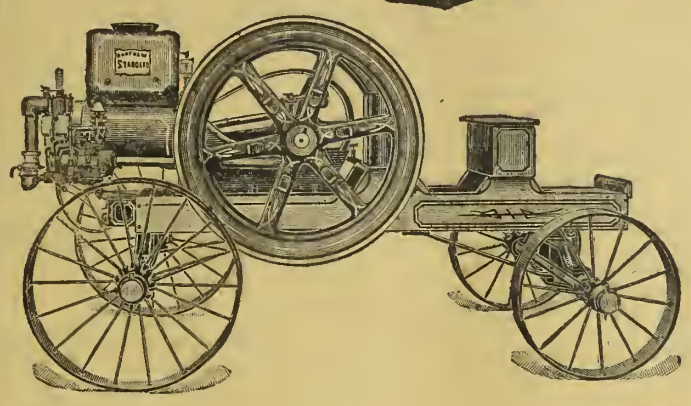
It is questionable if the average yield per acre is much more than 600 pounds of milk. If loyal, wholehearted support is given to the local factory and to our national industry of dairying, the farm of the dairy herd will be made far more productive. Great help will be derived by keeping individual records of each cow, because the old-established, complacent "average" cow has no intention whatever of assisting the average patron to get 3,000 pounds of milk from the average acre. The first necessary step is to know how for certain that each cow is a good producer, then one may aim with more hope at $30 or $40 per acre. —C. W. F.

Two cows that are kept in order to do the work of one would ordinarily do inevitably mean a loss.

Weed seed and small grain will never produce a profitable crop when run through the seeder. Look out for your seed before sowing.

The dairy cow deserves the very best water that can be had. Do not make her depend upon pools, running streams and sloughs for her drink.

Renfrew Standard Big Three



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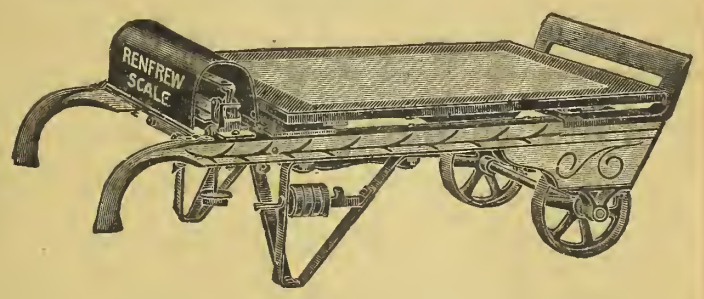

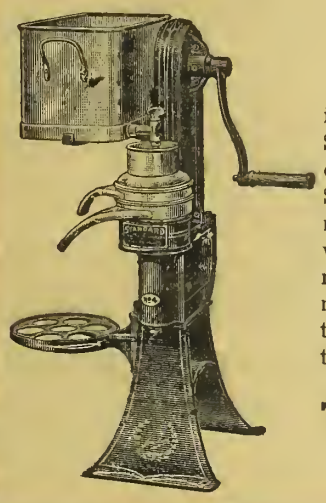

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LIVE STOCK.

Annual Meeting Pictou County Dairy Co., Ltd.

The second annual meeting of the Pictou County Dairy Co., Ltd. was held in Stellerton on Friday afternoon, April 19th. This company, although only incorporated in Aug. 22nd., 1913, and held their first general meeting about that time; but due to the provisions of the Nova Scotia companies and their articles of Associations, they have to hold their annual meeting in the spring of each year make it necessary for this meeting to be held.

The reports of the different offices, which showed the progress of the business to be in a very flourishing condition, were all favorably received, and adopted as read.

The election of directors resulted in William Craigie, Merigomish, being re-elected, and the new directors are Wm. McDonald, Lorne; George Milne, Woodburn, Auditor; B. Gravestock, Pictou.

The Directors reported that the $10,000 of stock offered was oversubscribed and that farmers still wanted some stock in the business, so it was voted that $5,000 additional stock be offered, about $2,000 of this was taken up during the day.

The Company now consists of over 300 good, practical farmers banded together in this co-operative association for the manufacturing of their Dairy products, and other business. The new creamery is now nearly completed and will be a credit to that part of the Province. An immense territory is available for the source of supply and no doubt the opening of the creamery, which will take place about the middle of May, will be one worthy of record.

The Manager, Mr. Harold Falconer, has lately returned from the Q. A. C. Dairy School, where he took the dairy course, passing with honors, as third in a class of forty-seven, and is now busy getting everything in shape.

If enthusiasm is what is wanted to make the Dairy business a success then it is evident that this business must go, from the enthusiasm that was displayed at this large meeting represented by the best farmers of a country almost one hundred miles wide.

W. A. McKay, Provincial Dairy Superintendent was present and assured the Company of the hearty co-operation between the Local Dept. of Agriculture and the Company, and also of the valuable asistance being rendered by the Federal Dept. in having a cow testing record centre established with this creamery as the main centre.

Everything points towards success at the present time and the people are justly proud of the splendid work they are undertaking.

A the meeting of the Directors afterwards, the officers appointed were Dan McDonald, Sylvester, President; Harold Falconer, Secretary-Treasurer and Manager, and Geo. Thompson, Warden of Pictou Co., Vice President.

This is but another evidence of the renewal of interest in the Dairy business in Nova Scotia.

It Pays to Spray

Not only for protection from bugs and blight but to increase the yield. Practical farmers and experiment stations have clearly proven that the yield is increased enough with every spraying to pay for solutions, time and labor many times over.

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Have capacity, power and adjustment to suit every need and pumps with the least slippage of any in use on any sprayer.

They are made with single or double acting pumps, 55 or 100 gallon wood tanks, wood or steel wheels regular or wide spray bars, combination pole and thills, or either separate.

There are special spray bars for many different crops, potatoes, tomatoes, pickles, cantaloupe, grain, cotton, tobacco, etc. This list includes a new one with drop nozzles that cover the underside of the

leaves as well as the top. A six-row bar enables potato growers to cover large acreages thoroughly and in less time.

An orchard attachment increases the value of these machines to the man who also owns an orchard.

See them at your dealers and write for "Spray" book showing full line of Hand, Knapsack, Bucket, Barrel, Traction and Power Sprayers.

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Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association

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It is now well known that not more than one case of rheumatism in ten requires any internal treatment whatever. All that is needed is a free application of Chamberlain's Liniment and masaging the parts at each appication. Try it and see how quickly it will relieve the pain and soreness. Sold by all dealers.

"Big Knees" of Cattle.

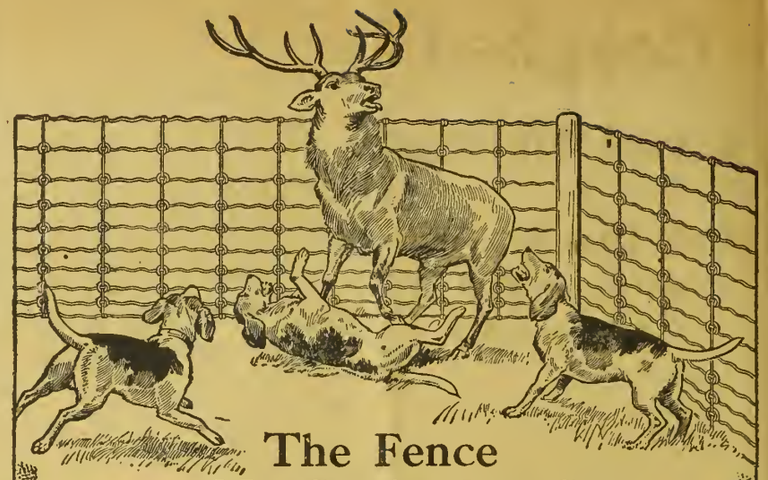
The big knees of cattle are, for all practical purposes, the same kind of swelling with which we are familiar in the human subject as "house-maid's knee." The housemaid suffers from an acute inflammation of the bursa that intervenes between the patella and the skin from kneeling on hard, damp stones, and in cattle the swelling arises from bruising of the knees in getting up and down, and, to some extent, perhaps, from lying on hard floors.

Causes.

Those accustomed to the management of stock know the extent to which the knees are employed in both lying down and getting up by cattle. When about to resume the recumbent position the cow first plumps down on her knees, and in the case of a heavy animal the force with which she comes to the ground is considerable. In getting up, the knees are also employed, and temporarily sustain the whole weight of the body in front. When the animal is heavy, and the pavement hard and sparsely covered with bedding, bruising results, and the frequency of "big knees" from bursal distension in cattle, as compared with horses, can be easily undersood. Horses are usually much more abundantly supplied with bedding, and when they suffer from "capped knee," as they sometimes do, it is enerally the result of bruising, or the entrance of thorns while jumping fences or hedges, in hunting, or in breaking out of pasture. The primary cause, then, of synovial swellings in front of the knee, is bursal distension, or the formation of a serous cyst under the skin, brought about by bruising or pressure. The swelling is superficial—that is, not connected with the articulation, and is generally diffused over the whole of the anterior aspect of the joint. It is very little affected by flexion or extension, and is rarely a cause of pain or lameness, in this respect differing very materially from other enlargements in which the articulation is involved, for these are generally a cause of great and painful lameness. If the swelling is prasped with the hand and manipulated, it will be found easily movable on the surface of the knee, and soft and fluctuating to the touch, reminding one—on a larger scale, of course—of the windgalls, bog spavins, and capped hocks of horses. The swelling is, indeed, of a similar character, though generally possessed of thicker walls, and it contains a pale yellow, alkaline, and viscid fluid. The enlargement is very rarely a cause of actual lameness, but the distension sometimes attains enormous proportions, and greatly hampers the animal's movements. It is also an eyesore, and though of no serious moment, since a cow with a big knee gives as much milk as any other, it affects the commercial value of the animal if offered for sale.

How to Prevent Big Knees.

Prevention obviously lies in the avoidance of the cause. In a few cases cattle may bruise their knees on hard ground when at pasture in seasons of prolonged drought, but the majority of cases are found among heavy milking cows kept indoors, or fattening bullocks tied up in stalls. Faulty construction of stalls, by paving them with brick or stone—very often rough stone—right up to the manger, is the most fertile cause of bruising. Beaten earth of a binding character forms the best flooring under the floor extremities, but the stalls should be paved for half their length from the channel behind, in order to facilitate cleaning. There is, of course, no objection to fully-paved stalls where the supply of bedding is bountiful; but since grain-growing became unprofitable less straw is produced than formerly, and it is also much more appreciated as a food. In purely pastoral districts, where there is little or no straw available, other than what is brought, a suf-



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Maritime Fence remains taut and trim after years and years of hard usage. It simply cannot sag or get out of shape. Made from extra-heavy imported hard-drawn steel wire, thicker, stronger, and galvanized so it is peel-proof.

Maritime Fences are tested rigidly before leaving our factory. We know they will withstand far greater strains than any they are likely to endure. The simple lock with the bull-dog grip—never lets go.

Our Fencing is made from Standard Gauge Wire. Other makers use SCANT WIRE. WE DON'T. Full weight, full measure, 16 oz. to the pound in every case.

It would pay you to act as our agent.

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Send for new offer and our latest Maritime Fence Book.

New Brunswick Wire Fence Co. Ltd.

Moncton, N. B. 13

VIGORA FOR HORSES

Read This Testimonial!

"Having seen in the newspapers the testimony in favor of your VIGORA, I decided to treat my two sick horses, troubled with colds, with this preparation. I bought two bottles and am pleased to say that both horses are completely cured."

ELIE COTE, St. Fereol Co., Montmorency.

Sold by all good Druggists and Grocers.

J. B. MORIN, Druggist and Chemist,

318 St. Joseph St., Quebec.

Coughed Almost All Night

With That Dry Tickling Sensation in the Throat.

A bad cough, accompanied by that distressing, tickling sensation in the throat is most aggravating.

Dr. Wood's Norway pine syrup heals the mucous surface, relives oppression and tightness of the chest, removes accumulated mucous or phlegm, quiets even the most obstinate and distressing coughs, securing sleep and rest at night, not only to the sufferer, but to others whose rest would otherwise be broken.

Mrs. Duel Marshall, Basswood Ridge N. B., writes:—"Just a few lines to let you know what Dr. Wood's Norway Pine Syrup did for me. I took a severe cold, coughed almost all night with that dry, tickling sensation in my throat. The first bottle did me so much good, I thought I would try a second one, which I am pleased to say resulted in a complete cure. I can strongly recommend it to anyone suffering with a cough or any throat irritation."

The price of Dr. Wood's Norway Pine Syrup is 25 c. a bottle; the large, family size, 50c.

It is put up in a yellow wrapper; three pine trees the trade mark, and is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

60 Years Old Today

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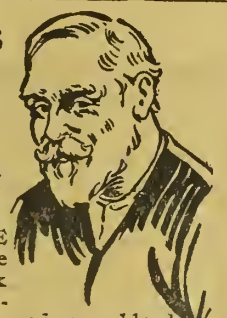


PEOPLE who are able to talk like this cannot possibly have impure blood—they just feel fit—no headaches, dyspepsia or bilious disorders.

These diseases can be cured by

Dr. Wilson's Herbine Bitters

A 'true blood purifyer' containing the active principles of Dandelion. Mandrake, Burdock and other medicinal herbs.

Sold at your store 25c. a bottle. Family size, five times as large $1.00. 2

THE BRAYLEY DRUG CO., Limited, ST. JOHN, N. B.

Cures Worms 10c. Deadshot Wormstick, in candy form. Reliable, Harmless.

Thousands of Dollars Profit

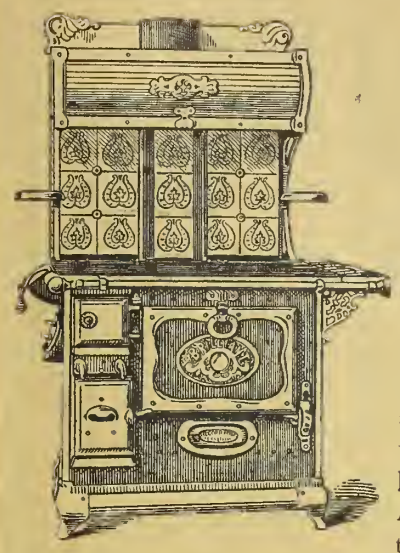
215 acres, fully equipped fruit farm, so situated that it escapes early and late frosts, one of the best apple farms in the Annapolis Valley; 16 acres now in full bearing; just the right time to take hold of this property and get the cream of the profits; cuts 50 tons hay; splendid pasture for 20 head stock; lot of valuable wood and timber; first class 10-room house; large barn, granary, shed and carriage house; only 2 miles to depot and village advantages; near neighbors, schools, and churches; for quick settlement of affairs, pair heavy work horses, driving horse, cows, young stock and full outfit of modern farm tools and machinery included, all for only $10,800, easy terms; for all details and traveling instructions to see this and many other good farms, see page 84. "Strout's Farm Catalogue 37", just out; choice selections of real bargains at wonderfully low prices throughout N. S. and N. E. States; write today for your free copy, it will show you where to find just the farm you want at the price you wish to pay. Address Farm, c/o Maritime Farmer.

ficient bed for covering a hard pavement is very rarely seen, while moss litter, or other substitute of straw is used sparingly.

Treatment.

The treatment of a bruised knee depends a great deal upon the stage at which it is undertaken. When the cow is first found with a swollen knee, free fomentation with hot water, hand-rubbing, and the prevention of further injury may result in its disappearance. A thick flannel bandage may be put on after fomentation to protect the front of the joint, and the allowance of litter should be increased. If the swelling does not disappear, but, on the contrary, the fluid effused increases in quantity and the tumor in size, it suggests that there is a continuance of the bruising. Should there be no fluctuations in size, an attempt may be made to excite absorption by blistering, which may need to be several times repeated, or the prolonged use of iodine may be tried. The hair over the swelling may be saturated twice a week with the tincture of iodine, or the liniment of iodine, which is much stronger, may be used, but a little less freely. Another plan is friction with iodine ointment, for which the following is the formula:—Resublimed iodine, 1 drachm; iodide of potassium, 20 grains; lard, 1 oz. A piece of the size of a hazel nut may be rubbed in once or twice a week, but those who adopt this treatment are warned against expecting immediate results, for the action of iodine in promotion absorption is slow. When a blister is employed its effects are to produce an exudation of lymph into the distended sac, converting the soft, fluctuating swelling into a hardish, indurated mass, which is gradually removed by absorption. This is facilitated by bandaging after the soreness of the blister has passed away. It is unfortunate that this method of treatment is both slow and uncertain, and if it fails there is nothing but either put up with the swelling (which, though unsightly, does not detract from the usefulness of the animal,) or to proceed to evacuate the swelling. There are severeal ways of doing this, but they come rather within the province of the veterinary surgeon, who will alone possess the proper instruments. In many cases, however, the sac fills again, and the same thing results when the owner tries to puncture with his penknife, unless the orifice is kept open for some time and the fluid allowed to drain away until adhesion between the walls of the sac has been obtained. The late Professor Williams recommended that " the puncture should be made at the lowest margin of the swelling, and upon its inner side, by a transverse incision, in order to blemish as little as possible. After the puncture is made, and the fluid pressed out, the walls of the sac must be kept in opposition by means of a flannel bandage, rolled round the knee from above downwards, until they become united by the adhesive inflammation. The bandage should not be disturbed for five or six days if no inconvenience is caused to he patient; but if any signs of pain are manifested it should be readjusted. The puncture in the skin should be kept open (and the best way of doing this is to insert a small piece of tow or lint into its orifice, allowing it to remain for several hours) in order to permit the escape of any fluid that may collect in the sac. The bandage is placed so as not to cover the wound. There is no danger to be apprehended from opening this bursa. I have done it repeatedly, and always with success, and sufficient inflammation is excited without injecting iodine or other irritant." About the best plan in cases where there is an enormously large fluctuating swelling is the insertion of a tape seton right through the body of it, allowing it to remain in three of four weeks, the knee being in the meantime protected from further injury by a good thick bed, or by a thick flannel bandage wrapped around it in such a manner as to allow the most dependent orifice to drain.—Veteran.

STOVE ECONOMY



There is no saving in having a poor stove. It burns up fuel without giving the right kind of heat. You cannot regulate it for cooking purposes either. It takes a good stove to turn out first class bread, cakes or pastry all the time. You will not be disappointed in choosing a

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Satisfaction follows the use of this Separator

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THE HORSE.

N. B. Prize Winners at the Horse Show

Following is a list of the amounts of prizes captured by New Brunswick exhibitors at the 1914 Maritime Horse Show:

H. W. D. Armstrong, Fredericton	$30
Geo. Carvill, St. John	15
W. A. Humphrey, St. John	64
D. S. Mann, Petitcodiac	10
G. W. McAnn, Peticodiac	8
Geo. McAvity, St. John	82
Hugh. McMonagle, Sussex	18
Geo. Phinney, Sackvile	12
Mrs. Harry Prescott, Baie Verte..	6
Wm. Prescott	10
J. A. Reid, Fredericton	24
Roderique Horse Co., Petitcodiac	15
H. W. Ryan, Petitcodiac	27
R. A. Snowball, Chatham	153
A. E. Trites, Salisbury	14
	$488

Total amount of prize money paid out, $2122.05.

"Blind Staggers" in Horses.

In past years horses have died by the thousands in Texes, Ohio, Kansas and Nebraska from a disease affecting the nervous system, popularly known as blind staggers or forage posoning. The Department of Agriculture has received urgent requests for help against this disease from sixteen different States, and as a result it publishes a bulletin containing definite instructions for combating this disease.

Bad Forage the Cause.

Investigators have practcally established that this horse disease can be controlled effectively only by a total change of feed and forage. It is quite obvious that there is a direct connection between the green forage, exposed pasturage and newly-cut hay or fodder which the horses eat, and this cerebro-spinal meningetis, as the disease is known to scientists. In fact, eating of such forage when contaminated is undoubtedly the most important cause. Over 95 p. c. of cases of ths disease in Kansas and Nebraska during the outbreak of 1912 were maintained under such conditions. Bad pasturage is also to be guarded against. Many horses have died from blind staggers caused by eating mouldy baled hay. As soon as the hay was eliminated the disease ceased. Other horses in the vicinity not fed upon this hay failed to contract this disease. Later some of the mouldy bales were opened and exposed to the sun for three or four weeks. After this the hay wes fed to horses without producing any ill effect. Forage poisoning, therefore, seems not to be an infection but rather what is called "auto-intoxication"—that is, it is due to certain chemical poisons or toxins formed by the activity of internal organisms. These poisons may be present when the forage is taken into the body, or may be formed in the stomach. The nature of this poison is still unknown.

Characteristic Symptoms.

When the horse is taken with the blind staggers it usually exhibits a disturbance of the appetite, depression and weakness, while there is trouble in swallowing, drooping of the head and sleepiness which may give way to excitement and atacks of dizziness. The vision is impaired, which results in the staggering gait tat gives the disease its popular name. Certain muscles of the neck and flanks are cramped, and there is a grinding of the teeth. Sometimes the animal has pains as though it were afflicted with colic. The animal will walk strangely as if in an open space, and will try to push through any obstacle it encounters. In the stable he will press his head against the stall or rest it on the manger. Sometimes he will crowd into a corner. The temperature at the beginning of the disease ranges from 103 to 107 deg. Fahr., but within twenty-four hours the temperature falls and eventually becomes sub-normal. The animal is often down on the second or third day, and may or may not get up when urged. Death usually ocurs in from four to eight days, although it may follow within ten hours of the first symptoms, while chronic cases have been known to last for three weeks. About 90 per cent. of the affected animals die.

Treatment.

While medical treatment in the vast majority of cases has not brought results, nevertheless, if it is used at all, it must be prompt, and before the disease has h adtime to run. The digestive tract should be cleaned out tnoroughly at once. Active and concentrated remedies should be given. Afflicted animals, however, have great difficulty in swallowing immediately after being taken, so that these remedies must generally be given by injecion. Arecolin in one-half grain doses, subcutaneously, has given good results as a purgative. Early in the disease urotropin in doses of 25 grains dissolved in water and given by the mouth every two hours, apears to have been responsible for the recovery of some cases of the malady.

After the animal has been purged, the treatment varies acording to the symptoms. The following measures have been recomended. The first and most important: Feed only clean, well-cured forage and grain, and pure water. Calomel, salol and salicylic acid, to disinfect intestines. Mild antiseptic mouth washes are advisable. Copious cold water injections, if the temperature is high, give better results than antipyretics. An ice pack applied to the head is beneficial in the case of marked nervous disorder. One-ounce doses of chloral hydrate per rectum should be given if the patient is violent or muscular spasms are severe. If the temperature becomes sub-normal, the animal should be warmly blanketed. If much weakness is shown this should be combated with stimulants, such as strychnine, camphor, alcohol, atropin or aromatic spirits of ammonia. During the period of convalescence the usual tonic treatment is recommended.

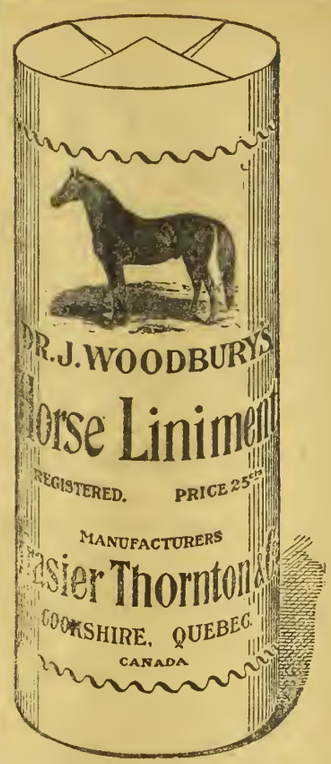
Sulphur and Methylene Blue in the Stable.

The various powders used upon open wounds and wire cuts often provoke a horse to gnaw and make the parts raw, smearing his nose and lips with blood and presenting a most annoying problem. The veterinarian will advise tying-up and powdering lightly. There is a better way. Take a pinch of sulphur and sprinkle the wound until all the moist surface is colored yellow. Repeat from time to time as seems needful. My experience is that the horse will not touch the wound after the first aplication of sulphur and that it will heal beautifully.

For many years I have found iodine the most effective aplication for naval ill. But there is a modern chemical which I find equally effective and much cheaper. An ounce of methylene blue costs but a trifle and does the work of many times its cost in iodine. A teaspoonful of methylene blue in a pint bottle of rain water makes a lotion of sufficient strength. Wrap the end of a stick with soft cloth, pour out some of the lotion in a cup and swab the naval freely. The effect is magical and entitles the remedy to high rank for the

GOLDIE KIP

First Prize Two-year-old Roadster at the recent Maritime Horse Show. Goldie Kip is by Rudy Kip owned by A. W. Wortman, Salisbury, N. B.



Horsemen, Attention!

These are the Preparations which have helped to make Canadian horses famous.

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Dr. J. Woodbury's Celebrated Condition Powders

For Sale By All Dealers

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will reduce, inflamed, swollen Joints, Sprains, Bruises, Soft Bunches; Heals Boils, Poll Evil, Quittor, Fistula, or any unhealthy sore quickly as it is a positive antiseptic and germicide. Pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2.00 per bottle, delivered. Book 7 K free.

ABSORBINE, JR., antiseptic liniment for mankind. Reduces Painful, Swollen Veins, Goitre, Wens, Strains, Bruises, stops pain and inflammation. Price $1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by

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CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for **Rheumatism, Sprains, Sore Throat,** etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is Warranted to give satisfaction. Price **$1.50** per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Toronto, Ont.

Scratches and Stocking

—Are prevalent in cold weather irregular work and overfeed induces both. A system tonic and blood purifier, such as

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will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil quickly cure them. Per. Box $1.00

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best medicine obtainable.

Yours truly,
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SUMMER SHOES FOR MEN WHO WORK

Here is something new in footwear specially suitable for farmers, woodsmen, millmen, trackmen, laborers—all those needing strong yet light, cool, easy shoes. These are made on good-fitting right and left lasts from our famous oil-tanned Skowhegan waterproof leather with waterproofed sole leather outsoles and solid insoles.

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"SUMMER PACKS" and "HARVEST SHOES"

are light weight, comfortable, durable working shoes for spring, summer and fall wear. Sold by leading dealers everywhere. If your merchant does not carry them write us, giving his name and address, and we will see that they are placed within your reach. Made 4, 6 and 9 inches high. 19

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Fredericton, N. B. - - Canada

purpose. Methylene is safe; it is administered to people in capsules and is also injected into the circulation as a destroyer of germs in blood diseases. Indeed, it was this qualitty which suggested its use to me for naval ill. The lotion is valuable for sore necks and shoulders and for collar boils. I suspect that methylene enters into the composition of some of the high-priced proprietary remedies for these ailments.—Breeders' Gazette.

The Suffolk Breed.

A Farmer reader inquires about the characteristics of the Suffolk breed.

The folowing description appeared in a recent isue of one of our Engish exchanges:—

"Developed from the noted old Suffolk Punch stock, which originated as a separate breed centuries ago, the modern Suffolks continue to hold extensive sway in their native country, and enjoy favor also in Essex and Norfolk, their breeding being confined to these three eastern countries, so that they are essentially a local breed. They have, however, become firmly established in Australia, while they find some vogue also in other colonial and foreign countries, and the export trade is an important factor in promoting the breed's prosperity. In its appearance the Suffolk horse offers a strong contrast to the Shire and Cydesdale. It is a clean-limbed cart-horse, there being a complete absense of long hair on the legs. The type bears a close resemblance to that of the Western Continental cart breeds of Femish blood, and there is no doubt that the Flemish cross played a great part in the evolution of the Suffolk Punch. Standing upon short legs, the Suffolks are very wide and thick, or "punchy" shape, with a broad back and short, thick neck, their conformation plainly indicating that they possess strong powers of draught. While of a heavy type, they are unrivalled in point of weight, size, and power by the more massive Shires, and as compared with these they exemplify a more active and medium sized stamp of the draught horse As a prominent breed point of the Suffok there is to be noted the characteristic configuration of the head, which is relatively short as from the forehead to the muzze, and very full and deep in the jowl, differing esentially from the more ruged and biger head typical of the Shire. A highly distitnctive note is struck also in regard to the colour, this being uniformly chestnut, though of varying shade. No other colour occurs in the Suffolk. In recent times the breed has undergone progressive improvement, and among the points that are being particularly studied by its suporters are to breed horses with good legs and feet, and that stand correctly upon their joints, and to get true-moving action, while weightiness of type has also been kept steadily in the forefront.

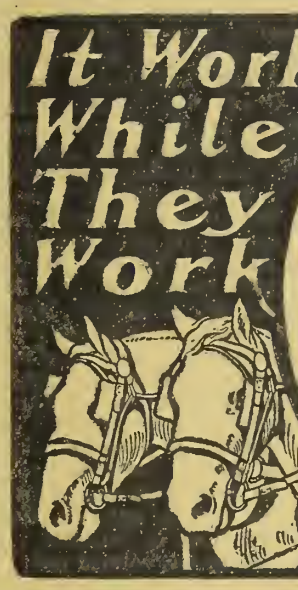
"The Suffolks are characterized by great activity, and they make desirable farm horses and prove most useful for draught work on the streets and the road, finding a ready demand for the latter puropse in the towns of the counties where they are bred and in adjacent parts, while there is a certain call for Suffolk geldings of weighty proportions in London. Much valuable work has been acomplished by the Suffolk Horse Society in promoting the welfare of the breed. Thus it has instituted a special scheme for assisting smaller farmers in the Suffolk's home district to become possessed of good brood mares, and it has allots a number of free nominations to leading stallions for the benefit of small breeders.

"There are several important and extensive studs of Suffolks to be found in their native county. Among the most noted are the Bawdsey Manor Stud, at Woodbridge, owned by Sir Cuthbert Quilter, where that great horse, Bawdsey Harvester, is located one of the best stallions of the present day, and Mr. Kenneth M. Clark's Sudbourne Stud, at Orford. Other leading breeders include Mr. Carlyle Smith, of Ashmoor; Mr. Pratt, of the Morston Hall Stud, at Trimley; Messrs. Catchpole, owners of the Darsham Stud; Mr. Woodgate of Framlingham; and the Marquis of Graham, at Easton Park, Wickham Market."

CLEAN---No dust or flying ashes. Ash chutes guide all ashes into convenient pan.

McClary's Sunshine Furnace

No ash shovelling necessary. See the McClary dealer or write for booklet. 33



It Works While They Work

If horses go lame, you don't have to lay them off to cure them. Kendall's Spavin Cure works while they work—and cures them while they earn their keep. For Spavin, Curb, Ringbone, Splint, Sprain, Swollen Joints, Lameness

Kendall's Spavin Cure
"Completely Cured Him"

Moose Jaw. Sask., Oct. 13th

"Two years ago, I bought a colt that was badly spavined, and completely cured him with only two bottles of your Spavin Cure. Worked him steady all the time and sold him last winter for a top price."
Howard Brock.

Also famous as the standard family liniment $1. a bottle—6 for $5. Ask your dealer for free copy of our book "A Treatise On The Horse," or write us. 53

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See this Bow Lever

Light rigid steel frame. Bolted trunnions. Roller bearings. Best finish throughout

THIS is a special feature of the Maxwell "Favorite" Churn. No other churn has it. You can adjust the handle to centre, right or left, whichever is easiest for driving.

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"FAVORITE" CHURN (with Bow Lever)

—makes churning a pleasure. It's so simple to drive—requires so little effort to produce the butter. Agricultural Colleges and Government Inspectors recommend it. Used in Denmark, Australia, New Zealand, S. Africa, and all over Canada.

Call at your dealer's and let him show you the splendid unique features of the Maxwell "FAVORITE." Sold in eight sizes.

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BLACK CAT BATTERIES
because they have
Nine Lives

Made in Canada by the world's expert—the oldest, largest and most reliable Battery Factory in the Dominion.

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POULTRY.

Feeding Young Chicks.

A few suggestions given by the Poultry Division, Experimental Farm Ottawa.

Do not feed too soon. When the chick is hatched it has a sufficient supply of nourishment in the yolk of the egg to last it for several days. What the chick requires for the first few days is not feed but warmth and rest.

A little sand or grit first. When the chicks are removed to their brooding quarters there should be some coarse sand or fine chick grit scattered where they can have free access to it. They should then be some coarse sand or fine chick grit scattered where they can have free access to it. They should then be left until they show positive signs of hunger which would be between the 2nd and 3rd day after hatching. They may then be given some bread crumbs that have been very slightly moistened with milk; this may be scattered on clean sand or chick grit. If being brooded by a hen she will see that no food is allowed to lie around but if in a brooder that part of the food that the chicks do not pick up in a few minutes should be removed as nothing in feeding causes so much trouble as leaving food of that nature around until it is sour.

Feed for the first 10 or 12 days.—The following daily ration of five feeds given about two and a half hours apart and continued from the time the chicks are two to three days out of the shell until 10 or 12 days of age may be altered or adopted to suit conditions:

First feed— Dry bread crumbs, slightly moistened with milk.

Second feed—Finely cracked mixed grains or commercial chick feed.

Third feed—Rolled oats.

Fourth feed—Dry bread crumbs, moistened with milk.

Fifth feed—Finely cracked mixed grains.

In addition to the above give the chicks daily a little green food such as grass, lettuce, sprouted oats, etc. Do not have the moistened bread sloppy but in a crumbly state and during this period let the chicks onto fresh soil or grass every day if possible.

Feed after 10 or 12 days— After the chicks are ten days to two weeks old, coarser foods may be allowed. The infertile eggs may be boiled and mixed with the mash food and the bread and milk discontinued. Hoppers in which is put cracked grains and dry mash or rolled oats may be placed where the chicks can have free access to them. As soon as they become accustomed to the hoppers all hand feeding except the mash may be discontinued. If the chicks are on range it w ll be found that after a time they will get careless about coming when called, at which time the mash may be dropped and dependence placed entirely on the hopper feeding.

Place grit and water, also a dish of sour milk if possible where the chicks will have free access to them. Nothing provides animal food in better form than does milk, the chicks like it and thrive on it.

Feeding Young Turkeys.

Young turkeys require more than ordinary care during the first few weeks after being hatched. As the termination of the twenty-eight day hatching period approaches the eggs should be carefully watched, and as soon as the young poults hatch care should be taken that they have dry quarters. Any wet or damp place must be avoided, and the young poults should not be allowed a free run through wet grass for a few weeks. Young turkeys should not be out in heavy showers until their backs are well covered with feathers. If they get wet they may die from chill, unless put in a warm room to dry. Black or red pepper and ginger in the food or drinking water will aid them to overcome a chill, and are of great value on cold or damp days and a preventative of bowel trouble in both old and young turkeys. During the warmer parts of the day for the first few weeks they may be given the run of short grass or cultivated land. It is usual to keep the turkey hen in a large, airy coop and allow the poults to run at large during the day on a dry place. The coop should be moved frequently so as to give the youngsters run over fresh ground.

Feed the Foults

The first food should be soft and easily digestible. Hard boiled eggs, chopped fine may be used, although this food is not universally recommended. Green food is their chief need, and if plenty of green grass pasturage is available little else will be needful. Some cracked grain, stale bread dipped in milk and fed in a fairly dry crumbly state is good, and when the young birds are a couple of weeks old scalded bran and ground oats thoroughly soaked, fed as a dry crumbly mash, can be fed to advantage. Sour milk or curd may be very profitably used at any time mixed with the food. Keep the poults in dry, clean quarters, feed food in a crumbly condition, not sloppy; always have plenty of charcoal and grit where it can be easily used by the birds and give them range over as much green feed as possible. Reasonable results may be expected if these instructions are carried out.

Galvanized Stall Equipment.

That Steel Cow Stalls are a great improvement over the unsanitary wood type, is granted by every farmer who has used the steel. There has been one objection to it, however. It rusted. Little scales of rust formed beneath the paint and fell off bringing the paint with them so that the appearance of the steel outfit was spoiled, and the surface was not so easily kept clean.

This has been remedied this year by Beatty Bros., of Fergus and Winnipeg, makers of the well-known BT Steel Equipment. They are galvanizing their stalls and of course, the galvanized steel never rusts. No extra charge is being made for galvanizing.

Your stable equipment is much exposed to stable acids and moisture. When you buy steel stabling see that it is galvanized to stand this exposure.

Drawbacks on the Practical Farm.

While many farmers believe they make money on their poultry flocks it might prove an unpleasant surprise to them if they would keep a strict account of the cost of production in this line, and compare it with the amount received from the sales of poultry products.

We are assuming that the man gives his fowls good care, shelter and feed. Of course the fellow who lets his fowls go on the "root-hog-or-die" plan, hustling their own living, and making their roosting places in the barn, on the fences and among the trees, is not to be considered; he either keeps a very small flock at a low margin of profit, or a large flock at a big loss.

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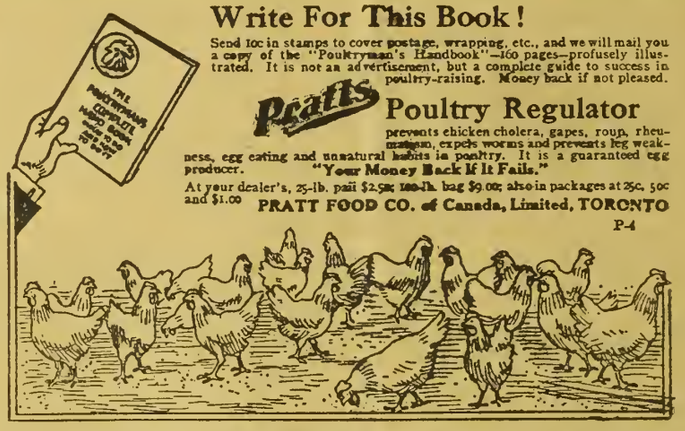
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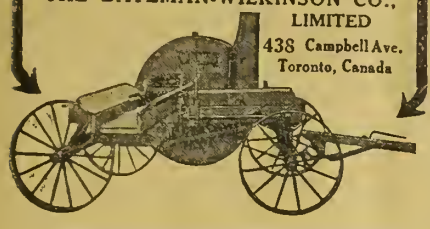

The absence of pure bred fowls is one of the greatest drawbacks with many farmers in poultrying— at least, the lack of pure bred males to head the flocks, and no further cross breeding than the first cross. Some will say that this counts for little, but we must remember that a mongrel fowl cannot transmit the qualities of any particular strain to his offspring with any degree of certainty; they are as apt to be of one blood as another; while the pure bred transmits but one blood, his offspring thus being more likely to be strong, vigorous and possessing the same prepotency for pure breeding. Thus, considering that the sire is the better one-half of the flock, his selection is really of more importance than that of the females. With strong pure bred specimens of each sex, the extent of one's success with the lowls is almost limitless.

The Poultry Flock.

Roosters should be separated from the flock just as soon as hot weather begins; nests should be kept clean; eggs should be gathered twice a day; the eggs, while held, should be kept in a cool, sweet fairly dry place, where the temperature runs say from 45 degrees to 60 degrees.

One cause of loss in eggs is due to the shells becoming dirty. A hen walks over a dirty yard to a nest with four or five eggs in it, and when she gets off all the eggs are dirty but the one just laid. This can be avoided by scattering plenty of litter in front of the nests. The hen's feet will clean themselves on this as she approaches the nest.

The size of the egg is largely controlled by breeding and feeding, scrubs will produce small eggs. Select your best pullets for keeping and feed them well. You must have a strong healthy hen to produce a large egg.

Disinfectant for Poultry Houses.

In a clean five-gallon stone crock pour 3½ quarts of raw linseed oil. Then dissolve one to six ounces commercial lye in just enough water to dissolve it half a pint is usually sufficient. Allow the lye solution to stand a few hours until cold. Then pour it very slowly, constantly stirring, into the crock of oil. Take four or five minutes in adding the lye solution to the oil. Continue stirring for 20 to 30 minutes until a smooth, thick, soft soap is formed. Then stir in 8½ quarts commercial cresol, which will dilute and blend with the soap to form a clear, red-brown liquid. A 3 per cent mixture of the above stock solution is strong enough for all ordinary disinfection, as cresol is extremely powerful in its action. When diluted in this way a thin, milky liquid results, which can be applied with brush or spray pump The latter is best, because with it the disinfectant can be forced into every crack and crevice, thus insuring a perfect job.

No Lice in Henhouse.

I'm in the poultry business for the money I can make from eggs. I have 12,000 laying hens and 800 pullets, but I don't have any lice on the place. I can't afford then, said O. L. Freisinn, who long ago hung two by 4's by wires from the ceiling of each roosting house and laid the roosts on them to avoid the vermin. He even had a tin cone insulator put on the wires in some of the houses, to fill with oil. But these are now unused. A thorough spray of salted whitewash at 80 to 100 pounds pressure on the outside of every building scarcely whitens the places along the cracks and about the knots where penetrating spray used inside, a mixture of distillate oil 98 p. c. and ol pure carbolic acid 2 p. c. has been absorbed through the boards.

If you want to bring back crows every few hours, just throw the eggs that have not hatched out on the ground anywhere.

The day-old chick business does not stop when the average breeding time is over; it continues until later.

If you want to tempt cats to eat young chicks, just toss in their way all the dead chicks you come across.

Don't throw out spoiled meat of any kind to chickens. Many a case of "limber neck" has been caused by a spoonful of bad meat.

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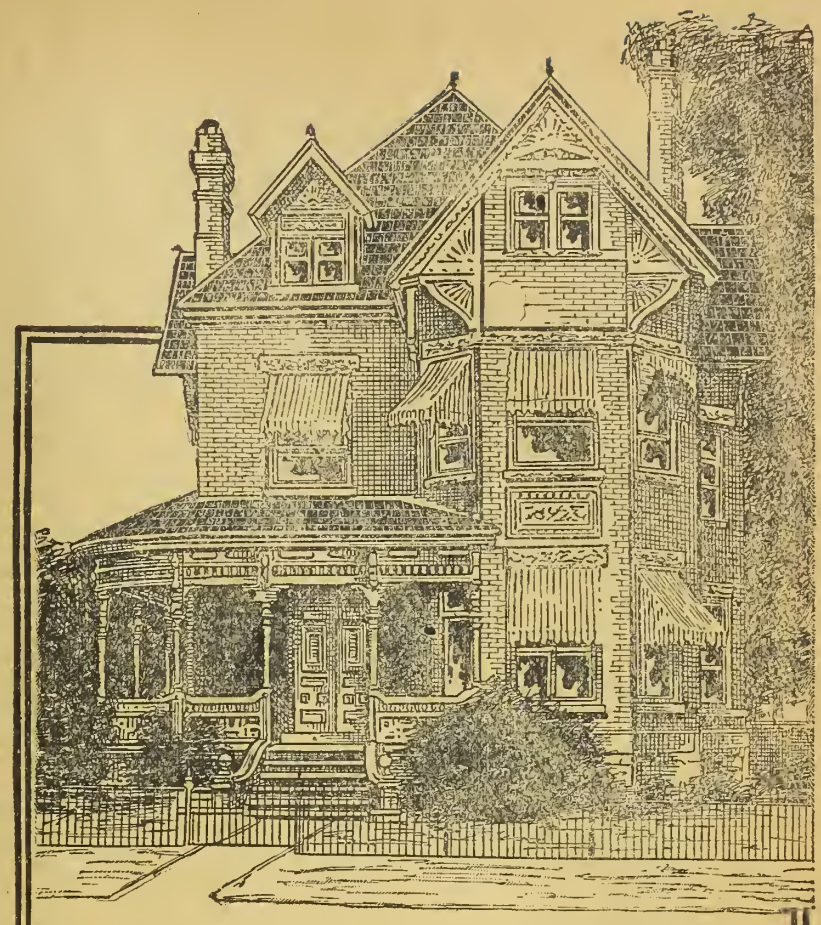

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FOR HOME AND COUNTY

This Department is devoted to the best interests of the Homes of the Maritime Provinces. Contributors to these columns are leaders in the "For Home and County" movement. This Department is yours. Use it to the best advantage by sending us timely suggestions, short articles dealing with your experiences, and reports of your Institute meetings.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

He received me with absolute enthusiasm. He was too rheumatic to be shaken hands with, but he begged me to shake the tassel on the top of his night-cap, which I did most cordially. When I sat down by the side of the bed, she said that it did him a world of good to feel as if he was driving me on the Blunderstone road again. As he lay in bed, face upward, and so covered, with that exception, that he seemed to be nothing but a face—like a conventional cherubim— he looked the queerest object I ever beheld.

"What name was it I wrote up in the cart, sir?" said Mr. Barkis, with a slow rheumatic smile.

"Ah! Mr. Barkis, we had some grave talks about the matter, hadn't we?"

"I was willin' a long time, sir?" said Mr. Barkis.

"A long time," said I

"And I don't regret it," said Mr. Barkis. "Do you remember what you told me once, about her making all the apple parsties and doing all the cooking?"

"Yes, very well," I returned.

"It was as true," said Mr. Barkis, "as turnips is. It was as true," said Mr. Barkis, nodding his nightcap, which was his onIy means of emphasis, "as taxes is. And nothing's truer than them."

Mr. Barkis turned his eyes upon me, as if for my assent to this result tof his reflections in bed; and I gave it.

"Nothing's truer than them," repeated Mr. Barkis; "a man as poor as I am, finds that out in his mind when he's ard up. I'm a very poor man, sir?"

"I am sorry to hear it, Mr. Barkis."

"A very poor man, indeed I am," said Mr. Barkis.

Here his right hand came sowly and feebly from under the bedclothes, and with a purposeless uncertain grasp took hold of a stick which was loosely tied to the side of the bed. After some poking about with this instrument, in the course of which his face assumed a variety of distracted expressions, Mr. Barkis poked it against a box, an end of which had been visibe to me all the time. Then his face became composed.

"Old clothes," said Mr. Barkis.

"Oh!" said I.

"I wish it was money, sir," said Mr. Barkis.

"I wish it was, indeed," said I.

"But it ain't," said Mr. Barkis, opening his eyes as wide as he could.

I expressed myself quite sure of that and Mr. Barkis, turning his eyes more gently to his wife, said:

"She's the usefullest and best of women, C. P. Barkis. All the praise that anyone can give to C. P. Barkis she deserves, and more! My dear, you'll get a dinner to-day, for company; something good to eat and drink, will you?"

I should have protested against this unnecessary demonstration in my honor, but that I saw Peggotty, on the opposite side of the bed, extremely anxious I should not So I held my peace.

"I have got a trifle of money somewhere about me, my dear," said Mr. Barkis, "but I'm a little tired. If you and Mr. David will leave me for a short nap, I'll try and find it when I wake."

We left the room in compliance with his request. When we got outside the door, Peggotty informed me that Mr. Barkis, being now a "ittle nearer" than he used to be, always resorted to this same device before extracting a single coin from his store; and that he endured unheard of agonies in crawling out of bed alone, and taking it from that unlucky box. In effect, we presently heard him uttering suppressed groans of the most dismal nature, as this magpie proceeding racked him in every joint; but while Peggotty's eyes were full of compassion for him, she said his generous impulse would do him good, and it was better not to check it. So he groaned on, until he had got into bed again, suffering, I have no doubt, a martyrdom; and then called us in, pretending to have just woke up from a refreshing sleep, and to produce a guinea from under his pillow. His satisfaction in which happy imposition on us, and in having preserved the impenetrable secret of the box, appeared to be a sufficient compensation to him for all his tortures.

I prepared Peggotty for Steerforth's arrival, and it was not long before he came. I am persuaded she knew no difference between his having been a personal benefactor of hers and a kind friend to me, and that she would have received him with the utmost gratitude and deveotion in any case. But his easy, spirited, good humor; his genial manner, his handsome looks, his natural gift of adapting himself to whomsoever he pleased, and making direct, when he cared to do it, to the main point of interest in anybody's heart; bound her to him wholly in five minutes. His manner to me, alone, would have won her. But, through all these cases combined, I sincerey believe she had a kind of adoration for him before he left the house that night.

He stayed there with me to dinner—if I were to say willingly, I should not half express how readily and gaily. He went to Mr. Barkis' room like light and air, brightening and refreshing it as if he were healthy weather. There was no noise, no effort, no consciousness, in anything he did; but in everything an indescribabe lightness, a seeming impossibility of doing anything else, or doing anything better, which was so graceful, so natural, and agreeable, that it overcomes me, even now, in the remembrance.

We made merry in the little parlor, where the book of martyrs, unthumbed since my time, was laid out upon the desk as of old, and where I now turned over its terrific pictures, remembering the old sensations they had awakened, but not feeling them. When Peggotty spoke of what she called my room, and of its being ready for me at night, and of her hoping I would occupy it, before I could as much as look at Steerforth, hesitating, he was possessed of the whole case.

"Of course," he said. "You'll sleep here while we stay, and I'll sleep at the hotel."

"But to bring you so far," I returned, "and to separate, seems bad companionship, Steerforth."

"Why in the name of Heaven, where do you naturally belong!" he said. "What is 'seems' compared to that!" It was settled at once.

He maintained all his delightful qualities to the last, until we started forth, at eight o'clock, for Mr. Peggotty's boat. Indeed, they were more and more brightly exhibited as the hours went on; for I thought even then, and I have no doubt now, that the consciousness of success in his determination to please, inspired him with a new delicacy of perception, and made it, subtle as it was, more easy to him. If any one had told me, then, that all this was a brilliant game, played for the excitement of the moment, for the employment of high spirits, in the thoughtless love for superiority, in a mere wasteful careless course of winning what was worthless to him, and next minute thrown away; I say, If any one had told me such a lie that night, I wonder in what manner of receiving it my indignation would have found a vent.!

Probably only in an increase, had that been possible, of the romantic feelings of fidelity and friendship with which I walked beside him, over the dark wintry sands towards the old boat; the wind sighing around us even more mournfully than it had sighed and moaned upon the night when I first darkened Mr. Peggotty's door."

"This is a wild kind of place, Steerforth, is it not?"

"Dismal enough in the dark," he said: "and the sea roars as if it were hungry for us. Is that the boat, where I see a light yonder?"

"That's the boat," said I.

"And its the same I saw this morning," he returned. "I came straight to it, by instinct, I suppose."

We said no more as we approached the light, but made softly for the door. I laid my hand upon the latch; and whispering Steerforth to keep close to me, went in.

A murmur of voices had been audible on the outside, and, at the moment of our entrance, a clapping of hands: which latter noise, I was surprised to see, proceeded from the generally disconsolate Mrs. Gummidge. But Mrs. Gummidge was not the only person there who was unusually excited. Mr. Peggotty, his face lighted up with uncommon satisfaction, and laughing with all his might, held his rough arms wide open, as if for little Em'ly to run into them; Ham, with a mixed expression on his face of admiration, exultation, and a lumbering sort of bashfulness that sat upon him very well, held little Em'ly by the hand, as if he were presenting her to Mr. Peggotty; little Em'ly herself, blushing and shy, but delighted with Mr. Peggotty's delight as her joyous eyes expressed, was stopped by our entrance (for she saw us first) in the very act of springing from Ham to nestle in Mr. Peggotty's embrace. In the first glimpse we had of them all, and at the moment of our passing from the dark cold night into the warm light room, this was the way in which they were all employed; Mrs. Gummidge in the background, clapping her hands like a mad woman.

The little picture was so instantaneously dissolved by our going in, that one might have doubted whether it had ever been. I was in the midst of the astonished famiy, face to face with Mr. Peggotty, and holding out my hand to him, when Ham shouted:

"Mas'r Davy! It's Mas'r Davy!"

In a moment we were all shaking hands with one another, and asking one another how we did, and telling one another how glad we were to meet, and all talking at once. Mr. Peggotty was so proud and so overjoyed to see us, that he did not know what to say or do, but kept over and over again shaking hands with me, and then with Steerforth, and then with me, and then ruffling his shaggy hair all over his head, and laughing with such glee and triumph, that it was a treat to see him.

"Why, that you two gentlemen—gentlemen growd—should come to this here roof to-night, of all nights in my life," sid Mr Peggotty, "is such a thing as never happened afore, I do rightly believe! Em'ly my darling, come here Come here, my little witch! There's Mas'r Davy's friend, my dear! There's the gentlemen as you heard on, Em'ly. He comes to see you, along with Mas'r Davy, on the brightest night of your uncle's life as ever will be, Gorm the t'other one, and horroar for it!"

After delivering this speech all in a breath, and with extraordinary animation and pleasure, Mr. Peggotty put one of his large hands raptrously on each side of his niece's face, and kissing it a dozen times, laid it with a gentle pride and love on his broad chest, and patted it as if his hand had been a lady's. Then he let her go; and as she ran into the little chamber where I used to sleep, looked round upon us, quite hot and out of breath with his uncommon satisfaction.

"If you two gentemen—gentlemen growd now, and such gentlemen—" said Mr. Peggotty.

"So th' are, so th' are!" cried Ham. "Well said! So th' are. Mas'r Davy bor—gentlemen growd—so th' are."

"If you two gentlemen, gentlemen growed," said Mr. Peggotty, "don't excuse me for being in a state of mind, when you understand matters, I'll arks your pardon. Em'ly, my dear!—she knows I am a going to tell," here his delight broke out again, "and has made off. Would you be so good as to look arter her, Mawther, for a minute?"

Mrs. Gummidge nodded and disappeared.

"If this ain't," said Mr. Peggotty, sitting down among us by the fire, " the brightest night of my life, I'm a shellfish—bright too—and more I can't say. This here little Em'ly, Sir," in a low voice to Steerforth, "—her as you see a blushing here just now—"

Steerforth only nodded, but with such a pleased expression of interest and of participation in Mr. Peggotty's feelings, that the latter answered him as if he had spoken.

AILING WOMEN OF MIDDLE AGE

Mrs. Doucette Tells of her Distressing Symptoms During Change of Life and How She Found Relief.

Belleville, Nova Scotia, Can.—"Three years ago I was suffering badly with what the doctors called Change of Life. I was so bad that I had to stay in bed. Some friends told me to take Lydia E. Pinkham's Vegetable Compound and it helped me from the first. It is the only medicine I took that did help me and I recommend it. You don't know how thankful and grateful I am. I give you permission to publish what your good medicine has done for me."—Mrs. Simon Doucette, Belleville, Yarmouth Co., Nova Scotia, Canada.

Such warning symptoms as sense of suffocation, hot flashes, headaches, backaches, dread of impending evil, timidity, sounds in the ears, palpitation of the heart, sparks before the eyes, irregularities, constipation, variable appetite, weakness and inquietude, and dizziness, are promptly heeded by intelligent women who are approaching the period in life when woman's great change may be expected.

Lydia E. Pinkham's Vegetable Compound invigorates and strengthens the female organism and builds up the weakened nervous system. It has carried many women safely through this crisis.

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G. Y. CHOWN, Registrar, Kingston, Ont.

"To be sure," said Mr. Peggotty, "that's her, and so she is. Thankee, sir."

Ham noded to me several times, as if he would have said so too.

"This here little Em'ly of ours," said Mr. Peggotty, "has been, in our house, what I supose (I'm a ignorant man, but that's my belief) no one but a little bright eyed creetur can be in a house. She ain't my child; I never had one; but I couldn't love her more. You understand! I couldn't do it!"

"I quite understand," said Steerforth

"I know you do sir," returned Mr. Peggotty, "and thankee again. Mas'r Davy, he can remember what she was; you may judge for your own self what she is; but neither of you can't fully know what she has been, is, and will be, to my loving heart. I am rough, sir," said Mr. Peggotty, "I am as rough as a Sea Porkypine; but no one, unless, mayhap, it is a woman, can know I think, what our little Em'ly is to me. And betwixt ourselves," sinking his voice lower yet, "that woman's name ain't Missis Gummidge nether, thouugh she has a word of merit."

Mr. Peggotty ruffled his hair again with both hands, as a further preparation for what he was going to say, and went on, with a hand upon each of his knees:

"There was a certain person as had know'd our Em'y, from the time when her father was drowned, as he had seen her constant; when a babby, when a young gal, when a woman. Not much of a person to look at, he warn't," said Mr. Peggotty, "something of my own build—rough—a good deal of the sou'-wester in him—wery salt—but, on the whole, a honest sort of chap with his heart in the place."

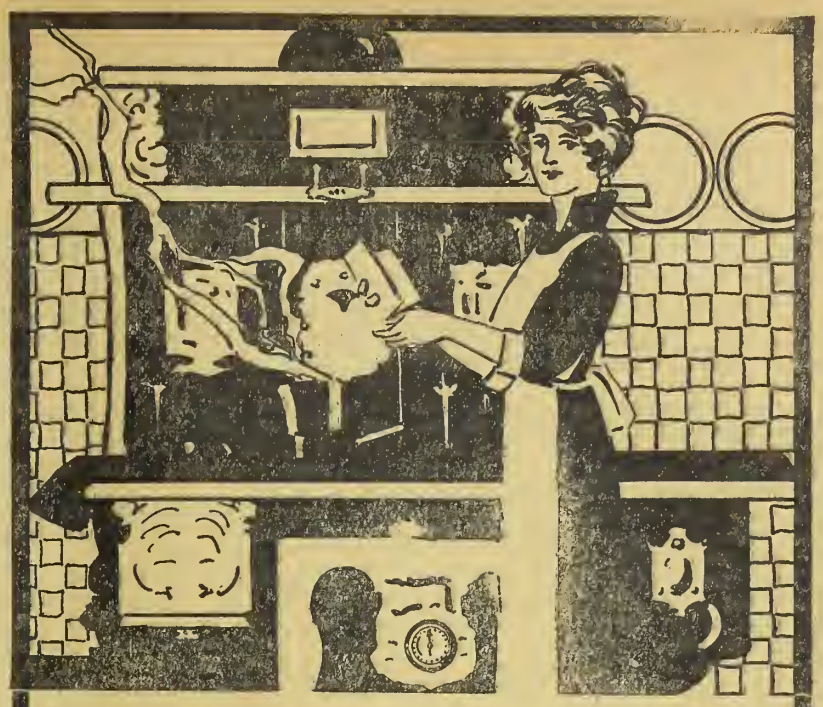
I thought I had never seen Ham grin to anything like the extent to which he sat grinning at us now.

"What does this here blessed tarpaulin go and do," said Mr. Peggotty, with his face one high noon of enjoyment, "but he loses that there heart of his to our little Em'ly. He follers her about, he makes hiself a sort of servant to her, he loses in a great measure his relish for his wittles, and in the long run he makes it clear to me what's amiss. Now I could wish myself, you see, that our little Em'ly was in a fair way of being married. I could wish to see her, at all events, under articles to an honest man as had a right to defend her. I don't know how long I may live, or how soon I may die; but I know that if I was capsized, any night, in a gale of wind in Yarmouh Roads here, and was to see the town lights shining for the last time over the rollers as I couldn't make no head against, I could go down quieter for thinking 'There's a man ashore there, iron-true to my little Em'ly God bless her, and no wrong can touch my little Em'ly while so be as that man lives'."

Mr. Peggotty, in simple earnestness, waved his right arm, as if he were waving it at the town lights for the last time, and then, exhanging a nod with Ham, whose eye he caught, proceeded as before:

"Well! I counsels him to speak to Em'ly. He's big enough, but he's bashfuller than a litttle un, and he don't like. So I speak. 'What! Him!' says Em'ly. 'Him that I've know'd so intimate so many years, and like so much. Oh, Uncle! I never can have him. He's such a good fellow!' I gives her a kiss, and I says no more to her than 'My dear, you're right to speak out, you're to chose for yoursef, you're as free as a little bird.' Then I aways to him, and I says, 'I wish it could have been so, but it can't But you can both be as you was, and wot I say to you is, be as you was with her, like a man.' He says to me, a shaking of my hand, 'I will he says. And he was—honorable and manful—for two year going on, and we was just the same here as afore."

Mr. Peggotty's face, which had varied in its expression with the various stages of his narrative, now resumed all its former triumphant delight, as he



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laid a hand upon my knee, and a hand upon Steerforth's (previously wetting them both, for the greater emphasis of the acton), and divided the following speech between us:

"All of a sudden, one evening—as it might be tonight—comes little Em'ly from her work, and him with her! There ain't so much in that, you'll say. No, because he takes care of her, like a brother, arter dark, and indeed afore-dark, and at all times. But this tarpaulin chap, he takes hold of her hand and he cries out to me, joyful, 'Look here! This is to be my little wife!' And she says, half bold and half shy, and half a laughing and half a crying, 'Yes, Uncle! If you please'—If I please!" cried Mr. Peggotty, rolling his head in ecstacy at the idea; "Lord, as if I should do anything else!—'If you please, I am steadier now, and I have thought better of it, and I'll be as good a little wife as I can to him, for he's a dear good fellow!" Then Missis Gummidge, she claps her hands like a play, and you come in. There the murder's out!" said Mr. Peggotty—"You come in! It took place this here present hour; and here's the man'll that'll marry her, the minute she's out of her time."

Ham staggered, as well he might, under the blow Mr. Peggottty dealt him in his unbounded joy, as a mark of con fidence and friendship; but feeling called upon to say something to us, he said, with much faltering and great difficulty:

"She warn't no higher than you was, Mas'r Davy—when you first come—when I thought what she'd grow up to be. I see her grow up—gentlemen—like a flower. I'd lay down my life for her—Mas'r Davy—Oh! most content and cheerful! She's more to me—gentlemen— than—she's all to me that ever I can want, and more than ever I—than ever I could say. I—I love her true. There ain't a gentleman in all the land—nor yet sailing upon the sea—that can love his lady more than I can love her, though there's many a common man—would say better—what he meant."

I thought it affecting to see such a sturdy fellow as Ham was now, trembling in the strength of what he felt for the pretty little creature who had won his heart. I thought the simple confidence reposed in us by Mr. Peggotty and himself, was, in itself, affecting. I was affected by the story altogether. How far my emotions were influenced by the recollections of my childhood, I don't know. Whether I had come there with any lingering fancy that I was still in love with little Em'ly, I don't know. I know that I was filled with pleasure by all this; but, at first, with an indescribably sensitive pleasure, that a very little would have changed to pain.

Therefore, if it had depended upon me to touch the prevailing cord among them with any skill, I should have

made a poor hand of it. But it depended upon Steerforth; and he did it with such address, that in a few minutes we were all as easy and as happy as it was possible to be.

"Mr. Peggotty," he sad, "you are a thoroughly good fellow, and deserve to be as happy as you are tonight. My hand upon it! Ham, I give you joy, my boy. My hand upon that, too! Daisy, stir the fire, and make it a brisk one! and Mr. Peggotty, unless you can induce your gentle niece to come back (for whom I vacate this seat in the corner), I shall go. Any gap at your fireside on such a night—such a gap least of all I wouldn't make, for the wealth of the Indies!"

So Mr. Peggotty went into my old room to fetch little Em'ly. At first, little Em'ly didn't like to come, and then Ham went. Presently they brought her to the fireside, very much confused and very shy—but she soon became more assured when she found how gently and respectfully Steerforth spoke to her; how skillfully he avoided anything that would embarrass her; how he talked to Mr. Peggotty of boats, and ships, and tides, and fish; how he referred to me about the time when he had seen Mr. Peggotty at Salem House how delighted he was with the boat and all belonging to it; how lightly and easy he carred on, until he brought us, by degrees, into a charmed circle, and we were all talking away without any reserve.

Em'ly, indeed, said little all the evening; but she looked and listened, and her face got animated, and she was charming. Steerforth told a story of a dismal shipwreck (which arose out of his talk with Mr. Peggotty- as if he saw it all before him—and little Em'ly's eyes were fastened on him all the time, as if she saw it too. He told us a merry adventure of his own, as a relief to that, with as much gaiety as if the narrative were as fresh to him as it was to us—and little Em'ly laughed until the boat rang with the musical sounds, and we all laughed (Seeerforth too), in irresistible sympathy with what was so pleasant and light-hearted; He got Mr. Peggotty to sing, or rather to roar, "When the stormy winds do bow, do blow, do blow;" and he sang a sailor's song himself, so pathetically and beautifully, that I could have almost fancied that the real wind creeping sorrowfully round he house, and murmuring low through our unbroken silence, was there to listen.

As to Mrs. Gummidge, he roused that victim of despondency with a success never attained by anyone else (so Mr. Peggotty informed me,- since the decease of the old one. He left her so little leisure for being miserable, that she said next day she thought she must have been bewitched. But he set up no monopoly of the general attention, or the conversation. When little Em'ly grew more courageous and talked (but still bashful) across the fire to me, of our old wanderings upon the beach, to pick up shells and pebbles; and when I asked her if she recollected how I used to be devoted to her; and when we both laughed and reddened, casting these looks back on pleasant old times, so unreal to look at now; he was silent and attentive, and observed us thoughtfully. She sat at this time, and all the evening, on the old locker in her old corner by he fire, with Ham beside her, where I used to sit. I could not satisfy myself whether it was in her own little tormenting way, or in a maidenly reserve before us, hat she kept quite close to the wall, and away from him; but I observed that she did so all the evening.

As I remember, it was almost midnight when we took our leave. We had had some biscuit and dried fish for supper, and Steerforth had produced from his pocket a full flask of Hollands which we men (I may say we men, now, without a blush- had emptied. We parted merrily; and as they all stood crowded round the door to light us as far as they could upon our road, I saw the sweet blue eyes of little Em'ly peeping after us, from behind Ham, and heard her soft voice calling to us us to be careful how we went.

"A most engaging little beauty!" said Steerforth, taking my arm. "Well! it's a quaint place, and they are quaint company; and it's quite a new sensation to mix with them."

"How fortunate we are, too," I returned, "to have arrived to witness their happiness in that intended marriage! I never saw people so happy. How delightful to see it, and to be made the sharers in their honest joy, as we have been!"

"That's rather a chuckle-headed fellow for the girl; isn't he?" said Steerforth.

He had been so heraty with him, and with them all, that I felt a shock in this unexpected and cold reply. But turning quickly upon him, and seeing a laugh in his eyes, I answered, much relieved:

"Ah, Steerforth! It's well for you to joke about the poor! You may skirmish with Miss Dartle, or try to hide your sympathies in jest from me, but I know better. When I see how perfectly you understand them, how exquisiely you can enter into happiness like his plain fisherman's, or humor a love like my old nurse's, I know that there is not a joy or sorrow, not an emotion, of such people, that can be indifferent to you. And I admire and love you for it, Steerforth, twenty times he more!"

He stopped, and looking into my face, said: "Daisy, I believe you are in earnest, and are good. I wish we all were!" Next moment he was gaily singing Mr. Peggotty's song, as we walked at a round pace back to Yarmouth.

THE END

P. E. I. Women's Institutes.

Mrs. Dunbrack and Miss McDonald met the ladies of Georgetown, on the evening of the 12th ult in the C. M. B. Hall, and discussed with them the different lines of work which are undertaken by the Women's Institutes in the Dominion. Those present were strongly in favor of organizing an Institute in their section and a meeting for that purpose will be held in a few days.

A large number of the ladies of Montague met in the public hall on Wednesday afternoon at 2.30 o'clock, for the purpose of hearing Mrs. Dunbrack explain fully the object, aim and work of the Women's Institute Movement, as has been inaugurated in this province a little over a year. Both Mrs. Dunbrack and her assistant, Miss Helena McDonald, received a hearty welcome. Mrs. Wright ably filled the chair, with Mrs. J. A. G. Ellis, as secretary pro tem. After considerable discussion along the lines af work carried on by the Women's Institutes, which included among other phases taken up, the beautifying of the school grounds; furnishings, renovating and decorating the interior of the school house, which would include the desks, floor, walls, windows and window shades, ceiling, etc., supplying sanitary covered drinking fountains with individual drinking cups for the pupils; the furnishing by the mothers, of two towels to each child which she had attending school, the same to be used during the school hours and replenished once a week; the placing of a sanitary wash basin, made of white enamel with a five gallon tank connecting with the basin which had a plug, and which emptied its contents in the same manner as a modern bathroom fixture, into a receptacle holding the same quantity of water as the tank, and which supports the basin and is easily removed and emptied each day and cleaned. Rural

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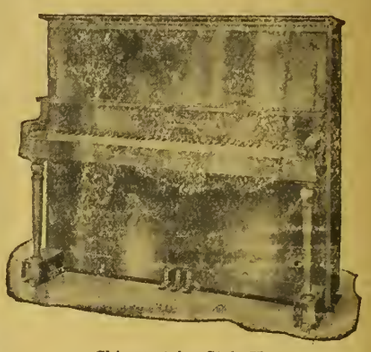

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Single men, agricultural labor.

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ST. JOHN, - - - N. B.

school sanitation, inside and outside the school building; medical inspection in the schools; the school nurse, who would work among the schools, making regular visits, and examining each child and reporting the same to the mothers and medical authority, the examination to include the general health and condition of the teeth, also the sanitary condition of the school surroundings; purpose and value of the school gardens, rural school fairs pointing out the benefit of these fairs to the younger members of the community; the value of a practical course in Household Economy in the schools; school and institute libraries, explaining the system of travelling libraries which the University of McGill is offering to all Institutes, individuals or communities which have no advantage of literary privileges. Mrs. Dunbrack said that she would only be too glad to assist anyone in securing one of these libraries and to send them the rules and regulations governing the loan of the McGill. offer.

The subject of cleaning up back yards was discussed, also the advisability of offering a prize this coming fall for the best kept back yard during the coming summer; cleaning up vacant lots in a neighborhood and making them beauty spots instead of eyesores, which is the case in many instances. It was suggested that the section or village interested be divided into four parts and one or more vacant lots be secured in each section or division and the work of preparation of the soil, planting and caring for flower or vegetable garden be given to the boys and girls of that particular section in which they live, then opening up competition for the encouragement of the same. The school garden work could easily be arranged. The co-operation of the P. E. I. Floral Society was also spoken of, and the speaker advised that as many as could do so, should become members of the society and reap the benefits accruing therefrom. The membership for the year is fifty cents and entitles the members to many privileges along the lines of floriculture, civic improvement, etc., and would greatly assist the teachers and parents of the children in the rural sections in furthering the good work of beautifying their school and home grounds. The speaker was given a hearty vote of thanks for her instructive address, after which the ladies organized a Women's Institute with over forty members enrolled, placing in office the following ladies:

President—Mrs. Wright.

Vice-Pres.—Mrs. Thompson.

Secy-Treas—Mrs. Gordon Ives.

Directors—Mrs. J. A. G. Ellis, Miss Jessie Campbell and the President, and Vice-President.

Auditors—Miss Flossie Kelley and Mrs. John Beer.

All those accompanied by Mrs. Dunbrack and Miss McDonald paid a visit to the school rooms, and it was the unanimous voice that the most necessary work in Montague towards civic improvement was that of the school house and its surroundings.

The first meeting of the Montague Women's Institute will be held in the Guild Room next Friday, when the future work of the Institute will be taken up. It is hoped that all the ladies of the community will attend this meeting and help those already organized in carrying on their good work.

A Word on the N. S. Institutes.

The work of the Institutes in Nova Scotia goes on apace and it is very interesting to note the different interests that appeal to the different institutes. In each community it is without doubt "the cause that needs assistance" that procures the attention of the Institute. They all follow the good scriptural injunction, "Whatsoever thy hand findeth to do, do it with thy might," and strange to say, while their interests are many and diversified there is one cause that makes a strong, probably strongest would be best—appeal to all—the cause of the children, and nearly all the Institutes are looking into the school conditions of their districts. In some places the conditions are good, in other the school has been neglected, but the trustees, rather than resenting the co-operation of the Institutes, are welcoming their suggestions and offers of substantial aid. In a future issue, the work taken up by each Institute in its various stages will be discussed.

Outside the actual work done, the monthly meetings are decidedly interesting and worth while and if no work was ever accomplished by our Institutes, we would feel amply recompensed for their establishment by the enjoyment the members obtain from the social intercourse. The many papers prepared and read show what our women are capable of, and they are not carelessly written, but much thought, work and time given to their preparation. Just to show what can be done we will publish in future issues timely papers prepared by Institute members in various sections of the province. Here is one on "Sociability", which was prepared and ready by Miss Margaret Trenholm, of Martock and Windsor Forks, Hants Co. Institute and it seems to touch right at the root of the most of our young people—Jennie A. Fraser.

Sociability.

Many have asked, and are spectulating on the motive of our Women's Institute. In general, to help and stimulate the public interest in the home in particular, is the point we would like to discuss today—Sociability.

Living as we are in the country, simple and peaceful lives our pleasures must originate among ourselves. The home, the place that should be most sacred is what we should consider first. Some of the finest traits may grow in public—enthusiasm, generosity, patriotism, and the like—but the inner characteristics which proceed from the heart in its quieter hours are best nourished at the hearthstone.

Particularly in the country are we thrown back upon our homes for amusement and instead of wishing for what is miles away from us, let us try rather to develop the tender seeds planted in our own rich soil.

I read in a magazine this paragraph:—"Many fortunate women instead of rejoicing in what they have are themselves very unhappy by dwelling on what they have not." It is so easy for us to envy the beauty and luxury in other homes that are denied to ours. I fear women are more prone to envy than are men. Sir Thomas Moore had found the secret of happiness when he wrote in his diary "I make it my business to wish as little as I can, except that I were wiser and better." He had the viewpoint of Saint Paul, who said: "And having food and raiment let us therewith be content.

If we can, in our society, combine our efforts to make our homes brighter and the place in which we live more attractive to those growing up in it, so that they may see the advantages and opportunities of their own beautiful country, then they will stay with us and do credit to their homeland. Then again, there are always housekeeping problems, which, if our members would bring before that society might be unravelled very deftly by some other, who has had more experience; thus benefiting the seeker and indirectly the whole Institute.

Let us then, as members of the Institute try to help each other in little every day things that in the end count so much. Let us always have a kind word and pleasant smile for everyone. Let us not forget that charity begins at home and then will each member be a link in the chain which will bind the people of Martock and Windsor Forks into one great family.

A sprained ankle may as a rule be cured in from three to four days by applying Chamberlain's Liniment and observing the directions with each bottle. For sale by all dealers.

High Quality Builds Big Telephone Business

This business was organized to manufacture telephone equipment for independent local and municipal systems. Right from the start our equipment made records for efficiency, It did not take long for our goods to acquire a reputation for quality and reliability. As a result, our business has grown by leaps and bounds.

It is a well-known fact that we have been securing over 80 per cent. of the new telephone business in Ontario. The business, too, has been secured with less effort than the business secured by competitors. The satisfaction our telephones and equipment have given under all conditions have paved the way for easy business getting.

To judge how fast our business is growing, you'll remember in a previous announcement that our business last year doubled that of the year before. Well, this year the fiirst two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the local telephone business, that we are the legitimate people to deal with. There are those in the telephone business who are interested in depreciating the success of the independent telephone movement and the development of the municipal systems, On the other hand, our business lies wholly and directly with the independent telephone systems and it is to your own best interests to look after those systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems with the make of telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephones and equipment.

You are absolutely safe in equipping your system with our telephones. We guarantee them as regards material and workmanship. In fact, we guarantee all our equipment and materials. And in addition we offer to send your telephones for ***Free Trial,*** so you can test and compare them with others right on your own lines before risking a dollar.

Ask for No. 3 Bulletin—containing the latest information about building telephone lines.—Also No. 4, describing our magnetic telephones, is free on request.

Send for a copy.

Let us quote you on your year's supply of Dry Cell Batteries.

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THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Land Agency or Sub-Agency for the District. Entry by proxy may be made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required in every case, except when residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead Price $3.00 per acre.

Duties—Six months residence in each of six years from date of homestead entry (including the time required to earn homestead patent) and 50 acres extra cultivation.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price $3.00 per acre.

Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land.

W. W. COREY,
Deputy of the Minister of the Interior.

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Students can enter at any time as we will not this year have any summer vacation, the number in attendance from a distance making it inexpedient to interrupt their work.

Besides, St. John's cool summer weather makes tudy during the warmest weather just as pleasnt as at any other time.

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everywhere to ride and exhibit a sample 1914 Hyslop Bicycle with coaster brake and all latest improvements.

We ship on approval to any address in Canada, without any deposit, and allow **10 DAYS' TRIAL.** It will not cost you a cent if you are not satisfied after using bicycle 10 days.

DO NOT BUY *a bicycle, pair of tires, lamp, or sundries at any price* until you receive our latest 1914 illustrated catalogue and have learned our special prices and attractive proposition.

ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you **Free Postpaid** by return mail. **Do not wait.** Write it **now.**

HYSLOP BROTHERS, Limited
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Caring for Heavy Hair.

My hair has been the wonder of all who have seen it for so long that I hape grown quite used to exclamations about it and questions as to how I made it grow so long and thick and glossy. The questions are easily answered; the process is simple and I think anyone who follows it will have beautiful hair.

When I was a young girl I had typhoid fever and my hair fell out until my head was bald in spots. A hair brush seemed an odd gift just then, but a good, soft wire hair-brush was given me and I used it, very gently, two or three times a day all the while my hair was coming in again. It came wavy, and I believe as a result of the frequent stimulating brushings, very thick and heavy.

I continued the use of the wire brush in place of a comb for years, though now I use, too, a heavy comb with long teeth set well apart. I do this because the comb is easier to use and my hair is heavy enough without more stimulating. There has been a great deal said against the wire brush, but I am firmly condinced that the swift and continued growtn of my hair was due solely to the stimulation the roots received, the increased amount of blood drawn to the scalp and the impossibility of dandruff formation, caused by the gentle action of the wire brush.

Of course this must be gentle. Harsh brushiog of the scalp or a snapping motion of the brush in the hair would be ruinous. But patient steady use of a soft wire brush will st art the oil on dry, lifeless hair, cure dandruff and make the hair grow soft and glossy. I have never used the first bit of any sort of preparation on hair or scalp, relying on cleanliness and care—and they have certainly proved enough: nor can poor health be sufficient excuse for poor hair, for I was a nervous invalid for years, doctoring all the time, yet my hair continued growing and kept its thickness and brilliance through it all.

Having always cared for my hair myself, brushing, dressing and shampooing it, I have learned by experience methods as easy for heavy hair and certainly as effective as any. The hair should be shampooed only once a month if it is protected by a cap when doing dusty work. Nothing is more disgusting or more injurious to the hair than to let it become so oily that it strings down flat to the head; or to see fluffy hair so dusty as to suggest a chalk mill.

The dry shampoo so much advert sed, I believe to be very harmful. They have been proved so, and it stands to reason that any powder strong enough in alkali to cut the dirty oil from hair and scalp could not be good for either, when one remembers that the scalp is even more sensitive than the face. Egg shampoos may do for thin hair, but very hot water is necessary to rinse out the egg and getting bits of cooked egg out of very heavy hair is no joke.

Having what is called a "tender head," I have learned to take a shampoo without pulling my hair, making my scalp sore for days, taking cold or leaving the job half done —and "here's how:" Into a foot tub or large wash bowl put plenty of soft, comfortable hot water and a teaspoon of baking soda. If the hair lacks oil omit the soda. Make a strong suds of good tar or castile soap, but put no soap directly on the hair. It is too strong and hard to rinse out. The stringy, lifeless condition of much freshly washed hair is caused by soap in it.

Comb all the tangles out of the hair and draw it over the face loosely, not tight enough to strain the roots the wrong way and make the scalp sore. Bend well over the tub and wet all the hair, then dash handfuls of suds upon the scalp and rub each handful in thoroughly, but gently, with the rounding tips of the fingers, not letting the nails irritate the scalp. Be sure each part of the scalp gets scrubbed—the sides and back are apt to be slighted while the crown and front are rubbed till sore. When the scalp is clean, rub the hair in both hands as you would wash a towel, keeping it under water as much as possible. Wring lightly, and put into clean, soft water as hot as you can bear. Repeat the scrubbing process to clean the soap from the scalp, constantly shaking the head to separate the strands and wash the soap all out of it. A second rinsing in cool water follows, and if this rinsing is thoroughly done, both hair and scalp will be clean.

Wipe face, neck and scalp a little, and throw the hair back over the shoulders at once—if it drys over the face the roots are stretched the wrong way and the scalp becomes sore. Fine linen towels or old linen cloth are best to dry the scalp, as they give off less lint than any other Much drying with towels is not best. When the scalp is comfortably "dry-scrubbed" sit in a low chair, rest the head on a cushion on the chair arm, and lay the hair on the radiator to dry, placing a towel under it. Shake it out every few minutes and it will soon dry in much better shape than if fanned dry, nor will you have that sick, exhausted feeling that fanning often gives. If no radiator is available, dry before an open oven. In summer, choose a breezy day and keep the hair well shaken while the wind and sun dry it for you.

Never try to comb the tangles out until the hair is thoroughly dry. Then a soft bristle brush, a wide-spaced comb and gentle work will soon dismiss the snarls. With the cheap, sharp, narrow spaced, short-toothed combs that most women use I do not see how they can expect to have nice hair. Fifty cents will buy a heavy, black comb with long, dull, teeth, widely spaced, that can be easily kept clean and will never break the hair. They are very durable and good economy in the end. Brushes and combs should be cleaned once a week, or they will work dust and grease into the hair. I find gasoline cleans them best and quickest, with least damage.

Wire hairpins are responsible for broken hair and for injured hair follicles by pressure of their hard, sharp ends. Bone or celluloid hairpins should be used—nor are they more expensive than the wire, in the long run, for the wire ones are so easily bent and lost.

As for the pads and puffs so severely condemned, I have worn as many as I liked and always dressed my hair in the prevailing fashion, and I cannot see that the pads have hurt it in the least. But I am sure they would have hurt it if they had not been removed and my hair combed and braided every night. What comfort would nice hair give it one could not wear it becomingly and modishly dressed? But what must one expect who keeps her scalp padded and puffed, or even leaves her own hair coiled upon it night and day? Let your hair "rest," lightly braided, all night and don't worry about a pad or two in the daytime. —Elizabeth Laverne.

New Brunswick Women's Institutes.

DEBATES IN INSTITUTES

Sometime ago I was asked the question, "Do you approve of debates in Institutes," and the reply I gave was, "Yes, I do, if not held too often.

A debate once or twice during the year arouses a great deal of interest and is a splendid thing, but the subjects chosen should be ones which could not possibly stir up friction. Whether debaters are on the affirmative or negative side their greatest ambition is that their side shall win, and very often members who are the greatest of friends before a debate begins, have anything but kindly feelings towards one another when it is finished, therefore it is well to avoid local questions on which members may become divided.

DEBATEABLE SUBJECTS.

The following subjects may be debated upon and many interesting and instructive points could be brought out, making the debates very educative:—

1. Do women on the farm work harder than tne men.
2. Should a wife understand her husband's business.
4. Does the housewife work harder
3. Can a woman be too economical than the professional woman.
5. Will better education tend to turn the boys and girls away from the farm.
6 Shall the wife have an allowance.
7. Which are the grestest labor-savers in the home, hardwood floors or carpets.
8. Which has the greater influence over one's life, heredity or environment.
9. Should children have an allowance.
10. Is Agricultdre the greatest of professions.
11. Are the girls of today as competent to take charge of a home as the girls of a quarter of a century ago.
12. Has the home of today as great an influence over our boys and girls as the home of twenty-five years ago.
13. Shall girls share equally with boys.

DEBATE BY MEMBERS OF THE CENTRAL NAPAN INSTITUTE

Recently the members of the Central Napan Branch debated upon: "Resolved that Agriculture is the Greatest of Professions." We shall publish one of their papers in favor of agriculture and one against it as being the greatest of professions. These papers show careful thought and study on the part of members debating and the points are strong on both sides.

RESOLVED THAT AGRICULTURE IS THE GREATEST OF PROFESSIONS.

Agriculture is the art which has for its object the production of plants and animals, or of food for man and beast. IT IS THE FIRST OF THE PROFESSIONS. In the Creation, God made man an agriculturist, thus above all other professions it has the approval of the Creator and in no other walk of life is man so dependent on God who sendeth the sunshine and the rain, and maketh the earth to bring forth her increase; and to no other worker has God given such a promise as is found in Prov. 12:01. "He that tilleth his land shall be satisfied with bread."

AGRICULTURE IS THE MOST HEALTHFUL OF THE PROFESSIONS.—In no other walk of life is there so great a chance for physical

WILSON'S
FLY PAD.
POISON

Every ten cent packet will kill more flies than $8.00 worth of any sticky fly killer. **Refuse substitutes, which are most unsatisfactory.**

developments, and our governments realizing this, look to the country to supply recruits to army and navy. Not only do country bred boys and girls develop sound bodies, but strong minds as well, as can be proved by looking over our college reports.

AGRICULTURE IS THE MOST INDEPENDENT OF THE PROFESSIONS.—The farmer is accountable to no man, his time is his own and if used wisely in research for best methods and application of same, success is sure to crown his efforts, as is evidenced by looking over the properous farm homes of Canada today which were not so very long ago an unbroken wilderness.

This walk in life, as in no other, can be shared in by all the family; its branches are so varied there must be some of its duties of pleasure and interest to all.

IT IS THE MOST BEAUTIFUL OF THE PROFESSIONS.—The changing seasons are ever spreading out a panorama, far more beautiful than the greatest artist can produce. What can match an orchard in the blossom time; a field spread with daisies and wild-flowers; lambs sporting on the hillside; and over all a beautiful sunset such as residents in cities never dreamed of.

I AM SURE ALL WILL ADMIT IT IS THE MOST NECESSARY PROFESSION.—Some will tell you we could not live without the doctor. Where does the doctor get his herbs and medicines? He is dependent largely on the agriculturist. Even the minister gets his most beautiful illustrations from the fields, as "consider the lilies," "the lost sheep" and the many others we might quote.

Our opponents will write up the many other professions in a masterly style I am sure, but can make no points to compare with those in favor of Agriculture.

The whole matter can be summed up in one statement—Do away with agriculture and you will have no means of supporting the human race, therefore no need for any other profession.

"Give fools their gold and knaves their power
Let fortune's bubbles rise and fall;
Who sows a field or trains a flower
Or plants a tree is more than all."

—Written by Mrs. A. G. Dickson, Chatham, N. B.

RESOLVED THAT AGRICULTURE IS NOT THE GREATEST OF PRPFESSIONS.

Ladies,—What is a profession? Webster tells us "the occupation to which one devotes one's self. Why should agriculture be the greatest of occupations? Is it superior or more admirable than the other professions or greater in the number of its followers?

For a profession to be truly great, it must tend to ennoble those engaged in it and must do the greatest good to their fellowmen.

"Howe'er it be it seems to be
'Tis only noble to be good;
Kind hearts are more than cornets,
And simple faith than Norman blood."

And although a good man may ennoble any profession, be it cobbler or the builder or designer of our finest structures, still, some professions have a gceater tendency to uplift than others. Now, is agriculture the greatest in this respect? I say, "No." A profession that ensures the making of wealth does not, we know, mean greatness. Kipling has truly said:

"And no one shall work for money
And no one shall work for fame,
But each for the joy of working
And each in his separate star,
Shall do the thing as he sees it,
For the God of things as they are."

Speaking in general terms, our farmers lead a busy and useful life and work hard; in some cases they are successful financially, but the average farmer has little money to spare, and with all the farmer's "boasted independence" there is little time for holidays or pleasure seeking. Other professions bring their annual holiday but to the farmer an occasional "stormy" day is very often his only rest from work.

Can we read Ian McLaren's "Beside the Bonnie Brier Bush" and not be fascinated, enthused, with the life of Dr. McLure. He who spent his days and many of his nights in relieving the sick, not for the gain in money, but for love of the little children and the men and women he attended. That picture of the old Scotch doctor and his faithful mare "Jess" stands for many in the same profession.

Can agriculture to whatever perfection it may be brought, compare with that of the skilful doctor and surgeon, healing the sick and bringing back life to the worn bodied?

Then the ministry, that healing of souls instead of bodies. Can the profession of agriculture be greater than that? With the life of such a man as Doctor Robertson, the great superintendent of Home Missions in Western Canada, as an example, the good which he has done, the love the people gave him, how his work lived after him, and how that grave in the cemetery in old Kildman has inspired others, we feel that no profession can be greater than his.

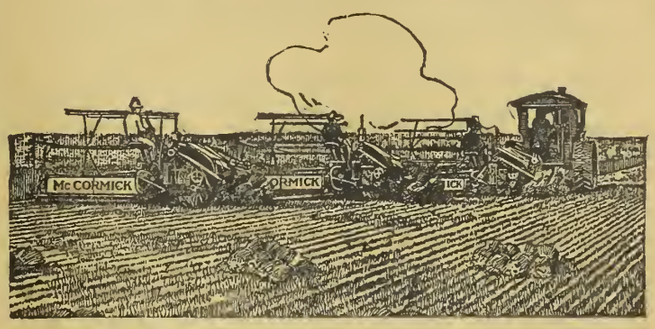
Can any farmer in any department of agriculture, no matter how successful, gain the love of his fellowmen, the honor and reverence after life is over, that we give to Livingstone, the great missionary explorer, or our Dr. Grenfell, the missionary doctor of Labrador? As our missionaries in foreign lands, what of their lives,—men like Dr. McKay, of Formosa; Dr. Geddie, and the men at work in our mission fields today. Can we say the profession of the man who has fields of waving grain; orchards, bending with their weight of fruit; herds of prize cattle, and horses; can his profession be "greater" than that of the missionary?

Then the doctor or minister coming daily in contact with so many people, their sympathies are awakened, their interests aroused and their minds broadened. The farmer, owing to environment, usually moves in a narrower groove. Interest in crops and in cattle, horses or sheep does not give the broadening outlook that constant human association does.

Ladies, I have only touched on a few of the professions, but in most of them we have our great men; those whose names are household words; "who leave footprints on the sands of time." Wellington, the great soldier; Nelson, the great sailor; Pitt the great statesman—and the great men of the profession of agriculture, where are they?

Can there be any doubt that agriculture is not the greatest of professions?—Written by Miss Lena A. MacLean, Centre Napan.

McCormick Binders



MANY years of McCormick binder experience have brought out the strong points of the machine and enabled the builders to devise features that make the machine still more efficient and satisfactory. There are a number of such features that insure a complete harvest of the grain, whether it be short, tall, standing, down, tangled or full of green undergrowth.

For Western Canadian fields the McCormick binder is built with a floating elevator which handles varying quantities of grain with equal facility. A third packer assists in the handling of grain that is very short or full of undergrowth. The improved knotter has only two moving parts. The tops of the guards are almost level with the platform canvas, leaving no ledge where short grain might accumulate.

For these and other reasons the McCormick binder is efficient in Western Canadian fields. See the McCormick local agent for full information, or, write the nearest branch house.

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Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Estevan, Sask.; Lethbridge, Alta.; North Battleford, Sask.; Regina, Sask.; Saskatoon, Sask.; Winnipeg, Man.; Yorkton, Sask.

These machines are built at Hamilton, Ont.

SISTER: READ MY FREE OFFER.

I am a woman.
I know a woman's trials.
I know her need of sympathy and help.

If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understand women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back, or bowels, feeling of weight and dragging down sensations, falling or displacement of internal organs, bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete **ten days' treatment** entirely **free and postpaid**, to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escaping the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured**, my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatment is for all,—**young or old.** To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, write **for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask for the free treatment to-day**, as you may not see this offer again. Address:

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Lighter than Leather	For Men and Boys
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No man or boy should think of buying ANY workshoes until he SEES and TRIES my "steels" at home. My "steels" are better in every way than any all-leather workshoe or rubber boot you ever wore. I will send a pair of "steels" your size, for your Free Ten-day Try-on, without cost, risk or obligation on your part to prove them an ABSOLUTE NECESSITY in your work.

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Steels 6 in. high	$3.50
Steels 9 in. high, extra grade of leather, black or tan	5.00
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Sizes for Boys, 1 to 4

Steels 6 in. high	$2.50
Steels 9 in. high, extra grade of leather, black or tan	3.50

Each style of "Steels" is worth at least twice as much as the best all leather workshoe of the same height.

My "Steels" run in the same sizes as ordinary, all leather workshoes. In case of error in ordering, exchange will be made to larger or smaller size, without extra cost to you.

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It tells How to Keep Your Feet in Good Condition; Tireless, Powder-dry and Comfortable, How "steels" save your feet, your health, your money. Read my free book, "The Sole of Steel"—SEE and TRY my "steels" before buying workshoes.

O. M. RUTHSTEIN, The Steel Shoe Man, Dept. 62, TORONTO, CAN.

A Plea for Trees.

Most of my life as a teacher has been passed in country sections, and my home for many years was a farm —if a small one.

I chanced to hold schools in sections where there was very beautiful scenery. Varied influences caused me to take up, whole-heartedly, Nature Study, as we term it in our school curriculum. Fast following the nature student period, one finds oneself a nature lover, and to be a nature lover denotes real interest, a fondness for flowers, for bird, for forest habitant; for every babbling brook and placid lake, and for tree.

A few verses of a poem aptly express some enjoyment of the nature lover. To quote:

"Tis you shall have a golden throne
and laurels
and laurels in your hair,
And castled courts—but let me keep,
My leafy haunts, where woods are
deep,
For golden crest and black cap and
hermit thrush sing there,
And the willow-warblers plaintive
notes,
Make music in the air."
Great Kings shall bear you shoulder
high,
And poets praise your worth;
But leave to me my orchard stead,
With green boughs crossing over-
head,
The squirrel in the pine tree, the
wood-owls mellow mirth,
The rare things, the shy things, the
little things of earth."

The latter terms of my service in the country, I lost no opportunity to impress upon my pupils the wisdom of conserving our forests. Outside of school I placed a plea—as chance offered, and at public examinations, I always gave a lesson on trees. But all this was little. One may say, I myself was but awakening to the importance of the subject. Besides I had no technical knowledge of the great principles of forestry—trimming, culling and replanting. Then there was lacking the great spirit of co-operation to produce any results.

Now, I think this Institute could, and should place some enthusiasm in the preservation of our woodlands. And why should our association be interested?

Because, scarcely a better medium could be found to influence the rising generation of land owners, than the women of the farms, and the rural school teachers. Constantly the press sends out warnings of the dire consequences following a destruction of the forests. It is an oft-repeated lesson to state that forests are a prevention of destructive winds, irregular rain falls, loss of renewing soil, terrible floods and so on.

The value of forests in relation to water supply is not that they cause precipitation, but that they provide natural reservoirs for the storage of water after it has fallen, and that by giving it out gradually, they regulate and equalize the flow of streams.

Clearing the land about the sources and upper reaches of a river has a disasterous effect upon the river. It is a principle of nature—no forests—no waterways. Floods in China and in treeless districts of Europe and the United States afford striking examples.

Our neighbors in the United States is keenly feeling the result of the vandalism that swept their country, where the misuse of this great natural product has resulted in all sorts of losses.

Latest stastics prove, also, that the productive possibilities of much of their farming lands, has been ruined by the loss of surface springs, following the destruction of forests. This loss of surface springs brings it very close to everyday farming. Scientific farming primarily entails that knowledge which can combat conditions arising from this fatal error, this wantoness of the early settlers.

Present day farming with its schemes of tillage subsoiling and irrigation, delay the loss of production on account of the disappearance of this invaluable circulating system. But the great remedy remains—afforestation.

Frequently an alarm cry goes forth through the pages of some magazine or newspaper that should teach Canadians to check the ruthless onslaught of the axe and the saw.

But these warnings are received by most much as the little child accepts the terrors of the bug-a-boos— very dreadful—but, perhaps nothing in it.

Canadians should conserve their wonderful forests, a source of great wealth. It is said that the comparative value of Canadian forests is three times all its mineral wealth, and ten times its gold and silver out put alone. The wondrous uses to which wood is applied forces it ever in immense quantities upon the market.

In the Drexel Institute of Philadelphia, one may see a curious bit of clay stamped with strange characters, one of the earliest, so-called leaves of a book, read by the ancient Babylonians. Beside it is a massive scroll of skin bearing Hebrew text, and nearby is a fragment of Egyptian papyrus, telling its ancient story

In the evolution of printing material it is a far cry from the first use of plant life, the papyrus—to the present use of a spruce tree. And since those first pulpmakers, the wasps, taught some ingenious mind the possibilities of tree for printing material, probably there is no greater drain upon our forests than this call for pulp wood.

England alone imports 350,000 tons of ready-prepared pulp for newspapers only. And it takes for one day for newspapers for the city of London about 400 tons of white paper, made from pulp which denotes some hundred cords of wood per day—that in turn denoting an average weekly destruction of very many acres of the forests.

It is a lamentable fact that, to disseminate the knowledge that the forests are a source of great wealth, seems but to implant a spirit of greed which is the direct influence leading to their destruction.

But why kill the goose that lays the golden eggs? The farmer must learn the great principles of trimming and culling his trees and also the necessity of reforesting and afforesting. He must look upon the wood lots as first aid to preservation of soil, in short, as the assurance of his livelihood and that of his heirs.

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The Ross Cadet Rifle shoots .22 shorts or longs, or 22 long-rifle cartridge and with its novel adjustable peep and globe sights, for which no extra charge is made, secures an accuracy quite beyond that of other 22 calibre rifles.

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The free illustrated pocket compendium of private advice for all men, whether young or elderly, single or married, whether well or ailing (explained be ow), not only contains a great fund of necessary information upon certain avoided private subjects, telling you what to avoid, what to do and what not to do, but also fully describes a new small mechanical appliance called a VITALIZER which generates a natural force and which is now being worn by men all over the world who seek new manly vigor. You, yourself, no matter where you live, may easily have one of these little VITALIZERS to try out in your own case. Therefore, please use the coupon below and get this free pocket compendium by return mail. SANDEN. AUTHOR.

How would YOU, reader, like to be strong, vigorous, vital and manly once more, without an ache, pain or weakness? If you really seek and want this new vigor, this rugged manly strength, then please call at my office or write today and get my free book that you may know the whole wonderful story of this great, drugless, self-treatment, this marvellous little VITALIZER of my invention, which you wear comfortably on your body, and which sends its steady gentle, silent supply of FORCE into your nerves, blood and organism while you sleep,

Real manhood with a perfect manly strength is not only nature's own gift, but, according to my belief, may easily be within the reach of practically any man. Of course, we all know that if is the husky, vigorous, vital fellow who attracts both women and men to him, and it is he, also, who is ever sought out and who achieves the really big things of life. Sturdy, vital manhood is, without doubt, the one great, silent universal power which fascinates us all, no matter how we may argue to the contrary. Therefore, reader, I care not what may be your age, nationality or creed, whether you are married or single, whether you are a bank president or work on the farm or in the shop, nor do I care how unstrung or nervous you may feel, or what past acts may have left you debilitated and enervated, I say to you in all seriousness, if I can show you an easy, drugless way by which you may treat yourself with the object of bringing back full vigor to your organism, then I will show you the road to new hope and new manhood. A man may be small in stature, yet as strong and attractive as a giant, or he may be big in stature, yet unstrung, nervous and unmanly. It is all a question of your own vigorous strength. Therefore, let me suggest that you call or write at once, then, after reading my book, if you decide you want to try out my little vitalizer in your own case, and will write to me sayingso, I will reply to your letter and guarantee to make an easy proposition which should enable you to have one of the vitalizers at once. At all events, you need the knowledge that my little book contains, whether you ever get a vitalizer or not, so please call or fill in and send the coupon.

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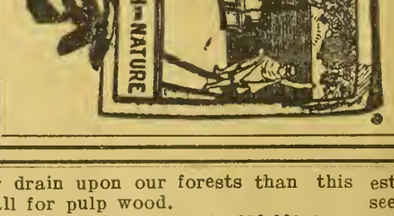
NOTE—With special attachments my VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health.

Free Self-Help Book For Men

I publish a little illustrated pocket compendium in booklet form, as mentioned above, which is meant to guide both single and married men along the road of Vigorous Health and Moral Rectitude, so they may be as vigorous and strong as the best, and may live to a ripe, healthy old age. There is a lot in this little compendium which every young or elderly man should know and can refer to from time to time with great profit to his own physical health. The booklet in one part fully describes my new VITALIZER, the great drugless self-treatment. If it is not convenient or if you are too far away to call, please write for this booklet today. It will come to you in plain, sealed envelope by return mail. Please use coupon. Office hours, 9 to 6.



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Dear Sirs—Please forward me your book, as advertised, free, sealed.

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The young of the rural districts should be trained in the fine distinctions of the value of a stripped wood lot and a conserved wood-lot. The first has a worth that it but for a time, while the other with judgment can last for generations.

The government of Sweden owns and cares for 18,000,000 acres of forest land. The proceeds from this state property pay for all workers in it, for the forestry schools, and a large portion of the public school expenses. This latter expenditure is no mean amount when it is considered that Swedish schools are splendidly equipped and education is so extensive that Sweden has the least percentage of illiterate inhabitants of any of the European nations.

In Norway and Germany all forest lands are maintained for public appropriations.

Each of these countries reap a high profit from its forest holdings, and more than that it is found that these lands are better today than they were at the organization of the system.

If it is thus a financial success in great con(erns, why not for the individual farmer ?

In wishing to reach a point upon which it may found an interest in trees, I will enumerare the general uses of forests: They furnish fuel and lumber; they regulate and promote, to a degree, rainfall; they protect the country from destructive winds; they hold water in the soil, thus preventing floods; they promote health by using poisonous gases and give off life-sustaining oxygen; in the decay of their fallen leaves and branches they furnish soil; they are the upkeep of a circulatory system through which surface springs are retained ; they are the breeding places of animals and of birds, those able but unrecognized farmer's friends. And lastly, they add beauty to the scenery. What we love we will preserve.

The members of this Institute could each do a share to implant in the young mind, the beauty and comfort of trees—then the profit.

A property that is beautifully set admist trees, is an addition to the community. Many, or most of the rural homes of our country stand devoid of these natural adornments. all rural school grounds lack them. Frequently lengthy roadways to a home subject one to unprotected heat in summer and bleak winds in winter.

With all the beauties nature has so generously lapished upon us, how little we are retaining !

Parts of our country become less and less lovely as the years pass by. Roads that should have been left as avenues, pleasurably to travel, have been ruined by cutting down all border trees. Lakes are fringed with ugly stump lands, none left for cattle shade, nor for beautifying the margin of water.

Now there's a profit in natural beauty. I have been told and I have read that England holds in its rural districts, much that is charming that the tourist finds vast enjoyment in their paths, roads and boating in and about their small towns and rural districts.

It is a fact that American cities and towns reveal more pride in trees than does the actual country. Bridgewater, I think, evinces generally, a more pleasing appearance in its residental quarters, solely through the care of trees than some portions of the surrounding sections do with all their better chances. Care for the trees you have! Plant new ones. Keep alive the spirit of forestry.

I will close with two thoughts of Ruskin:

First—It is the law of economy to make the best of everything.

Secondly—Everyone is intended to find an exquisite happiness in one's own least efforts.

The foregoing paper by Miss E. Bowers, a member of the Bridgewater, N. S., Institute, and read by her at their March meeting shows what can be done in the line of preparing an address for our Women's Institutes.

The Luscious Strawberry.

Old-Fashioned Strawberry Shortcake.—One and one-half pints of flour two rounding teaspoons of baking powder, one-half teaspoon of salt, butter size of an English watnut, one egg, two tablespoons of sugar, sweet milk to make soft dough, soft as can be rolled. Much nicer baked in small cakes. Prepare berries an hour or more before using by washing, slice and cover with cream.

Strawberry Cream.— One large tablespoon of butter beaten to a cream, add gradually one and a half cups powdered sugar and the beaten white of one egg. Beat till very light Just before serving add one pint of crushed strawberries.

Strawberry Pie—Make a crust same as for any pie and take one quart of fresh strawberries, select one pint and put on plate and sprinkle three tablespoons of sugar on them and one tablespoon of dry flour, then the other pint of berries, and three more of flour, roll out top crust, not too thin, and take a thimble and cut holes in crust about one inch apart. Be sure to get both edges of the crust on good and tight so juice will not run out.

Strawberry Blanc Mange— Dissolve one-fourth cup of cornstarch in one-fourth cup of cold milk and add to it one and three-fourths cups of sugar and cook over hot water, until the mixture thickens, then cover, cook fifteen minutes, stirring well. Remove from fire, stir in a cup of strawberries, and a few drops of vanilla. Turn into a large mold and set aside to chill. Serve with whipped cream and berries to garnish.

Strawberry Sherbet —Take the juice of a quart of strawberries, one pint of sugar, one quart of water, tablespoonful of gelatine. Soak gelatine in a little water and later add it to one cupful of the water, which has been boiled. Mix ingredients together and freeze. Fine with sponge cake.

Strawberry Rolls. —Cut biscuit dough in even pieces. Roll each a long narrow strip about one-half an inch thick. Place two rolls of strawberries on each strip, sprinkle with sugar and bits of butter on top also one teaspoon of hot water on each, bake quickly and serve hot.

Strawberry Whips—Sweeten and mash half a box of strawberries previously washed; add one cup of medium cream beaten until thick. Chill before serving.

Strawberry Layer—Make a medium size plain cake, using yoke of two eggs, teablespoon of butter, one cup of sugar, one cup of milk, cup of flour, two teaspoons of baking powder. Cream butter and sugar, add yolks of eggs, then milk, flour and baking powder which has been sifted togetber. Bake in thin plates. Layer —Mash two cups of strawberries, mash fine, add one cup powdered sugar, beaten whites of two eggs. Beat all until stiff and pile between pie and on top.

Baked Strawberry Rolls—Roll biscuit dough, thin, cut it in squares, and spread with berries, roll up the crust and put the rolls in dripping pan, just a little apart, put a piece of butter on each roll, spice it if you like, strew over a large handful of sugar, a little hot water. Set in oven and bake. Serve with sweet sauce.

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WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it towards the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oygen to form an **absolute, complete and perfect combustion.**

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Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyne, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded. Extra burners 35c. each.

The Maritime Farmer

SUSSEX, N. B.

We are exclusive agents for these burners in the Maritime Provinces. We want agents for exclusive territory.

Household Pests.

Editor The Maritime Farmer:—

The following is a treatise on a few of the most common pests found in the household.

Housefly.

We are all familiar with the housefly. It is only within the short period of the last few years that people have become acquainted with the dangerous character of this insect, and only within the last two years has the public, generally, been awakened to the danger of the creature and the necessity of fighting it.

When the adult fly issues from its pupal sheath ts first impulse is to feed. Its sense of smell must be very keen for it knows the odours of cooking and it will fly imediately to the nearest kitchen. The mouth parts of the fly are so constructed that its food must be in liquid form. When it alights upon a solid a plentiful supply of saliva enables it to make some slight impression and to gain some sustenance. It prefers semi-liquids to liquids and solids. Thus custard pie is a typical food with the pest, the custard being of a semi-fluid consistency. The fly has been termed as persistet. This is true enough for we all know if we are unfortunate in having to eat a meal in a room where flies are abundant, we have to fight for every mouthful. Then again can we not recall the nuisance in the early morning when its persistency is evidenced in returning again and again to our faces while we are trying to sleep, in spite of the many slaps from us. After its rest during the darkened hours of the night the pest is thirsty and hungry and is attracted by perdspiration on the sleeper.

The housefly is not especially fond of bright sunlight. Therefore one sitting in bright sunlight is not so apt to be disturbed, but it revels in the shady porch and in the houses away from the rays. It flies into stables in search of a place on which to lay its eggs—the manure heap being the best breeding place for the ordinary housefly, although it is safe to say that it will breed in almost any fermenting organic matter. Thus, under ordinary city and town conditions a large percentage of the flies found in houses come from horse stables or their vicinitty. The fly which breeds on fermenting vegetable refuse from the kitchen is not the ordinary housefly but the so-called stable fly. This is an important point as the housefly is rarely found in houses and on food and is therefore not an important carrier of disease. Flies are great feeders. When there is an abundance of food they will suck at it incessantly, or at very brief intervals.

On account of the simplicity of its digestive processes, pathogenic bacteria and other micro-organisms pass through the alimentary canal unchanged. Therefore the question of fly specks is an important one. Every casual observer knows they are laid with great frequency and when flies are abundant the specks are found everywhere. The domestic fly has the reputation of being a dangerous enemy to human health. A certain speces of mosquito is the cause of yellow wfever, while the housefly is charged with being an agency in distributing typhoid fever, summer complaint, cholera infantum, etc.

The fly visits everywhere under the sun. It is impossible to keep it out of kitchens, dining rooms, cow stables and milk rooms. Flies walk over food and are the cause of one of the worst contaminations that could ocur from the standpoint of cleanliness and the danger attending the spreading of disease germs.

Certain authorities claim that owing to the frequency of the passing of its excrement there is greater danger from disease germs that pass through the fly's body than from those that are suposed to be carried on its feet. To avoid only the danger from flies you must destroy or protect from them all substances in which would be contained disease germs. To avoid the nuisance of ies it is necessary to get rid of them and in so doing obviate the danger.

The simplest way to attack the fly problem is to prevent them from breeding by abolishing all places where they can breed. By alowing them to breed in countless numbers and then to try keeping them out of the buildings, or killing them after they have entered, seems to be working the wrong way around. The second method is sometimes the only resort where, for instance, in cities and towns individuals are not able to have the co-operation of the Board of Health or the city authorities in the campaign. In the rural districts the hoseholder should care for his own surroundings in ways that will free himself from flies, but in city comunities this might not be effective as it needs the help and co-operation of all stable keepers in the neighborhood in the work. If the school children in every community were taught the dangers and habits, together with preventatives of the fly, the knowledge diseminated would be beneficial where sufficient interest were manifested.

Many devices have been invented for destroying these invaders, all of which are good. Caution should be exercised in the use of poisonous fly pads and liquids where there are young children, cats and dogs. A 10 per cent solution of Formaldehyde, sweetened, placed in saucers about the rooms where flies are found is an exterminator and is non-poisonous. All garbage and kitchen refuse should be burnt or buried within a few days, but at once if possible. All refuse should be covered and sprinkled with chloride of lime until disposed of. Windows and doors should be tightly screened during the summer. Milk, fruit and other foods should be covered with muslin.

Mosquitoes

The anoyance of the mosqito has been endured for many centuries without any effort being made to prevent it except in he use of smudges, skin applications and removing from localities where the pest is abundant. It has only been within a very few years that the discovery as a carrier of disease has been made, and consequently people have been awakened to its dangers to human life. As has been mentioned the mosquito is a carrier of the germs of malaria and of yellow fever. Malaria has been called by medical men a country disease. The malaria mosquito breeds in swampy regions, open streams with side pools of still water and more or less permanent but small accumulations of water. These places are not as a rule found in cities, or, at all events, only in the suburbs, whereas they are commonly found in the country. The rain barrel which catches the water from the roofs of our houses is another breeding place for mosquitoes. It can be plainly seen that the malarial insect does not accommodate itself to city conditions, but is found almost everywhere in the country, except in very dry localities and at certain high elevations. Where land is irrigated the ditches are proli fic breeding places for the mosquito.

Public interest has been so intensified to the danger of the mosquito as a disease carrier that antimosquito work has been extensively carried on in all countries, particularly in the United States.

First in importance is proper and thorough drainage and the complete abolition of breeding haunts. Numerous substances have been used to rub on the skin or to put near the bed as a protection against the mosquito. Oil of pennyroyal and spirits of camphor rubbed upon the face and hands or a few drops on the pillow at night, will keep away mosquitoes for a time. Oil of peppermint, lemon juice and vinegar, as well as oil of tar have all been mentioned and recommended as preventives of mosquito bites.

One of the most effective lotions is composed or ½ oz. oil of citronella, 1 oz. spirits of camphor. As a rule, a few drops on a towel hung over the head of the bed will keep the pests away for a whole night. Failing this method if the mixture is applied to the hands and face a few drops will suffice. This method is effective against all mosquitoes excepting the yellow fever germ carrier. This mosquito begins to trouble the sleeper at daybreak, by which time the efficiency of the above mixture is lost, and one is in his soundest sleep. If, however, one awakens and aplies a fresh supply of the lotion the result will be as effective with this last named mosquito as with those invaders of the night. A good mixture for use in the woods against mosquitoes and black flies will be found in mixing 2½ pounds of strained mutton tallow (while hot), ½ pound black tar

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Too many farmers are content to overlook the important question of proper ventilation in their barns, yet nothing is more essential to the health of their live stock and the preservation of their crops and buildings.

Pedlar's "Superior" Barn Ventilator

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Dr. Morse's Indian Root Pills

exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

A Household Remedy

(Canadian tar). Allow to cool, but just before quite cold stir in three ounces of citronella and 1½ ounces of pennyroyal.

In considering the abolition of the breeding we must consider the habits of the different mosquitoes, but the breeding places of the most common household mosquitoes have been mentioned above and therefore all receptacles of water about the place must be done away with. Where it is necessary to have the rain barrel or tank they should be properly screened. In New Orleans and other Southern cities the Boards of Health are now enforcing such methods. Care should be taken in screening. A fine wire mesh should be used and fitted perfectly, leaving no possible crevice for the mosquito to enter. The premises about the house should be rid of tin cans, bottles and wooden or tin boxes in which water can accululate. The gutters on the roof should be examined frequently to make sure there is no clogging, thus allowing water to accumulate. Pans in the poultry yard, domestic animal water troughs, the water cup of the grindstone, all are places in which the mosquito will breed, and in them water should not be allowed to remain over forty-eight hours. The house mosquito will breed in many places which might be overlooked. Take for instance water standing in flower vases, water pitchers in unused guest chambers, in the tanks in water closets where those are not in frequent use. In sewers in dry weather they will breed and emerge through the entrance on the surface. Cess pools, unless perfectly tight with cement will breed these minute insects. A little kerosene will put a stop to this.

Remedies for Mosquitoes.

The degree of swelling and irritation resulting from mosquito bites varies with the different species of the insects, and in fact different idividuals of the same species vary in their effect. Household ammonia has been found to give relief as has also the application of alcohol while others have found glycerine to be most effectual. Touch the bite with glycerine and the soreness disappears in a few minutes. Indigo is another application which has been known to bring relief even after a lapse of a day or two. If a piece of ordinary toilet soap is moistened and applied to the bite the irritation ceases speedily.

Cockroaches

The roaches which abound in houses are to be found in kitchens and pantries, especially in the neighborhood of fireplaces as they are fond of heat. This accounts for them inhabiting the oven rooms of bakeries. During the daytime they hide behind the baseboards, furniture and places away from the light. Their bodies being at and thin, they are able to squeeze into small cracks or spaces where they would not be suspected of hiding. Unless midnight patrols are made the housewife often is not aware of the pest being in the house. The sudden entrance into a pantry or kitchen and the appearance of a light will start these pests on a flight for cases of concealment. Coskroaches feed on almost anything, being destructive to furniture, clothes and food. The greatest of care should be taken of dishes and pantry shelves where the pest has been discovered, as the roach leaves in its tracks a very penetrating, disagreeable and nauseating odor. Hot water and soap seems to be the only remedy for its extinction. There are two redeeming traits in the cockroaches character, namely they feed on and will be of actual service in removing dead animal matter and prey on that grievous insect, the bedbug. The spread of cockroaches from house to house can often be traced to being introduced with laundry, supplies, furniture, etc.

An effective and simple way of exterminating one's premises of the cockroach is found in fumigating with hydrocyanic gas, which gas is extremely poisonous to human beings, but can be supplied with safety by observing the proper precautions. Borax scattered along the water pipes in kitchens and bathrooms, on baseboards and in crevices of woodwork where the roach is known to exist often is effectual of ridding a place of these pests.

The Bedbug.

In spite of the best of care and the adoption of all reasonable precautions the bedbug may often gain access to a house. Its presence is not always a sign of neglect or uncleanliness. It will find its ways into trunks and traveling bags and thus be carried to a new abode. If these pests have been in a house previous to its being vacated by human beings, they will escape through the windows, pass along water pipes or gutters and thus gain entrance to an adjoining house in search of their usual source of food. A closely allied species is found in nests of the common barn swallow and it often hapens that these nests are fairly aive with those vermin. This speci often gains access to houses. In England there are at least three species all resembling very closely the bedbug On of these will be found in pigeon cotes, another in the nest of the English martin, while a third follows the frequented places of the bat. The true bedbug occurs occasionally in poultry houses.

The most characteristic feature of the bedbug is the pungent and disagreeable odour which it exhales, which is a great assistance in detecting its presence. The bedbug thrives mostly in filthy houses or old buildings which are full of crevices. In these crevices they are enabled to hide during the day. The bedbug is only active at night leaving the bed on the approach of daylight. They crawl into the cracks of wooden beds, or under loose wall paper. The eradication of this pest has been greatly facilitated by the use of iron and brass bedsteads, replacing the wooden ones.

To some persons the bites of the bedbugs are poisonous. Hydrocyanic gas as a fumigator is advised as its fumes reach the hiding places of the insects and immediately kill them. The application of benzine or kerosene to wooden bedsteads, introducing the liquid liberally by means of a brush or feather is the most practical method. The use of hot water, corrosive sublimate or oil of turpentine may be used in the same way.

The Woolen Moth (Tinea tapetzella).

This clothes moth is abundant in houses and does considerable damage to clothing and furs. The eggs are laid in summer and autumn upon woolen goods upon which the larvae feed; and as they grow they form cases to live in, and these often unite the folds in cloth and sacks into masses, when undisturbed. The caterpillars sometimes injure beans, peas and other seeds when stored in damp places. They are about ½ inch long, very active, fleshy and yellowish-white with long hairs scattered over the body. Furs may be preserved from the ravages of this moth by the simple expedient of storing them during the summer in paper parcels containing a few drops of gasoline, benzine or pepper sprinkled over them. These parcels should be carefully gummed up so as to close all apertures.—Mrs. A. Ethel Dunbrack, Supt. P. E. I. Women's Institutes.

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THESE Deering binder features appeal to the farmer. The elevator, open at the rear, delivers the grain properly to the binding attachment. Because the elevator projects ahead of the knife it delivers grain to the binder deck straight. A third packer reaches up close to the top of the elevator and delivers the grain to the other two packers. A third discharge arm keeps the bound sheaves free from unbound grain.

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The Deering local agent will show why Deering New Ideal binders are the standard of binder construction. See him, or, write to the nearest branch house for a catalogue.

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The Gold Dust Twins' Philosophy

THE floors and doors appear to wait until the dust germs congregate; the housewife hails each dawning day with grim and harrowing dismay. Says she: "My work will NEVER end; o'er dusty stretches I must bend, until, with aching back and hands I finish what the day demands."

The "Floor-and-Door-a" Girl

Then Mrs. Jones, one afternoon, dropped in, at time most opportune. An optimist, she knew the wiles of household work—its sighs and smiles. She told of how she polished floors and woodwork and the endless doors, until when Hubby saw them, too, reflections said: "Why, howdy-do!"

"The Gold Dust Twins," said she, "I find, help leave the woes of dust behind. Each mark of sticky hands on doors, each tread of muddy feet on floors, all fade before the slightest touch of Gold Dust, and the work is such that, when the woodwork has been done, I find said work was only fun." This line of reasoning must show that those who've tried it OUGHT to know. If you, in one day's duties, find that there's a Grouch in ev'ry Grind, invite the Gold Dust Twins to share such tasks as tire and fret and wear.

From kitchen floor to bedroom suite, these tireless little chaps make neat, and best of all, the sum expense is measured up in meager cents. They put both dust and dirt to rout and run the last old microbe out.

The Gold Dust Twins

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Milburn's Heart and Nerve Pills Built Her Up.

Mrs. Frank Blough, Sarnia, Ont., writes:—"I embrace the opportunity to write you saying that I have used Milburn's Heart and Nerve Pills, and found them very helpful to me. I was very badly run down, and was taking doctor's medicine. My son, out West, wrote me saying, 'Mother! you use the Milburn's Heart and Nerve Pills, they will be better for you than doctor's medicine.' This I did with good results. I often recommend them to other people. My doctor did not know I was using them, he used to say 'Why! I never saw any one's heart gain up like yours has. You do not need any more medicine.'"

Milburn's Heart and Nerve Pills are 50c. per box, 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Molasses as Dairy Feed.

Many inquiries reach his office asking for information pertaining to the feeding value of molasses.

In he south where molasses is plentiful and cheap it is fed in large amounts by intelligent feeders to all classes of live stock. In view of the fact that it contains a very large amount of carbohydrates in proportion to the protein, it acts as a fattener much as does corn and other carbonaceous foods.

Where it is given for the feeding nutrients it contains, it is considered almost equal pound to pound for corn. In the northern states where it is less plentiful and more expensive it is fed with, rather than in substitution of, other foodstuffs which are, as a rule, more economical.

Molasses is exceptionally valuable in giving palatability to other foods. In this connection it is useful for mixing with foods which are inexpensive but unpalatable, although they contain useful feeding nutrients. By mixing with them a small amount of molasses they are rendered palatable and consumed by animals with avidity. In this manner molasses becomes very useful and lessens the daily cost of rations.

Because of its palatability it is also useful in inducing cattle, that are being specially fed, to consume larger amounts of feed. Expert fitters of cattle for the show yard or sale ring recognize that tey can more quickly put their animals in condition by the use of molasses than without. Those who are feeding for large records of milk and butter-fat very often resort to the use of molasses and as a result are able to stimulate animals to consume approximately one-fourth more feed and thereby produce one-third more butter-fat than they would without the use of it.

Animals that eat molasses take on excellent codition and a shiny coat. This evidences the fact that molasses is very healthful to the digestive apparatus rendering it strong and efficient. It is reasonable to believe thereby that molasses aids digestion to the extent that the animal secures more nourishment from other foods consumed. It is a very valuable food when not overfed, but should be fed mixed with warm water and at the rate of not to exceed two or three pounds daily over a long period.

There is no real need of anyone being troubled with constipation. Chamberlain's Tablets will cause an agreeable movement of the bowels without any unpleasant effect. Give them a trial. For sale by all dealers.

FLORICULTURE.

Carnation, Truro, writes:—Some large plants of pink and white carnations that were taken up last fall and planted in a box in the cellar seem to be growing rapidly and turning white. Their foliage seems to be wilted and soft. These plants have been kept fairly dry and the cellar has been without any heat all winter; it is somewhat damp. The bottoms of the Carnation plants seem to be moldy. Should they be moved to the light and how should they be watered.

These plants are evidently affected by the long spell of mild weather past and have started growth to such an extent that it will be necessary to bring them to the light as soon as possible in order to save the plants. Try and get as cool a place as possible with sun-light only part of the day. Water moderately and spray the foliage frequently. The fungus will probably disappear after they are brought out of the damp cellar.

Amateur, Hillsboro writes:—I took up some roots of Spirea last fall and planted them in tubs with good drainage. They at once began to grow but they look spindly and weak. Some few branches are in bud but they are small and seem wilted. What is the matter? They have had plenty of light and a warm room.

The proper way to grow this plant is to dig it up just before the ground freezse and place it in a dark shed or out building, where it will freeze and remain frozen for about a month. Then if pulled it will generally come well. It should have plenty of sunlight and a cool room. The trouble with yours is that the roots have not had their period of rest before replanting. They have probably been grown in too warm a room. The only thing that I could advise would be to keep in as cool a place as possible with plenty of sunlight and be a little sparing of water but do not allow them to get dry. We grow hundreds of them at the green house in this way. The white heads make a very pretty show for Easter in churches, etc., etc.

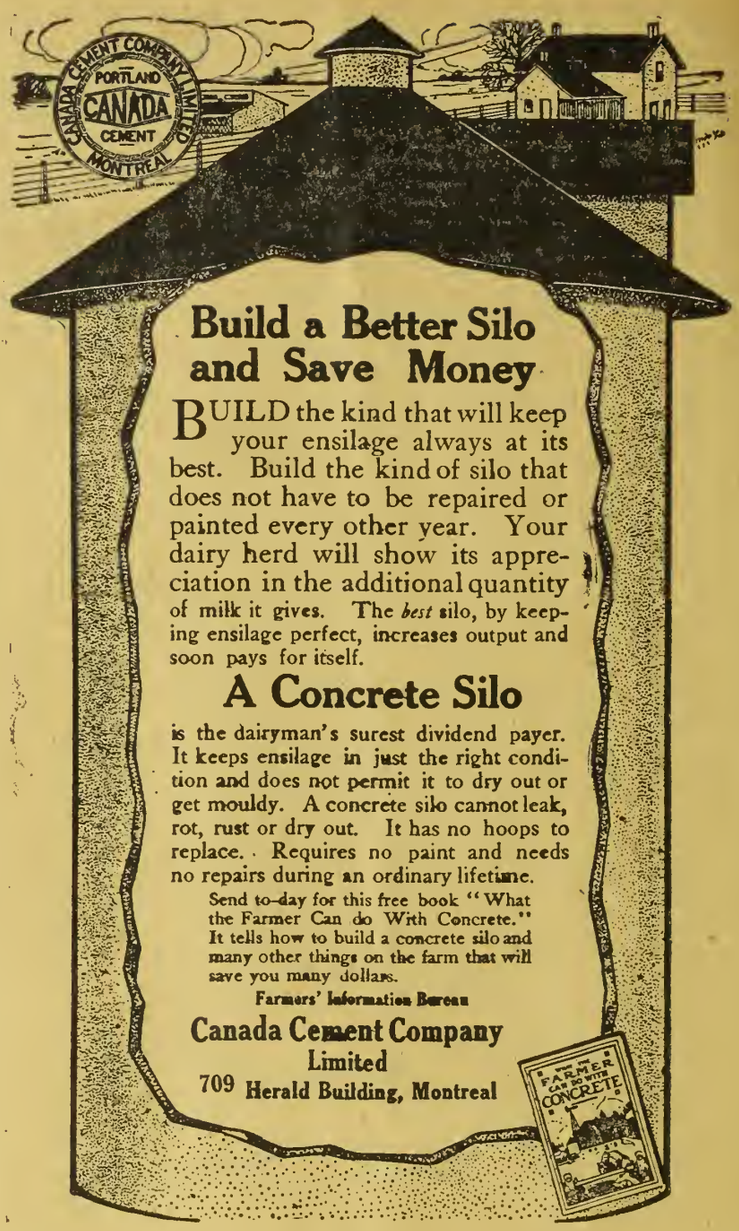
Woodstock Correspondent writes:—Please advise me what to do with an Oleander that is becoming infested with brown bugs. They do not seem to grow but are spreading rapidly. It is also covered with a sticky stuff that seems to come out of the leaves. What shall I do for this? Also, it is hard to wash off.

The sticky substance is the result of the presence of the insects which can be removed by washing the plant with kerosene emulsion made by thoroughly mixing one part of kerosene oil with one half pint of sour milk. Stir thoroughly until a batter is formed of this. Take one part to fifteen parts of water stir frequently and apply with a cloth or sponge. Two applications will usually free a plant of these pests from the foliage leaving the plant clean and healthy. You had better put a clean cloth over the soil while working about the top as it is not desirable to get too much oil in the earth. This is good for ferns or any other tough-leaved plant that I have yet seen.

Time to plant Sweet Peas. As soon as one can get the frost out long enough to get them in for early bloom ing. Among the few bright colors that I try are the Black Knght (Spencer), Galdys Urwin, charming pale rose pink, King Edward Spencer, crimson-scarlet; Nora Urwin, a magnificent white; Primrose Spencer, primrose or creamy yellow; Prima Donna, deep pink; Fine Lady Grisel, Hamilton, pale lavendar—called the Orchid flowered Sweet Pea.

Value of a Pound of Butter Fat.

Acording to market conditions just at the present time a pound of butter-fat is worth probably less than 30c. Yet there are cases in which these figures hardly prevail as a true measure of value.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BUILD the kind that will keep your ensilage always at its best. Build the kind of silo that does not have to be repaired or painted every other year. Your dairy herd will show its appreciation in the additional quantity of milk it gives. The best silo, by keeping ensilage perfect, increases output and soon pays for itself.
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is the dairyman's surest dividend payer. It keeps ensilage in just the right condition and does not permit it to dry out or get mouldy. A concrete silo cannot leak, rot, rust or dry out. It has no hoops to replace. Requires no paint and needs no repairs during an ordinary lifetime.
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THE FARMER CAN DO WITH CONCRETE

Take for example the Guernsey cow May Rilma that has just completed a year's test making 1,073 pounds of fat. This is the production that she has given in twelve months. It exceeds the former world's record by about 15 ponds. Here is a comparatively small amount of butter-fat, but it is worth decidedly more than $4.50. It is this 15 pounds that made his cow the leader of all dairy breeds. The world is glad to honor phenomenal successes whether they be man's or beast's. When a horse makes a speed record, when a man does some great feat of value to the human race, when a cow is successful in producing more food for the human family and producing that food at a lower price, then the world collectively and the leaders individually are glad to honor these successes

The difference between the work of May Rilma and her nearest competitor a Holstein-Friesian cow Banostine Belle De Kol, is 15 pounds of fat. It is this small margin that has put a value on the Guernsey cow that can scarcely be measured by monetary figures. This amount of butter-fat has estabished a standard that marks May Rilma as Queen of the dairy world. Just what this honor is worth can hardly be estimated, yet it is the price of the 15 pounds of butter-fat.

This, of course, is a striking illusration that stands out from the large majority of cows that are being milked throughout the United States. Yet the same thing holds true in a measure in every dairy herd whether it consists of five cows or five hundred. Whether they be pure breds or grades. Whether they be kept in the ordinary farm stable or in he most elaborate cow palace that could be imaginedd. It all reverts back to the one question of weighing and testing, of measuring the value of the cow by means of the Babcock test and the milk scale.

The dairy farmer must invariably take this means to determine the true value of his cows if he would measure their worth. There is no other scale by which this measure can be ascertained and there may be May Rilmas in your herd—not May Rilmas that will compare with the present world's leader but those that will stand out in contrast with the other cows—here may be cows here that are making a handsome profit while others are causing you a loss every day. The only way to determine this is to weigh the test, to secure a definite understandng of each cow in the herd. Test and find them if you would make the best profit.—Kimball's Dairy Farmer.

Each age of our lives has its joys. Old people should be happy, and they will be if Chamberlain's Tablets are taken to strengthen the digestion and keep the bowels regular. The Tablets are mild and gentle in their action and especially suitable for people of middle age and older. For sale by all dealers.

Number of Bushels in a Bin.

During the past few weeks we have received a number of requests that we figure out the contents of bins of various sizes. So many of these have come to hand that we again republish from our issue of Jan. 20, 1905, an article and table on this very subject, as follows:

One of our subscribers asks us to publish a table showing the number of bushels in bins of various sizes. As the information asked for is of considerable interest, we have worked out the figures for any sized bin from 3 feet square up to 10 feet square. The exact measurement for an imperial bushel is 2,218.192 cubic inches. The number of bushels given for each measurement of bin is about as nearly correct as ordinary vulgar fractions will indicate.

In all cases the measurements are given on a basis of 1 foot deep.

When one of the dimensions of the bin is more than 10 feet, the contents may be ascertained by taking the measurements of two bins equalling the size to be considered. As, for instance, if it were desired to find the number of bushels in a bin 18 feet long, 7 feet wide and 5 feet deep, one would add the figures for a bin 7 x 10 to those for a bin 7 x 8; then multiply by 5. One foot deep in a bin 7 x 10 equals 54½ bushels; 1 foot deep in a bin 7 x 8 equals 43½. These added make 98 bushels in 1 foot deep in a bin 7 x 18 feet. Multiply 98 by 5 (490) and we have the number of bushels in a bin of the size stated.

Of course, when grain weighs either more or less than the standard weight, its measurements by weight will be somewhat different.

This table should be of considerable value, and might well be cut out and pasted in the granary.

1 ft. deep. Bus.	1 ft. deep Bus
3ft. x 3ft..... 7	5ft. x 8ft....31
3ft. x 4ft.....9 1-3	5ft. x 9ft....35
3ft. x 5ft.....11 2-3	5ft. x 10ft...39
3ft. x 6ft.....14	6ft. x 6ft....28
3ft. x 7ft.....16 1-3	6ft. x 7ft...32 2-3
3ft. x 8ft.....18 2-3	6ft. x 8ft....37 1-3
3ft. x 9ft.....21	6ft. x 9ft....42
3ft. x 10ft.....23 1-3	6ft x 10ft...46 2-3
4ft. x 4ft.....12½	7ft. x 7ft....38 1-4
4ft. x 5ft.....15½	7ft. x 8ft....43½
4ft. x6ft.....18 2-3	7ft. x 9ft....49
4ft. x 7ft.....21¾	7ft. x 10 ft....54½
4ft. x 8ft.....25	8ft. x 8ft....50
4ft. x 9ft.....28	8ft. x 9ft....56
4ft. x 10ft.....31	8ft. x 10ft...62
5ft. x 5ft.....19½	9ft. x 9ft....63
5ft. x 6ft.....23 1-3	9ft. x 10ft...70
5ft. x 7ft.....27½	10ft x 10ft...78

N. W. F.

Both A
Bread Flour
And A
Pastry Flour

"A woman always wants a reason, but never gives one".

So we are going to tell you just why "Beaver" Flour is a bread flour and a pastry flour —as good for one as for the other—*and best for both.*

Ontario Fall Wheat is the most nutritious wheat in the world — rich in flesh and strength building qualities and with a full rich flavor and splendid pastry making qualities.

Manitoba Spring Wheat has more strength than Ontario Fall Wheat—but is not so good for pastry.

Naturally, *the perfect flour* is the one that combines the good qualities of *both* Ontario and Manitoba wheat. *This is exactly what* "Beaver" Flour *does.* It is a *blend* of Ontario Fall Wheat and Western Spring Wheat. It contains *exact quantities of each.* "Beaver" Flour has the real home made flavor that a Western Wheat flour lacks—it makes deliciously light, tasty Cakes, Pies and Fancy Pastry.

135

Order "Beaver" Flour

for your next baking day. Put it to the test. Try it for *both* Bread and Pastry—and see for yourself the convenience and economy of using a true blended Flour. Dealers—Write us for prices on Feed, Coarse Grains and Cereals.

THE T. H. TAYLOR CO., LIMITED, - CHATHAM, Ont.

On Lightning Rods.

The protection of buildings from lightning is undoubtedly as important as the projection of transmission lines, still it is a matter to which little attention has been given. Where protection for buildings is provided at all, it is usually inadequate, and in many cases the danger is increased rather than diminished. The following are thought to be correct answers to some of the questions usually asked about lightning rods:

1. Should buildings in cities have lightning protectors?

Ans. No. On account of the increasing number of steel buildings, and overhead wires, city buildings are reasonably safe. Contrary to the general belief, telephone and power lines are splendid protection against lightning.

2. How many rods should be provided?

Ans.—The more the better. Four rods and four ground connections should be satisfactory for a building 40 by 75 feet.

4. What kind of material should be used?

Ans. Probably copper is a better material where the air is full of gas and smoke. There seems to be no advantage in having a stranded cable. A solid rod is as efficient and is cheaper. In the country galvanized iron rods or even galvanized iron pipe would be entirely satisfactory. The claim frequently made that copper should be used on account of its high electrical conductivity is not correct since the actual ohmic resistance of the material use has little to do with the efficiency of the rod.

4. What should be the shape and size of the rods?

Ans. Round rods or pipe are preferable. Sharp bends should be avoided as far as possible. The rods should terminate in a number of points five or six feet above the top of the roof. There is very little advantage in expensive sharp pointed polished points.

5. How should ground connections be made?

Ans. In the majority of cases a galvanized iron pipe driven a few feet into the ground is entirely satisfactory.

6. Is it safe to stand near a lightning rod during a storm?

Ans. No.

7. Is it safe to stand in a draft during a storm?

Ans. No.

Home Made Ice Box.

A cheap substitute for a refrigerator consists of nothing more than a box in a box with insulation between. This insulation should be about three or four inches of sawdust. The outside of the inner box and the inside of the outer box may be further insulated with heavy paper. Both boxes may be of rought lumber and each provided with a lid, or one lid may be constructed to fit both boxes and have a dead air space or insulation between. The inside of the inner box should be finished with galvanized iron to make it more sanitary and be provided with a drain to drain off the water from the ice. Into this inner compartment the ice is placed and may contain a rack for the things to be kept cool. A disadvantage of this box is that everything goes into one compartment. If, however, a large box is constructed, a partition may be placed in and one compartment used for ice and the others for vegetables, meats, etc.

If no boxes are available, one inch material with two by four inch material to give the space for sawdust, may be used. The object of having the layer of sawdust surrounding the inner box is to make it a non-conductor of heat, so that the ice will keep longer. If the joints are tight, and the box painted, this ice box will have a good appearance and be economical of ice and serve as a very useful article about the house on hot summer days.

When your child has whooping cough be careful to keep the cough loose and expectoration easy by giving Chamberlain's Cough Remedy as may be required. This remedy will also liquify the tough mucus and make it easier to expectorate. It has been used successfully in many epidemics and is safe and sure. For sale by all dealers..

Amatite

The Roofing that Needs No Painting

WHEN your roof is covered with Amatite, there is an end to the roof painting nuisance. Amatite has a real mineral surface and needs no painting. You don't have to get up on the roof every two years and paint it.

The mineral surface makes this unnecessary and it will stand rain and hail and wind and snow, for years without attention.

When you paint the old-fashioned roofings you are practically trying to keep them from getting wet. Amatite is made to get wet, for water won't hurt it a bit. Next time your old-fashioned roofs need painting, cover them with Amatite.

A sample of Amatite and booklet about it will be sent free on request. Address nearest office.

THE CARRITTE-PATERSON MFG. CO. Limited

St. John, N. B. Halifax, N. S. Sydney, N. S.

Electrical Treatment of Milk.

Professor J. M. Beatie, the Liverpool city bacteriologist, has presented his report upon the operations of the Earle Road Milk Depot, where, for some months past, experiments have been conducted in the electrical treatment of milk for the purpose of destroying bacteria. The professor's conclusions are that the electrical treatment of milk will destroy disease-producing bacteria. The main milk-souring bacteria are either completely destroyed or may be neglected as far as the keeping power of the milk is concerned for ordinary household use. The milk is not sterilized in the strictest sense of the word, but there is a reduction in the total number of bacteria by 99.93 per cent. over a series of 15 daily examinations.

The milk will keep perfectly sweet for at least three or four days after treatment, a period long enough to cover distribution and household use. The chemical constitution of the milk seems to be unimpaired and the taste is not altered in any way. In two cases in which the control supply was tuberculosis the electrically treated milk was non-tuberculous. The bacteria which remain both in their number and in their nature are not harmful and the milk is perfectly satisfactory as a food for infants.

Ayrshire Record Work.

The official testing of Ayrshire cows for advanced registry is having a wonderful influence on bringing the Ayrshire breed of cattle to the attention of all clases of dairymen.

The Ayrshire cow is proving her ability to make good on a poor pasture and scant fodder, and return to her owner a fair profit, and aso is showing that with the other extreme, she can give a coresponding return for the most abundant food supply and the best of care.

She is showing that marvelous ability to adapt herself to any and all conditions and to enrich her owner in just that proportion for which he has provided.

The Record of Performance Test proves this in the varied manner in which it is conducted, and from the thrifty dairy farmer's ordinary husbandry to the fancy farmer's scientific feeding at the hands of an expert.

The returns all along the line seem to be just in accord with the outlay, fair, good, excellent or phenomenal just as she may have had a chance for

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If you can get a suit valued at $25.00 in Canada for $12.50 from Catesbys in London---Will you buy it?

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Then sit down right now, fill out the above coupon, mail it to our Toronto office, and get our latest Style Book and patterns. With this book is a letter explaining our system of doing business and a self-measurement form which is so simple that you can't go wrong in using it. We'll also send testimonials from many satisfied Canadians who regularly buy from us.

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If you don't want to cut this paper, write a postal or letter, and we'll send the patterns any way, but to get them you must mention The Maritime Farmer.

CATESBYS LTD.

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The "BURLINGTON." This shows the most popular style of suit worn by well-dressed men in Canada. The materials used are specially selected for this style of suit. $12.50. Duty free and carriage paid.

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Owners of the Celebrated Robert T. Oulton Silver Black Foxes, and to Robert T. Oulton, Pioneer Silver Fox Rancher of the World Successors

Capitalization $1,000,000. Present Stock Issue $700,000. Treasury Stock $300,000,
To be used only for the Purchase of Additional Animals Par Value of Shares $10.00 each.

1. The Company has bought out the celebrated breeders, formerly owned by Robert T. Oulton, which forms the basis of the organization.

2. **ROBERT T. OULTON,** the first successful black fox rancher, is our General Superintedent and adviser on all ranching questions.

3. **THOMAS A. OULTON,** as Ranch Manager.

4. Twenty-eight pairs of pure-bred Silver-Black Foxes; thirteen pairs of proved breeders and fifteen pairs of this year's young. These have been bought subject to the usual conditions of delivery.

5. We have bought three pairs of breeders with their pups, if any this year. The probable young will be applied to **PAY A DIVIDEND THIS YEAR.**

6. We are purchasing **NINETY PAIRS OF OTHER FUR-BEARING ANIMALS,** which will be allowed to accumulate in the ranch four or five years, after which time these will give a **PERMANENT HIGH DIVIDEND** on the entire capital, independent of the foxes.

7. The Ranch is located near Port Elgin, N. B., the centre of the fox business in New Brunswick.

8. This Company is organized with a view of paying a high dividend on pelt basis. No future decline in fox values can prevent us from paying permanently good returns on your investment.

For further information send the accompanying coupon.

The Keirstead and Mersereau Fox and Fur Company, Limited
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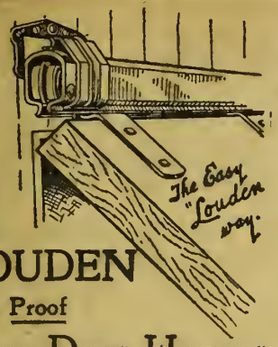

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Barn Door Hanger

and have the barn door hang and run right for all time. This is positively the finest Barn Door Hanger on the market. As its name implies birds cannot build in the track. The track is hollow with closed ends. No ice or snow in winter or trash in summer can possibly get in to clog it. Runs on two strongly braced trolley wheels always smooth and easy running. Hinged so as to make it flexible and to allow the door to swing outwards and upwards if occasion requires.

Ask for the Louden Line

—over 47 years of experience and practical experiments go to make Louden goods efficient and reliable. We make

"Everything for the Barn"

including Cow Stalls, Stanchions, Litter and Feed Carriers, Hay Forks and Slings.

Write for our new Catalogue.

The LOUDEN MACHINERY CO.

Dept. 48 - GUELPH, Ont. 4

herself, but always profitable.

Her wonderful beauty appeals to the fancy farmer and her wonderful money returns appeals to the dairymen trying to pay off his mortgage.

NOTE: We regret that in our last report the owner of "Selwood Milkmaid" 33429, was given as A. Hume & Co. It should have read, J. L. Stansell, Straffordville, Ont.—W. F. Stephen, Secretary Canadian Ayrshire Breeders' Association.

Cutworms—Some Timely Hints

Cutworms are very injurious this sprng. Reports of their destructiveness have come in from various quarters.

It has been found that poisoned bait made of bran mash, sweetened with cheap sugar or molasses, and made decidedly green with a liberal application of Paris green to be a very good remedy in the garden. A tablespoonful of this should be put oa frequent intervals among the plants subject to attacks, not, however, nearer than 12 inches to the plant; for in case of rain, the Paris green might be washed against the roots and would injure or kill the plants. Thorough cultivation is an aid. Pieces of shingle or board placed at intervals over the garden, serve as traps under which the cutworms hide toward morning, and where they can be found and killed. Frequently the depredators will be found within an inch or so of the plant cut, buried an inch under the soil. Young plants, like cabbage, cauliflower, etc., when first set out in a small garden, should be protected by paper or tin, or a barrier of some sort, which should extend into the ground an inch or so, and two or three inches above the surface. This can be removed when the plane becomes tough enough not to invite attack from the cut worm. On large acreages, fall plowing and thorough cultivation is perhaps the most practical treatment.

Suggestions and Reminders.

Watch carefully how your cultivator shovels are set. Don't go through the field and leave a fringe of weeds along the row. Tear up or cover all the ground.

Take an hour off once in a while, and, with one horse and a small cultivator, help the good wife cultivate the garden. You can do more in an hour in this way than she can in a day. Be sure, she will appreciate it, and you will actually think more of yourself if you will do this.

You like a pinch of salt in your soup, on your potatoes and meat. Don't you think the hogs would like the slop a little better if you would put in just salt enough to season it? Try it.

If you haven't attended to getting that self-waterer for your hogs in shape, don't delay it another day. Hogs must have good, clear, pure, water to do well.

It won't be long until the weeds along the fence on the public highway need mowing. Mow them while they are young and tender. An extra mowing or two during the summer doesn't take much time, and your place will be benefited in more ways than one and to an extent much greater than the outlay.

The first rainy day you had better look over the mower; see that all the sections on he sickle are tight; get the sickles all ground; examine the plates on the guards and see that they are tight. If the plates are dull, sharpen them; you can't get a decent job with dull plates. The rake should be gone over; see to it that all the bolts are in place and tight. If it is short any teeth, don't wait to put in new ones until the day you are ready to cut. Look the pitcher over carefully; see if your rope is all there and in good shape. You know how hard it is on your temper to start pitching and then have the old rope pull in two the first load. Don't put these matters off until the day we begin to hay.

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CORN MACHINES
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WHEN haying time comes you cannot control weather conditions, but you can make the best of them if you use the rakes, tedders, stackers, loaders, and sweep rakes sold by I H C local agents. With a line of I H C haying tools in your sheds you can come out of the least favorable weather conditions with the highest percentage of bright, well cured hay.

I H C haying tools are carried in stock or sold by local agents who can take care of you quickly in case of accident. It is their business to see that you are satisfied with the I H C haying machines and tools you buy from them. You cannot go wrong if you buy only haying tools with the I H C trade mark.

Write the nearest branch house and get the name of the nearest agent handling I H C haying tools, and catalogues on the machines in which you may be interested.

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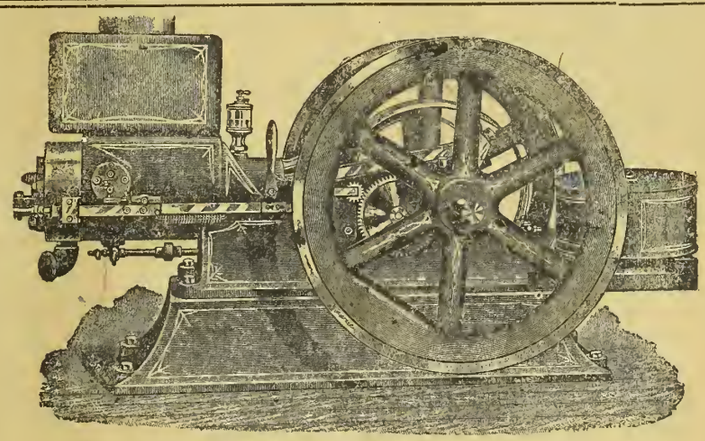

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FLEMING BROS., Chemists, 41 Church Street, Toronto, Ont.

Farmer Ads Bring Results----Try One Today

Weeds and Their Eradication.

(Continued from page 607)

ing funnel-shaped. The seed is about one eighth of an inch in length, pear-shaped and dark brown in color. This weed has been introduced from Europe and in some sections of the Dominion has become very troublesome.

Wild Mustard is an annual weed found throughout the length and breadth of the Dominion. The stem is erect, from one to three feet in height; flowers are fragrant and bright yellow in color; seed is contained in a pod which, when ripe, splits open and the seeds fall out. This is a very troublesome weed in grain crops, particularly oats.

The Ox-eye Daisy is a very abundant weed, having been introduced from Europe and is now quite general. It is a shallow-rooted perennial, with stems one foot in height. The flowers are conspicious, being white with a golden-yellow centre. This weed seed is very abundant in timothy seed.

Canada Thistle has been introduced from Europe. It is a perennial with deep-running rootstocks. The stems are from two to three feet in height and erect. The stems and eaves are covered with a great number of prickly points. The flowers range from purple to an almost white in color. The flower heads are about an inch in diameter. The seeds are numerous and each has a number of long filmsy hairs attached to it, which enables the wind to blow the seeds about the country. These are frequently found in grass and clover seed, sometimes also in grain.

Perennial Sow Thisle, as it's name indicates, is a deep-rooted perennial. It has spread from the Atlantic seaboard westward to Manitoba and is also found in the more western provinces. The flowers are bright yellow and one to two inches across. The stem is generally about two feet high and hollow. The whole plan is filled with a bitter, white juice. The seeds are about an eight of an inch in length and resemble the seed of the Canada Thistle.

The above weeds may be taken as general representatives of the most common noxious weedsd. There are others that are classed as noxious in one province and as common in another province. Among the latter class may be mentioned the following:

Couch Grass.—This is a very common seed found in all kinds of soil. The roots extend under the ground and form a matted bed which interferes with cultivation. The flowers are inconspicious, being borne in spiklets of 3 to 7 flowers. The seeds are seldom found in commercial grains.

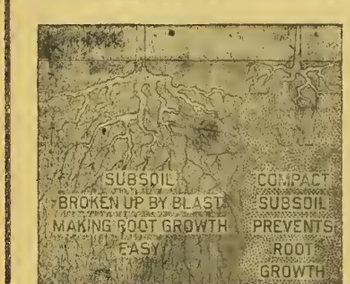
Sheep Sorrel has been introduced from Europe and is now common in all parts of the country. t is perennial and very hard to eradicate as its long fleshy roots extend far underground. The stems are slender about twelve inches high. The leaves are 1 to 4 inches long and arrow-headed in shape. The seed is nearly round and about 1-20 of an inch in diameter. This is one of the most common impurities in alsike clover seed. It is also very often found in the other commercial seeds.

Tall Buttercup.—This is a very common seed in moist lands. It is a perennial with fibrous roots. The stem is erect, 8 to 18 inches high. The flowers are bright yellow and the whole plant contains a slightly poisonous, acrid juice. The seeds are about an eighth of an inch ong, rouge in color from a greenish brown to black.

Common Ragwort.—This has been introduced from Europe and is quite common in Antigonish and Pictou counties, N. S. It is also found in a few isolated places in P. E. Island, Quebec and Ontario. This weed, owing to its non-prevalence in most parts of the Dominion is not generally known as a noxious weed, nevertheless, it is the cause of a strange and fatal disease of he liver in cattle. This disease was known as the Pictou cattle disease. For a time this disease was the foundation of much conjecture as to its origin, finally it was traced to this weed. The stem is sttiff and is about 2½ feet high. The flowers are yellow in colour and very showy. The seeds are creamy white in colour and about one-tweth of an inch in length. They are very seldom found in commercial samples.

Common Dandelion is a very well known pest in all well settled districts. It is a very common pest in lawns. The flower stalks are hollow, and, as the season advances, they grow longer. The flowers are yellow and very conspicuous. The seed is furnished with a hairy pappus by which the seed is spread by the wind. This pappus breaks off and is not present on seeds in commercial samples. This weed is very hard to eradicate when it obtains a foothold. The root is a tap-shaped root something like a carrot.

The above is a short description of a few of the most common weeds of the country. The most of these are very hard to eradicate when once well established. In the case of weeds, like every other farm pest the old adage of "an ounce of prevention, etct.," still holds good. A very good way to prevent the introduction of new weeds is to test all seed and grain and those found to contain weed seeds should be rejected.—John H. MacDonald, Cape Breton Co., N. S.



The above cut clearly demonstrates the advantages to be gained by planting trees in holes exploded with C. X. L. STUMPING POWDER. The ground is so pulverized that the roots can immediately expand in search of nourishment.

Also used for clearing land of stumps and boulders, ditching and subsoiling.

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BLASTERS WANTED

Many farmers prefer to hire blasters. Demand exceeds supply.

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Learn the fascinating game of trap-shooting—a healthful, out-door sport that requires all the skill and posseses all the excitement of shooting live birds "on the wing."

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Sussex Concrete Products Plant, - Sussex, N. B.

Women's Institute Meetings in N. S.

Editor Maritime Farmer :

Miss Jennie A. Fraser, Supt. of Women's Institutes in Nova Scotia, assisted by Miss Helen Dutcher, of Charlottetown, a graduate of ,Macdonald College, will hold meetings for the purpose of organizing Women's Institutes in the following places:

Canning—Monday evening, June 8th.
Lakeville—Tuesday evening, June 9th
Bridgetown—Wed. evening, June 10th
Round Hill—Thurs. even, June 11th.
Annapolis Royal—Friday evening, June 12th.
Bear River—Sat. evening, June 13th

During the following weeks these ladies will hold meetings in Yarmouth, Queens and Lunenburg Counties.—F. L. Fuller.

Strawberries After Harvest.

After the fruiting season is past the patch is mowed and raked, then the rows are thoroughly cleaned up, and made ready for the next year's crop. In our location we find burning over the beds inadvisable. Mowing, followed by cultivation with a five-tooth cultivator, a weeder and a hoe is our method. This disposes of the weeds and grass that may have sprung up during the fruiting season and covers up the crowns from which a new root system will spring up.

Horses For Sale

Heavy Team Horses 1250 to 1550 in fine condition.

Apply to

F. L. GILLIS,

NORTON, R. M. D. No. 1

or

Chas T. White & Son,

SUSSEX, N. B.

The Noted Clydesdale Stallion

"Baron Kelvin"

Reg. No. 12462

will make the season of 1914 at the farm of J. W. Calbeck within one mile of Summerside, P.E. Island, and at Charlottetown. He has an unbeaten record in the show ring both in Scotland and Canada. In 1911 he won the championship at Toronto and Ottawa, defeating the best horses in Canada and in the same year he won first prize and championship at Ogdensburg, N. York, open to all breeds of draft horses. He is a massive horse, weighing about one ton and with superb quality. Service fee $15.00 for the season with return privileges should mare not prove with foal.

Also the trotting and carriage stallion

Capt. Aubrey

(48050)

the fastest trotting sire in Canada. Fastest producing son of "Peter the Great" in America Race record, 2-07¼. Trial 2.06¼. Record at 4 years, 2.15¼ on ½ mile track. Bay stallion 15.3½ hands weighing 1200 lbs., foaled in 1904.

Sire of "Aubrean" 2.17½ at 4 years and several others in the Standard List. Will stand for service at the farm of J. W. Calbeck Summerside, P. E. I. and in Charlottetown.

Service fee $25.00 with return privileges. Further particulars and cards of both the above horses upon application to

C. A. MITCHELL,
School St., Charlottetown.

or the owner,

JOHN RICHARDS,
Bideford, P. E. I.

EGGS EGGS EGGS!

I have cut the prices in two. Parks strain of heavy laying Barred Plymoutb Rocks, are without doubt the greatest laying strain of this grand old breed. Bred for egg production for over twenty years. For balance of season I will supply eggs from my best pens for only $1.00 for 15, other pens 75c., $5.00 per hundred.

J. P. Prichard, Summerside. P. E. I.

Advertise in the Maritime Farmer.

Halifax Markets.

GRAIN—Oats, 49c to 51c. bus., bagged, 52c to 54c; Peas, whole $.00 bbl.

FEEDSTUFFS—Bran, $30.00 to 31.00 ton; Shorts, $31.00; Middlings, $31.00 to $32.00 ton; Linseed Meal, $37.08 to $39.00 ton; Gluten Feed, $32.00 to $24.00 ton; Corn Meal, $1.65 to $1.75.

GRASS SEEDS—Timothy, 8c to 11c lb.; Com. Red Clover, 19c to 24c lb.; Mam. Red Clover, 20c to 21c lb.; Alsike, 17c to 20c lb.

HORSES—Drafters, $250.00 to 275-00; Roadsters, $200.00 to $250.00; Carraige, $175.00 to $200.00.

DRESSED MEATS—Beef (carcass), 8c to 13c lb.; Mutton, 9c to 11c; Veal 6c to 9c lb.; Pork, 9c to 12c lb.

DAIRY PRODUCTS—Creamery Butter, 28c lb.; Dairy Butter, 22c lb.; Cheese, 15c lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c doz.; Fowl, 15c to 18c lb.; Ducks, 18c to 20c. lb.; Geese, 17c to 20c lb.; Turkeys, 22c to 23c; Turkey Gobblers, 15c to 17c lb.

FRUIT—Strawberries, 20c box; Cherries, California, $2.50 box.

MISCELLANEOUS—Hay, $16.00 to $17.00 ton; Wool, 25c to 27c lb.; Beef Hides, 12c to 13c lb.; Calf Skins, 18c to 20c lb.; Sheep Skins, 75c to $1.50 each.

VEGETABLES—Potatoes, $1.25 per bag; Turnips, $2.50 bag; Parships, $2.25 bbl.; Cabbage, crate, $2.25; Tomatoes, $4.00 case; Cucumbers $1.00 doz.

LIVE STOCK—Lambs, $4.50 to 5; Steers, butcher, good, 7c lb.; Steers, butcher, common, 6c lb.; Hogs, 125 to 200 lbs., 9c.

Although recent despatches from Woodstock, N. B., stated a heavy slump in potatoes, it certainly is not in evidence on this market. Potatoes here are decidedly firm at $1.35 bag, and are scarce at this figure. Parsnips have had quite an advance and are now offered at $2.20 bbl. Turnips are also firmer at $2.50.

In the feed market, Bran and Middlings are high, the former is firm at $30 to $31 per ton, and the stocks of Middlings held are light. The price of live stock continues steady. Dealers, however, are holding shipments back from outside points, in order not to overcrowd the market. In the fruit trade, Tomatoes continue pretty firm at $4.00 per crate. Strawberries in quart boxes are now offered at 18c to 20c.

ONE CENT A WORD.

JERSEY COW—7 years, large, due latter part of July, big producer, quick sale eighty five dollars. Others coming in. J. F. Hall, Lunenburg, N. S.

WANTED.—Man and wife wanted immediately, Man to do barn work, wife to keep house for 3 or 4. Also experienced man and wife to look after farm. Scoteb preferred. Apply giving full particulars to L. E. Y., care of Maritime Farmer.

I shall have some very fine registered Yorkshire pigs ready to wean in 3 weeks time. All pigs registered in buyers name. Another litter in July. Also some older boars; first class stock. E. W. HEURTLEY, P. O. Sutherlands River, N. S.

EGGS FOR HATCHING

Brom Bright Highest Class Exhibition Barred P. Rocks. The leading winners of America's largest shows—the Best. The verdict of three world's fair, Cockered and Pullet Mating. Regal W. Wyandottes winners at Kentville Poultry Show of 5 firsts, 2 seconds, 1 third, and 6 Specials. Winner of Silver Cup.

Setting $2.00 per 13.

Kentville Poultry Yards,
KENTVILLE, N. S.

FOR SALE

1 American Registered Jersey Bull, 1 year old, also 2 American Registered Bull Calves.

C. M. ROGERS,
Draffan Farm, - Hebron, Yar. Co., N. S.

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We will Send you *FREE* an Electric Flash Light, which sells for $2.00, for two new subscribers to the Maritime Farmer.

¶ You can earn a Light in a few minutes near your home.

¶ The Light is one that will prove most useful in your home.

¶ Write us if you require further information.

The Maritime Farmer

Sussex, - - N. B.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.
Correspondence solicited.

'Pone 111.

J. FRANK ROACH, - - Sussex, N. B.

BABY CHICKS

We can fill limited number of orders for B. P. Rock & W. Leghorn chicks this spring. Prices, April $20.-00 per 100. May, $15.00 per 100. Cash before shipment.

NEW LAID EGGS

We pay best cash market prices for new laid eggs delivered weekly.

LIVE POULTRY

Price per lb. on live market poultry quoted at any time also on dry picked, undrawn dead poultry.

BROODERS

Write us for prices on most modern Colony-house Brooder Stoves. Also a few second-hand Model indoor brooders for sale very reasonably.

KINNEAR POULTRY CO.,
Sussex, N. B.

FOR SALE.

To prevent inbreeding I offer for sale my Jersey bull O'Rorke No. 1757, coming three years old, a sure stock getter and a large percent heifer calves, good size, quiet and all right in every way. Apply to

H. B. Schofield, Lakeville, N. S.

EGGS FOR HATCHING

Japanese Silkies, Silver Bearded Black Polish, Golden Spangled Polish, Partridge Cochins, Silver Laced Wyandottes, Silver Spangled Hamburgs, Black Minorcas S. C., $2.50 Setting.

White Plymouth Rocks, Buff Plymouth Rocks, White Leghorn, $2.00.

Barred Plymouth Rocks, Light Brahmas, Rhode Island Reds S. C., White Wyandottes, Buff Cochin Bantams, $1.50.

All exhibition prize winning stock.

ROBERT J. MELVIN,
Yarmouth, N. S.

287-Acre Equipped Farm

Opportunity of a Lifetime

Greatest farm bargains ever offered in the rich and famous Annapolis Valley; 4 acres of bearing orchard, splendid chance to develop big orchard; 100 acres wood and timber worth the price of the farm; bal in rich tillage and spring-fed pasture; good bldgs.; 7-room house with town water; stock barn with basement; you can step right in where aged owner leaves off; price only $2800, easy terms, and he will throw in for quick sale, 8 head stock, all farm tools, machinery and crops; for all details and traveling instructions, see page 84, "Strout's Farm Catalogue 37", just out, choice selections of real bargains at wonderful low prices throughout N. S. and N. E. States; write today for your free copy, it will show you where to find just the farm you want at the price you wish to pay Address FARM care of Maritime Farmer Office.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initisl or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

FOR SALE—47 inch solid tooth rotary saw. A. D. MORRISON, Loch Side, N. S.

HEAVY Horses for sale. Apply to F. L. GILLIS, Norton. N. B.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

WOULD YOU MARRY IF SUITED? Best Matrimonial Paper Published. Mailed Free. THE CORRESPONDENT, Toledo, Ohio.

BLACK, WHITE, AND BUFF ORPINGTON Eggs for Hatching from birds that have size, shape, color and great layers, only $2.00 per setting of 15 eggs. C. H. WISENER, Pictou, N. S.

100 POST CARDS, POSTPAID, 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Two six H. P. gasoline engines, both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R. J. Pictou Co., N. S.

FOR SALE—Six months Guernsey bull for $30.00. Sire "Nonpareil of Glen View" 39081 21472 A. G. C. C., dam "Glen View's Comely" A. G. C. C. W. H. HODGSON, R. F. D. 3, Fredericton, N. B.

ROSE COMB BROWN LEGHORNS for sale after June 15 to make room for young stock. Winners in show room and laying contests. Eggs for hatching $1.50 per 15. Matinglist free. ERNEST PRINGLE, Stanley, N. B.

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

AT SLAUGHTER PRICES—White Wyandottes selected stock, pullets and hens, Barred Rocks from our breeding pens, and eggs at reduced prices. Baby chicks. EVANGELINE POULTRY YARDS, Wolfville, N. S.

FOR SALE—2 Pure bred Holstein Bulls, one 3 years and one 2½ years, good size, best of breeding. For extended pedigrees, price and photos, write WALTER PAYNE, Lake Edward, N. B., Breeder of Holstein Cattle.

FOR SALE—Simplex turbine power separator, capacity 3800 lbs. per hour; guaranteed to be in perfect working order; will sell at a bargain. THE DUNSTAFFNAGE CHEESE AND BUTTER CO., LTD., Dunstaffnage, P. E. Island.

Corning Turnip Seed For Sale

About 1000 pounds of the famous Gr. Top "Corning" Turnip Seed, crop 1913, grown from selected roots.

Price 50c., Postpaid 55c.

S. P. GOUDEY,

Yarmouth, - - Nova Scotia

REGISTERED YORKSHIRE PIGS

Bred from best stock in Ontario

A few boars and sows from six weeks to six months old.

E. W. HEURTLEY,

Sutherland's River, - - Nova Scotia

RASPBERRY PLANTS

We have a limited quantity "Herbert" "Hing" and "Cuthbert" Raspberry Plants at $2.00 per 100.

Also offering a nice grade Holstein Heifer 2 years old (¾ Holstein.)

ORCHARD HILL FARM,

Brown's Flats, - N. B.

ARMERS' ADS. BRING RESULTS.

Lawndale Stock Farm Shorthorns

Herd header (Milking Strain) "Royal Knight" by "Knight of Glenside" brother of World's Champion, "Rose of Glenside" 18,075 lbs. milk in one year.

Herd header, (Beef Strain) "Pontiac" by "Prime Sailor" and the sire of some very excellent individuals with many prizes to their credit.

We have at present an extra lot of heifers in the pink of condition. Also a few cows. We have them from 9 years old to this year's calves.

Information cheerfully supplied, address

I. M. LOVITT, M. D.,

Yarmouth, N. S. P. O. Box 352

Highfields' Poultry Farm

S. C. White Leghorns

Eggs for sittings from magnificent pens of birds imported direct from England and the U. S. A. and inspected and mated under the personal supervision of Mr. Seth Jones, Provincial Poultry Superintendent.

No. I pen headed by cockerel bought from Mr. Jones' pens and mated to pullets of the best type imported from U. S. A., $2.50 per Sitting.

No. II and III pens headed by cockerels bought from the Cypher's Co. mated to American pullets $2.00 per Sitting.

No. IV pen, birds imported from England direct, bought from Murray Linduer's well known yards and mated by him, $2.00 per Sitting.

No. V pen, Massive English pen of fine type, bred to lay, $2.00 per sitting.

No. VI pen Cockerel (Barron's world famed egg laying strain) mated with selected bens, $1.50 per Sitting.

White Wyandottes

No. I pen, birds imported direct from England bought from Murray Lindeur's well known yards, bred to lay $2.00 per sitting.

No. II pen, birds of good style, $1.50 per Sitting.

No. III pen, good utility birds, $1.00 per Sitting.

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Hampton, - - N. B.

Nursery Stock at Growers' Prices

Apple, Pear, Plum, Cherry and Ornamental trees. Strawberry, Raspberry, Currant and other Small Fruit Plants. Best of Government Inspected Stock, sold direct to the planter at lowest prices.

Bees and Bee-Keeper's Supplies.

Write us today a list of your wants.

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FOR SALE

A handsome Gray African Gander, a first class leader for exhibition $6.00.

Bronze Turkey Eggs from prize winners, $3.00 per sitting of nine.

Barred Plymouth Rock Eggs from winners at Chatham, N. B., $1.50 per 15.

H. W. ROSE,

Hotel Dieu Farm, - - Chatham, N. B.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

ROSE BANK FARM

Young Jersey Bulls for Sale

From Cows in the Record of Performance and also from prize winning cows

JOSSELYN & YOUNG

BEES---

We shall sell 10 to 15 colonies this Spring. Warrated free of disease.

CRAIG BROS.,

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HOUDANS

The Favorite French Fowl

A breed combining beauty and usefulness. Prolific layers of large white eggs,—non-setters. A splendid table fowl with a wealth of firm, white breast meat.

I have two beautifully mated pens, the progeny of last season's Boston, New York and Ontario Prize Winners.

Eggs for Hatching

For remainder of season $1.00 per 15.

W. J. M. MacLeod

SUSSEX, N. B.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVUE STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

Show Stock, and Producers all our own Breeding.

We have a grand bunch of Rams for sale at reasonable prices.

A. ARCHIBALD, - Clifton, N. S.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

Do You Need a Good Holstein Bull

We have three, 14 to 16 months, good lookers, good condition, well bred and the right age for service, also females all ages at reasonable prices.

LEA & CLARK, VICTORIA, P. E. I.

ELMWOOD STOCK FARM

High class Holstein cattle. 2 young bulls 18 months old, sired by Prince Dorinda, No. 4887. His first daughter to be officially tested. (Elmwood Flossie Netherland 24903) gave in 7 days 366.9 lbs. milk and 12.48 lbs. butter at 2 years 4 months. Also a few bull calves from 3 to 5 months old.

W. L. ETTER, Shubenacadie N. B.

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Send for FREE Catalogue; with descriptions and prices of over 1000 farms in Nova Scotia.

McCALLUMS LIMITED,

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Eggs For Hatching.

From the choicest matings in Eastern Canada, in Barred P. Rocks (Cockerel and Pullet matings, White Wyandottes, Rhode Island Reds, S. C. White Leghorns and Brown Leghorns. For sale at once, several high class breeding cockerels of above breeds. Address

Box 63, Sussex Vale Poultry Yards, Sussex, N. B.

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When you want a pure bred Holstein Friesian bull calf from high producing record stock, let us quote you our prices before you place your order. Write, or better still, call to see us. 'Phone 68-4.

JEFFRIES BROS., Mount Pleasant Farm, SUSSEX, N. B.

GOLDEN WYANDOTTE EGGS

I have a pen of beautifully mated Golden Wyandottes. Splendid table fowl and prolific layers. Eggs $1.00 per 13 eggs.

HAZEN FOLKINS,

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Bull calves from four to seven months old from my best milking dams and sired by the choice dairy bred bull Stonehouse Prince (31360). Inspection invited.

Fred S. Black,

Springvale Farm, Amherst

Get Results—Advertise in the Maritime Farmer.

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AND

CO-OPERATIVE DAIRYMAN

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, JUNE 23, 1914. Number 18.

A Systematic Rotation of Crops Enriches the Soil

And Swells the Farmer's Bank Account

By O. C. White, B. S. A., Ottawa

FOR the past ten years, experiments have been carried on to determine the reative value of different rotations or successions of crops. The results distinctly point out the advantage of growing crops in such regular order that after each crop the land will be left in the best possible condition to receive the one following.

Before presenting the results of our experiments to date, brief mention may be made of the chief reasons why a systematic rotation of crops is more profitable than long-continued growing of the same, or similar crops, on the soil.

1. Because different plants have different manurial requirements.
2. Because plants vary in their power to abstract certain foods from the soil.
3. Because plants do not feed to the same depth in the soil.
4. Because all plants are not alike in the residues they leave behind.
5. Because a proper rotation aids in the conservation of soil moisure.
6. Because some plants tend to produce better tilth than others.
7. Because certain weeds can be more effectively controlled.
8. Because different plants vary in their resistance power to bacterial and fungous diseases and to insect enemies.
9. Because the employment of a variety of crops distributes labor requirements more evenly over the season.
10. Because it practically insures the farmer against complete loss of a season's harvest.

The line of farming engaged in must, however, determine to a great extent the kind and relative amounts of crops that shall be grown, and may, in some cases, prevent following to the letter the rotation that would provide the largest returns. In any case it may be said that a good rotation will include (1) meadow or pasture, (2) roots, corn or other hoed crop, and (3) some cereal crop. The results of our experiments go to show that for greatest profits these crops should follow each other in the order named.

The following rotations have been devised to meet different requirements. One or the other of them is likely to be found suitable for conditions that obtain on the average live stock farm in Eastern Ontario and Quebec.

Rotation 'A' (Five Years' Duration).

First year.—Hoed crops. When corn is the hoed crop used, manure is applied in spring at rate of 15 tons per acre and shallow ploughed shortly before planting time, turning under clover and manure. After the hoed crop is harvested, land is shallow ploughed or cultivated.

Second year.—Grain. Seeded down with 8 pounds red clover, 2 pounds alsike, and 10 pounds timothy per acre.

Third year.—Clover hay. Two crops expected. Top dressed in fall with manure at rate of 15 tons per acre.

Fourth year.—Timothy hay. Field ploughed in August, top worked and ribbed up in October.

Fifth year.—Grain. Seeded down with 10 pounds red clover, which is allowed to grow to be turned under following spring when the hoed crop is corn.

This rotation has proven an excellent one here. When carefully followed, and when cultural operations were well performed, weeds have been kept under fair control, and crop yields have been maintained. One-fifth of the land is in hoed crop, two-fifths in grain, one-fifth in clover hay and one-fifth in timothy hay or pasture.

It supplies a relatively larger proportion of grain to roots and hay than the ordinary three or four-course rotation, and for that reason would be preferable where considerable grain is called for.

Rotation 'B' (Five Years' Duration).

First year.—Hoed crop. When corn is the hoed crop used, manure is appied in spring at rate of 15 tons per acre, and shallow ploughed shortly before planting time, turning under both clover and manure.

Second year.—Grain. Seeded down with 10 pounds red clover, 2 pounds alsike and 5 pounds timothy per acre.

Third year.—Hay. Ploughed late fall, manured at rate of 15 tons per acre.

Fourth year.—Grain. Seeded down with 10 pounds red cover, 2 pounds alsike and 5 pounds timothy per acre.

Fifth year.—Clover hay.

Though the arrangement is different, this rotation is very similar to 'A' in the relative amounts of the different crops it supplies. In 'A' both clover and timothy hay are provided, whereas in 'B' clover hay only is grown. 'B' has maintained crop yields, and has gvien profits equal to 'A' in the tests so far condducted, but, as indicated, does not answer the purpose where a ertain proportion of timothy hay is called for. It can, however, be easily extended into a six or seven-year rotation to include timothy hay or pasture. As a seven-year rotation the crops would succeed each other in the following order:—

Hoed crop; grain, seeded down with thy hay or pasture; grain, seeded down with clover and timothy; clover hay; timothy hay or pasture.

Rotation 'C' (Four Years' Duration).

First year.—Hoed crops.

Second year.—Grain. Seeded down 10 pounds red cover and 12 pounds timothy per acre.

Third year.—Cover hay.

Fourth year.—Timothy hay. Field ploughed in August, manured at rate of 24 tons per acre, worked at intervals and ridged up in late fall in preparation for hoed crops.

This rotation is most satisfactory from all standpoints, except that it supplies a rather smaller proportion of grain than is often desired. Where live stock is the mainstay of the farm, this is, however, a very minor fault. The turning of a shallow furrow when ploughing sod in preparation for grain or corn has been found to be good practice here. In preparing for roots, deeper ploughing or the regular plough with subsoiler is to be advised.

Rotation 'D' (Three Years' Duration).

First year.—Hoed crop. For corn, manure is appied in spring at rate of 18 tons per acre, and shallow ploughed shortly before corn planting time, turning under both cover and manure. For roots, land should be ploughed previous fall.

Second year.—Grain. Seeded down with 10 pounds red clover, 2 pounds alsike, 6 pounds alfalfa and 6 pounds timothy per acre.

Third year.—Clover hay.

This would be a most excellen rotation to put into practice where sufficient rough land was available to serve as pasturage. It is the rotation that would supply the greatest amount of forage of the best description for dairying or beef production. It ls better for heavy than for light soils.

Rotation 'E' (Three Years Duration).

First year.—Corn. Manure appiied in spring at rate of 18 tons per acre. Shallow ploughed shortly before corn planting time, turning under both clover and manure.

Second year.—Peas and oats mixed. Cut green for cattle. Seeded down with 10 pounds red clover, 2 pounds alsike, 6 pounds alfalfa and 6 pounds timothy per acre.

Third year.—Clover hay. Cut green for cattle.

This is a rotation specially designed to supply soiling crops. Two years' records only have been kept.

If a careful examination of the above rotations be made here will be noted a few desirable characteristics common to all:—

1. Grain fields are always seeded down with clover, even though it be used only as a fertilizer, as in the case of the fifth year rotation 'A'.
2. Grass and clover seedings are heavy. Increased crops of hay and rare faiures of a catch have justified them.
3. Hoed crops form a large proportion of every rotation. An attempt to farm a small area without a hoed crop was not successful. Weeds could not readily be kept in check.
4. No field is left in hay for more than two successive years. Our records show that the second crop almost always costs more per ton han the first, and that succeeding crops are very liable to be grown at a loss.
5. Barnyard manure is applied frequently, in comparatively small quantities rather than at long intervals, in large quantities.

In order that the net profits (profits after deducting the cost of rent, all manual and horse labour, manure, seed, twine and use of machinery) as well as the yields of these rotations could be determined, careful records have been kept of all items chargeable against the rotations.

The season of 1913 was so extremely dry that many of our crops were grown at a loss. The returns are therefore, very low as compared with the average returns for preceeding years. A re-arrangement of the rotations was made in 1912, hence averages have been drawn from the preceeding eight years only.

Costs, Returns and Net Profits..of Rotations 'A', 'B', 'C', 'D' and 'E'

Rotation	Cost to operate per acre	Value of returns per acre	Profit or loss per acre, 1913	Profit, average of 8 yrs. 1904-11
	$ cts.	$ cts.	$ cts.	$ cts.
A (Five years' duration)	17.55	19.40	1.85	8.78
B (Five years' duration)	21.83	21.47	— .36	9.03
C (Four years' duration)	17.08	16.97	— .11	8.15
D (Three years duration)	19.35	17.80	—1.55	10.08
E (Three years duration)	19.14	19.50	.36*	

*Records kept for 1912-1913 only.

Second Annual Convention of N. B. Homemakers

Forward the For Home and County Movement

With fine weather and an excellent representation of delegates form over the Province, the second annual convention of the New Brunswick Women's Institute opened in Fredericton, on Tuesday evening, May 26th, in the Assembly Hall of the Provincial Normal School

From the beginning of the first session to the end of the last session great interest was manifested on the part of the delegates present and the Department feels that each Branch chose wisely in sending the delegates they did.

As stated in my report, "the delegates make the Convention," therefore, considering the splendid attendance and the willingness to give and receive all possible help during the short time we were together, it is ample proof that our second annual meeting was a decided success and we trust the result will be an increased efficiency on the part of the members and the promotion of the work during the coming year.

To the readers of this page let me say that it is impossible to cover the whole field of work taken up by the Women's Institute in one convention, but the report given below will indicate the importance of the gathering.

Address of Welcome.

Mr. J. B. Daggett, Secretary for Agriculture presided at the opening session. In his opening remarks he explained why it was impossible for the Hon. Mr. Murray, Minister of Agriculture, to be present that evening and give the address of welcome as stated on the programme. He said the Minister would be present the closing even ing and address the delegates.

The absence of the Minister necessitated the address of welcome to fall to Mr. Daggett, who, as usual, was equal to the occasion and very heartily welcomed the delegates to the second annual meeting. Mr. Daggett referred to the advance made in Institute work during the past year and hoped the day would soon come when Women's Institutes would be in every corner of the Province.

In closing, he again extended a cordial welcome on behalf of the Government and trusted their sittings together would be profitable and pleasant.

Reply to Address of Welcome.

In her reply to the address of welcome, Miss Bessie Fraser, of Grand Falls, thanked Mr. Daggett and the people of Fredericton for the cordial welcome extended to them. She referred to the rapid strides made by the Women's Institute in New Brunswick and felt sure she voiced the sentiment of the great majority when she said that we do not want the vote. An organization with a motto "For Home and Country" must accomplish something, must make its influence felt. Miss Fraser said our work was unlimited. To us was entrusted the task of training young minds, of fitting boys and girls for facing the world and its battles and of learning to fight it nobly.

In closing, Miss Fraser said if the women of New Brunswick and Canada did but a little of this great work they would not have lived in vain; they would have fulfilled their destiny and some day they would surely hear the "well done."

Address

A visitor to the Convention was Mr W. W. Hubbard, former Secretary for Agriculture He was called to the platform, as he was really the father of the Institute movement in New Brunswick. Mr. Hubbard congratulated the women on the amount of good they were accomplishing. He told them in their hands lie not only the life of the country, the government of the country, but its future. The children that come from the home make the government. There can be no more noble work than by the woman co-operating in forwarding this work of making this one of the best spots on God's green earth on which to live.

Home Sweet Home.

How Women's Institutes Can Aid Our Public Schools.

The address delivered by Mr. R. P. Steeves, Director of Eementary Agriculture, was both interesting and instructive. Mr. Steeves divided his address into four parts with the following headings:—

1st.—Women's Institutes can aid the public schools, by acquiring a broader and more accurate knowledge of the aims and purposes of the public schools.

2nd.—By acquiring a knowledge of the work that is being carried on in the schools at the present time and the conditions under which that work is being done.

3rd.—By actively co-operating with teachers and pupils and linking together school and home interests and stimulating all to a better knowledge of the Province's resources.

4th.—By demanding that the teachers' responsibilities and duties be recognized in a greater degree than they are and that the profession of teaching be composed in a greater degree of mature men and women, who have an earnest purpose and settled habits and who are worthy of taking a leading position in the activities of the district and of demanding and receiving a good living stipend.

Mr. Steeves' address was considered so very instructive that the supervisor was requested to ask him to write a leaflet on this important subject for our Women's Institutes, going much more into detail and telling the women what they would have to do in order to be placed on the board of school trustees. The Supervisor interviewed Mr Steeves and he has kindly consented to have this leaflet printed in time to be read at the annual meeting of the school Boards.

Wednesday's Sessions.

The first part of Wednesday morning's session was taken up largely with the reports from the Branches, ten Institutes reporting at this stage of the meeing.

Mrs. C. W. Dobson, of Hillsboro, very kindly wrote a paper on "The Duties and Opportunities of our Officers and Members," but owing to illness in her family could not be present to read it, and her substitute, Mrs. H. M. Steeves read the paper. Suffice it to say that many excellent points were brought out and if all officers and members were to live up to what Mrs. Dobson says, the work would rapidly advance on all sides.

Supervisor's Report.

In presenting her annual report, Miss Winter, the Supervisor, referred to the growth of the work during the year, comparing the work done in New Brunswick with that of other Provinces. She told of the many advantages of the Women's Institute, mentioning its objects and aims, and dwelt at length upon the lines of work taken up during the year. Her trip to Nova Scotia to atend the Short Course in Household Science and the Nova Scotia Women's Institute Convention, and the Household Science Course held last April at Sussex, were mentioned, also libraries for Institutes, printed programmes and literature sent out from the Department.

Miss Winter devoted part of her report to the assistance the Institutes had given the public schools, and advocated that all school boards should have one or more women trustees. She hoped the day was not far distant when New Brunswick would have medical inspection of school children.

In conclusion, Miss Winter mentioned the many lines of work yet to be accomplished by the Women's Institute and she hoped the delegates would return to their homes enthused with the importance of the work and would continue to co-operate with the Department in systematizing the work and making it more effective.

Splendid papers and Addresses.

If space would only permit we would like to publish the papers read and addresses given at this convention, but not having room for same we can only say that each and every paper proved very helpful and the writers are to be congratulated on preparing and delivering in such an able manner what was requested of them.

The papers and addresses include:—"A Delegate's Duty," by Mrs S. B. Wass, of Fredericton; "Parliamentary Procedure and Business Methods for Institutes," by Mr. R. P. Gorham, of Fredericton; "The Care and Propagation of House Plants," Mr. John Bebbington, Sr., Fredericton; "Keeping Young People Interested in Country Life," Mrs. Chester Keith, President of the Corn Hill Women's Institute; "Programmes and Courses of Sttudy for Institutes," Mrs. James E. Porter, President of the Andover Branch of the Women's Institute; "Right Habits of Work," Mrs. Albert R. Fawcett, President of the Upper Sackville Institute; "How shall we increase Our Membership," by Mrs. Benj. Pomeroy, a member of the Enterprise Institute; "The Sanitary Home" and "Medical Inspection of School Children," Dr. W. H. Irvine, of Fredericton; and "What to Eat and Why," by Miss Imogene Jonah, of Sussex.

Nova Scotia Represented.

One of the features of Wednesday afternoon's session was the report of Miss Jennie A. Fraser, Superintendent of Women's Institutes of Nova Scotia, on the progress of the work in that Province. Miss Fraser has every reason to feel proud of the Branches in Nova Scotia. Although work in her Province was started only a year ago, Women's Institutes are well known in Nova Scotia and interest in the work is ever increasing.

We were also fortunate in having with us Miss Florence Brown, of Port Williams, N. S. She not only presided at Thursday morning's session but gave a very glowing account of the work done by the Port Williams Institute, of which she is a valued member.

Ontario Represented

Mr. Andrew Elliott, of Galt Ontario, was in the city Thursday and attended the afternoon session, when we had the pleasure of listening to him speak on Institute work in general. He not only paid the delegates many compliments but congratulated them on the advance they had made in Institute work. He said the women were at the head of all good work and there was nothing that was doing or could do so much good as the Women's Institute. Mr. Elliott concluded by saying he had never attended a Women's Institute Convention where the average attendance had been as good as it was in Fredericton.

Minister of Agriculture's Address.

The closing evening, Tuesday, May 28th, Hon. Mr. Murray was in the chair and addressed the delegates and visitors as follows:—

"I want to offer an apology for my non-appearance at the opening of this Convention. I had looked forward to being here, but important business called me away. I am glad, however, that my friend, Mr. Daggett, gave expression of my regret on that occasion and stated why I was unable to be present.

The last time I addressed a gathering on this platform was to the students of the Normal School—that intelligent body of young men and women who came here to complete their education. I was embarrassed on that occasion. If I was embarrassed then, in addressing a body of students, that feeling of embarrassment is intensified to-night.

MISS HAZEL WINTER

Superintendent of New Brunswick's Women's Institutes

I was to have extended, on Tuesday evening, a cordial welcome on behalf of the Department of Agriculture and the Government of New Brunswick. I did not want that expression omitted. Permit me to say that you are most heartily welcomed to this capital of the Province, and this welcome comes with a very great heartiness and a great measure of sympathy for your work from the Government of this Province. I had arranged with Mr. Clarke to accompany me here tonight, but he had, quite regretfully, to forego that pleasure. The hospitality of the city of Fredericton will be shown tonight by the Women's Institute of this city in giving a social at the close of this meeting.

"Matters relating to the Women's Institute movement have been gone into fully by Mr. Daggett, Mr. Hubbard and Mr. Elliott, and have been fully discussed. I am in hearty sympathy with the movement you have before you. I like the motto "For Home and Country." It means something, something which we all can appreciate.

"I was told this evening that a question was put in the box this afternoon, asking wheter or not it was right for women to vote. I also read, in an account of the meeting of Tuesday evening, that one of the women said: 'this is not a suffrage gathering.' It is not a suffrage gathering. I want to make myself clearly understood. We members of the Legislature have had a suffrage question put before us; some have had to take one side, some another. I myself took the side in opposition to the movement as it was introduced at that time. I made a statement then which I desire to make again; that when there is a general demand from the women of the Province of New Brunswick for a reasonable measure of women's suffrage, I am prepared to endorse thenr request, but when that request comes from a small section of the women of the province, which does not represent the women as a whole, I am not prepared to accept their request. So far as I am personally concerned, a gathering of women interested in the Women's Institute work is very much better than a gathering of women discussing women's suffrage.

"You are here tonight, having adopted as your motto "For Home and Country," for the express object of being home builders. I believe home builders lead to the highest ideals and acomplishments of man—home builders such as you are or desire to be. The influence of women on the life of every man is beyond expression. I desire to say that, because I know, in my own personal experience, the influence of women has been great. The man who aspires to advance to be a better man has, in some remote corner of his heart, the ideal woman before him. That woman may be a mother, sister or his wife, but with every man there is an influence for good being exercised, to a greater or lesser extent, all the time by reason of some woman.

"In speaking of the suffrage movement, why I do not like the idea, it is not because woman has not the judgment to decide whether this or that party is to run the affairs of the country, but because my ideal of womanhood does not lead me to look upon her as one who would prowl about the ballot box. The ideal woman is the one who guards the home.

It is to the wife or mother a man can go, in seasons of distress or trouble or discouragement, after having faced the discouragements in the strug gle for existence. The influence exercised over my life, as closely as I have been lead in the paths of right, has been the influene of my wife. One of the greatest influences for good over my life is the remembrance of kneeling at my mother's knee and saying "now I lay me down to sleep."

"Woman is worthier of something highert han mere political attainment. By encouraging and furthering a movement such as that in which you are engaged in here to-night, you are living up to the motto "For Home and Country." When you up-build the home, then, through that home, you are upbuilding the country, of which we are so proud to be citizens.

"This is an expression of my own personal opinion. Permit me to say that I give each person here tonight the right to hold a different opinion.

"Referring to the subject of Women's Institutes, I understand this movement began in the Province of Ontario about fifteen years ago. It is three years old in New Brunswick. first year sixteen organizations were formed. The movement has met with excellent results and the women recognize that through organizations such as these homes could be made more attractive and better in every sense of the word.

"Since 1911, I am advised, by the report which the supervisor submited to the Department, forty-one organizations, with a membership of 856, have been formed. I think it is a wonderful growth and tribute to the energy of the women. The possibilities before you are great and it is a work which is ennobling in its character.

"Having told you that the work is important and a good thing, you will ask 'What, then, as a member of the Government, are you prepared to do?' We are prepared to give just as much asistance to this organization as our financial resources will allow. This is a huge sum for a work which has only been in existence three years. We are prepared to augment that amount just as rapidly as the work grows and our finances permit. That is the attitude of the Government at the present time. In discussing this with my colleagues, they were in perfect sympathy with the work and believe it will do the people of this province much good in the future. The interest of the government in an undertaking is something that is sought by many people. Sometimes this assistance is sought for causes which are not altogether worthy; but a movement having for its object the upbuilding of home life, the upbuilding of the province generally, the Government is in hearty sympathy and is prepared to support.

"The movement and result of the work is attributed to the energy and foresight of the women of this province. We have in New Brunswick one of the best provinces in the Dominion of Canada. All of Canada is an excellent country, but I am convinced, after visiting many parts of Canada, that we have possibilities which many of us fail to realize. We have a country here teeming with possibilities. Our agricultural possibilities are just beginning to be realized. Our forests have for years given abundant wealth. Our mineral resources are great. The earth will still give up her substance and the fame of New Brunswick will be known as one of great possibilities, surpassed by none. In this beautiful climate we have raised up a race of people equal to any on the continent and the women of New Brunswick stand just as high as the men of this province, and form a citizenship of which any province might be proud. I believe that the people do realize the possibilities here and are beginning to take advantage of the great opportunities.

"For Home and Country." The basic object of the organization is the advancement of the home life, the uplifting of the home surroundings; that means loyalty. Loyalty in the home means loyalty in the country. What is loyalty? Blind faith as a ruler? It is something far away beyond that. It is that down in our heart which makes us proud of our home; and when we are loyal to our home we are loyal to the town and province, that begets loyalty to the great Dominion, and loyalty to the Dominion begets loyalty to the Empire. We must have faith in our future and a determination to advance our country's interests, not only along materialistic lines but along spiritual lines, which will uplift the life of each individual. On us as individuals rests a large amount of that responsibility. This working in harmony one with the other tends to raise the ideals of the country. We boast of our progress in material affairs, our armies and navies, but far greater than those and far more to be envied is the place that can boast not only of armies and navies but can boast of a contented people and happy and prosperous homes.

"It is your aim to make the province happier. I congratulate you on this. It is something which will go down to every individual in the province. I take advantage of the occasion which is offered to me, to extend to you the Government's most cordial welcome, to asure that whenever you visit here we will be glad to extend our assistance in every way possible, and to give expression to the wish that the work of the Women's Institutes will go forward with the same progressive spirit that you have retained up to the present time.

'Home is the dearest spot on earth. It has been said 'men make the houses women make the homes.' It is a great work which ies before you.

"As the responsible head of the Department of Agriculture, any assistance that I can give, any help that will be of benefit to this institution, anything that I can do that will not in any way conflict with the public interest, I am at all times willing and glad to give."

WATERLIGHT

This famous Thoroughbred Stallion was burnt to death when Mr. Geo. W. Fowler's barns were destroyed by fire last week. Waterlight was imported from Kentucky six years ago by the New Brunswick Department of Agriculture, and purchased at auction sale at St. John by Mr. Fowler, who paid close to $1,000 for him. On the turf, in the show ring and in the stud Waterlight has been a winner. His untimely death is a great loss to the horse breeding interests of New Brunswick.

SPECIAL FOR HALIFAX EXHIBITION

Since prize lists were printed, the Canadian Jersey Club has offered twenty-five dollars for championship male and female at this Exhibition.

Question Box.

As mentioned in Mr. Murray's address, the question box was a pleasant feature of this year's convention. At first we thought the women had no questions to ask, but when the hour arrived for the box to be opened, so many enquiries were encosed some had to be left unanswered with the promise that the next issue of our Official Organ would contain the questions and answers.

Musical Programme in Connection With Convention.

During the afternoon and evening sessions solos were rendered by Miss Mary Gibson, of Marysville, N. B.; Miss Florence Brown, of Port Williams N. S., and a piano duet by Miss Bessie Everett and Miss Mildred Walker of Fredericton.

Presentation

A happy interruption the closing evening was the presentation of a cut-glass ink-well and stand and toilet bottle to Miss Hazel Winter, the Supervisor, by Mrs. S. B. Wass, on behalf of the Women's Institutes of New Brunswick. Miss Winter suitably replied.

Delegates entertained by Fredericton Branch.

A muscial programme, consisting of vocal and instrumental music, followed by a reception was tendered the delegates and visitors present by the members of the Fredericton Branch this brought to a close the second annual conevntion. The next convention will be held at Fredericton, pprobably the first week in October, 1915.

A complete report of the convention, including papers, addresses, reports of the Institutes, etc., is to be printed in the near future, and may be had upon application to the Supervisor at Fredericton.

A Handy Garden Tool.

Take an old hoe, the wider and larger the blade the better. From a piece of pastboard cut a portion the size and shape of hoe blade, then space this off so that from four to six narrow blades or tines are drawn with the pencil similar to a rake, only the tines should be from ½ to ⅝ inch wide. Cut out clean the intervening spaces, place over the hoe blade and trace with an awl or file shank the outlines of the pattern upon it. With a heavy, sharp, cold chisel cut away the steel as indicated and afterwards file away all the rough edges and shape it to suit. Various formed rakes, scuffle hoes, weeders, etc., may be thus easily and quickly made to suit the fancy and kind of work required.

Special Prize for Sheep.

A silver cup is offered for competition at the St. John Exhibition for best judging of sheep by amateur.

A Sweepstakes prize of $25.00 is offered for competition at the St. John exhibition for "Best Stallion, any breed as evidenced by six of his get."

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JUNE 23, 1914.

DATES OF ISSUE.

July 7-21

August 4-25

ENTOMOLIGICAL WORK IN THE VALLEY

Prof. G. Gordon Hewitt, Dominion Entomologist was in the Annapolis Valley recently conferring with his officers in that district.

Field Officer Geo. Saunders is carrying on the work in that district. The bud moth is the special study of Mr. Saunders at present. On June 26th, he has arranged for a demonstration on the bud moth to take place in the fine young orchard of Mr. Ralph S. Eaton. It is expected that a large number will be in attendance as special trains at excursion fares will be run to Kentville that day.

Every fruit grower should attend this meeting. Mr. Sanders is in a position to demomnstrate from observation some terse results from two years spraying on a block of Wagner trees in Mr. Eaton's orchard in controlling the bud moth.

Upon this subject Mr. Sanders says:

Any orchardist who is at all in doubt as to whether spraying pays may be certain that the benefit derived from controlling bud moth by his two sprays, one before and one after the blossoms, will more than pay for the entire cost of applying four sprays to his orchard. I am not decrying the other sprays in any way; they are as useful as the two here spoken of for other purposes, but we are in a position to state with certainty that we can control bud oth to such an extent in the Annapolis Valley that the benefits derived from controlling it alone will more than pay for the entire cost of spraying.

I need hardly say that it is, above all, necessary to use the most adhesive poison obtainable, such as paste lead arsenate.

The Provincial Entomologist, Prof. W. H. Brittain's squad of nine San Jose Scale inspectors have been working between Truro and Windsor and will continue westward to Digby before going on to work in Yarmouth and Lunenburg counties. In the course of a recent interview, Prof. Brittain said: "We have not found a live San Jose Scale. It is also pleasing to notice that the Aphis has not been so scarce for years. We had anticipated a scourge of this pest this season, but its parasites have been busy and the result is good."

JERSEY CATTLE CLUB

The Canadian Jersey Cattle Club was one of the last of the pure bred cattle organizations to commence the work of registering the National Live Stock Records. However, since they commenced, the work has gone on very satisfactorily till now there are almost five thousand registrations. The Club has also made most exceptionally satisfactory strides in Record of Performance work that there are now about seventy cows which have qualified for the Record of Performance yearly test. These represent animals from a great many different herds and imported animals as well as Canadian and United States bred animals. Jersey cows from almost every province are qualified on the Record of Performance, however, it has only been within the last year or so that the breeders have fully awakened to the great value to be derived from this yearly testing, that now more breeders are entering cows almost daily. Perhaps there is as great value in this work from a selfish standpoint, that is, that a man may know his own cows, as from any other standpoint, but from a monitory standpoint it helps one wonderfully when the come to sell stock from Record of Performance ancestors. It is most interesting to study the breeding of the cows which are qualifying on this test, however, to date, there have been but two sires whose names have entered the list.

To be enrolled upon this list a sire is required to have four daughters each from a different dam qualified. The two sires whose daughters have accomplished this for them are Brampton Blue Beam, who was bred by B. H. Bull and Son, of Brampon, Ont., and who has since been in service in their herd; that of James Bagg and Sons, Edgeley; that of Joseph M. Dolson, of Fallow, and now stands at the head of the herd of C. A. Julien Sherman, at Red Deer, Alta. The other bull which has qualified is Mary Maid's Brigadier, No. 695, who has been at the head of the herd of A. H. Menzies and Son of Pender Island, B. C.. This bull was bred by H. C. Taylor, of Oxfordville, Wis., and is sired by Mary Maid's third son, a bull which traces back into the families which produced some of the cows which made Jerseys famous at the World's Columbian Exhitition at Chicago in the early nineties. Several other bulls have one, two and three bulls qualified and it is to be hoped that in the near future there will be many more sires with sufficient daughters qualified to have their names on the honor roll.

THE WOMEN'S INSTITUTES

The Women's Institute Movement is going on apace. On another page of this issue will be found a report of the convention recently held in Fredericton. Encouraging reports also reach us from Prince Edward Island and in Nova Scotia Miss Fraser is working away, extending the usefulness of the organization in her province. Accompanied by Miss Grace Dutcher, teacher of Domestic Science in Prince of Wales College, Charlottetown, she has been holding meetings in the Annapolis Valley and a number of new institutes have been formed.

STUDY ON FARM ANIMALS

We understand the Peabody School of Education, University of Georgia, has issued a nicely illustrated bulletin, the main object of which is to bring out the impoprtance of cattle husbandry in rural education. The bulletin illustrates the different dairy and beef breeds and contains instructive material in use in rural schools.

"This bulletin," writes Professor Odum, head of the rural education work, "will have a wide range of circulation and will go into schools throughout the south. I think it will develop the right sort of sentiment and have its results in improved cattle in Georgia."

"The time is coming, slowly but surely, when our rural school boys and girls will be studying about the respective breeds of horses, cattle, sheep swine, poultry, etc., rather than about tropical and other animals and birds that, perchance, they may never see unless they visit a menagerie as was so ably said by our friend Rev J. Hunter Boyd, before a meeting of the N. B. F. & D. A. at Fredericton several years ago when he was trying to impress his audience with the necessity of more agricultural teaching in our rural schools.

AN ESSENTIAL TO HERD INPROVEMENT

The first step in herd improvement is in the selection of a suitable bull. Such a bull, besides being a well-developed individual, with strong constitutional and vital powers, must be purely bred in order that he may have sufficient prepotency to transmit his characteristics to his offspring, no matter what may be the qualities of the females with which he is mated. He is likely to be found in a herd all the members of which are uniform in productive capacity and have been bred under the same conditions for a number of generations. A bull useful as a prepotent animal to mate with common or mixed females, is quite as likely to be the son of parents of something more than average merit as the offspring of what some are pleased to call "phenomenal" animals.

In the columns of the Maritime Farmer will be found advertisements of breeders of quality stock in all the popular breeds. When you are prepared to purchase a sire to head your herd or flock and have decided upon the particular qualities required make your wants known to our advertisers. You will get as good value for your money by patronizing the home breeders as you will by going farther afield.

USE AND ABUSE OF WORK

The most positive feature about the affairs of people in both country and town these days is a quiet determination to perform some useful, profitable work. This is in marked contrast to the atmosphere which pervaded the country the past three or four years. True, many people have been consistently engaged in honest productive work, but there has been a vast army of half-idle men who have been trying to get something for nothing. This element is now not so prominent, in fact, scarcely noticeable. They have gone with the decline of the fever of speculation and we are fast settling down to the humdrum of taking wealth from the soil and distributing it in exchange for necessities of life. The reaction from the "easy come, easy go" sort of existence to which many had become acustomed and which many felt is not the most agreeable thing that could happen, but natural forces do not permit of continued violation of the rule, "by the sweat of thy brow shalt thou eat bread." And just to the extent that wealth has been accumulated by means other than giving value to that extent has the rule been violated and the penalty must be paid in harder work, which crystalizes in the form of interest to be paid.

In nature the only recreation that is allowed is that taken in the pursuit and operation of natural function, work, and natural forces are just as powerful in the every-day affairs of people. If we will have joy and pleasure without remorse or the penalty of paying in some other form we must be careful not to give ourselves up too largely to the pursuit of non-productive efforts which are wasteful of time and energy.

The man who improves a highway is a public benefactor. Let farmers' public spirit manifest itself in well-dragged roads. Let every farmer drag the roads bordering his land after each rain, and improve them 50 per cent. The effort is worth while and should appeal to the pride of every land owner and tenant. Let's drag the roads all summer.

Destroying the Cabbage Worm.

The cabbage worm is well known to every gardener and works a great deal of damage every year, destroying cabbages, cauliflowers, turnips and even flowering plants which have succulent leaves, such as stocks, mignonette and nasturtiums. There are two varieties of cabbage worms, the native and imported species, but they both resemble each other and both are destructive. They feed on the leaves of the plants mentioned, and it is a common sight to see a whole cabbage patch with every leaf perforated with holes. If they are allowed to get a start and are unmolested they will in a short time destroy the whole crop.

Description of Cabbage Worms.

The imported cabbage worm is green in color, while native species are bluish, with yellow stripes. The full-grown caterpillar is about an inch and a half long. Towards the end of summer, when it's work of destruction is over, the caterpillar passes into the chrysalis stage, and in the spring or early summer, the butterfly or adult emerges. ' She lays her eggs on the under side of the leaves, where they hatch in about a week, and as there are several broods a season the garden is again quickly infested.

The butterflies of both sspecies, imported and native, resemble each other very much and are hard to tell apart. They are generally white, with black marks on the upper side of the wings and yellow or green markings on the lower side.

Method of Control

Pyrentheum powder is a well established remedy. It should be mixed with five times its bulk of flour and dusted into the cabbage just at nightfall. In order to make the mixture effective the flour should be mixed with the pyretheum over night.

Paris green and arsenate of lead are also used to good advantage, but there is a danger of these poisons being injudiciously handled and their use is therefore not highly recommended, although careful tests have been conducted which show that there is little danger in using these insecticides at any stage in the growth of the plant. The safest time to apply Paris Green is just before the plants begin to head. It should be mixed with 25 times its bulk of flour, road dust or sifted ashes and applied to the affected leaves.

Big Turnip Tournament.

Young Agricolas of Cumberland are off on their first lap of the race for the best turnip patches. When the seeds they are now sowing reach maturity in full blown "neeps" they are to meet the gaze of agricultural experts and their merits pronounced upon as standing stock and for the roots they produce for the Maritime Winter Fair.

Young Cumberland is out to show young Cochester that the boys of this county acknowledge no better at the game of farming. Once they have said so and backed it up with a prize patch of perfect specimens, measuring 1,250 bushels to the acre. That was last year. What this year holds in store is mere conjecture. Colchester's youthful farmers ran a close second with a field yielding only 75 bushels less. Profiting by their past experience, it is only natural that they better their efforts over in Colchester and the same principle applies here also.

This turnip raising idea has been expanding and developing fast since its inception three years ago, nuitl now no small measure of skill and industry is brought into play as the competing patches are watched and groomed throughout the summer.

The competition has grown until between two and three dozen farmers in Cumberland alone nurture choice seedlings which are tended and coaxed along by ardent farmer lads.

Quantity and Quality Grow.

Why turnips have been chosen of all vegetables is explained by the philanthropist who three short years ago founded this farming festival. A Nova Scotian waxed wealthy in New York, he turned his mind to some method of helping his home province. He conceived the thought that to promote live stock raising here the way could best be paved by providing cheap fodder grown at home—turnips. The scheme was soon set in motion with the help of Charles Hill, of Ouslon; F. L. Fuller, Truro, and Professor Cumming, of the Truro Experimental Farm. Prizes of $75, $50 and $25 were put up in Cumberland and Colchester and a check covering all expenses was sent along by this anonymous giver. This has been done three seasons and is to go on indefinitely. The entry list has grown each year and already there is a marked change being wrought in local agriculture, as the quality standard of cattle feed is being raised in keeping with a quantity increase.

Pictou Caught on.

An evidence of the far-reaching effect of this forward movement in farming is the staging of a similar contest in Pictou county this summer. Pictou knew a good thing when she saw it, and private subscriptions have provided prizes for a turnip growing competition there.

Here is a concrete idea of what an acre of turnips will do: Last year the largest production was 1,350 bushels, one acre of ground growing 40 tons of cattle feed. An acre of corn reared 10 feet higgh will yield 20 tons of silage and it looks an enormous quantity. But this turnip field doubled that record. Wherefore the choice of turnips as the cheapest nourishing fodder. To further extol its virtues, this one acre plot produced enough to feed 20 cattle 40 pounds a day for three and one-half months. Along with straw and a little grain it would fatten more than treble the amount of beef raised on the average farm of the east.

To equalize the competition only boys between 15 and 20 years of age and resident on farms assessed at not more than $3,000 can enter. Finally the prize money must be used for some such purpose as improving the farm, adding to the live stock, paying for an agricultural education or other scheme approved by the judges.

The donor of this gift has certainly the satisfaction of accomplishing something tangible in his native province. He not only has founded an industry of itself and developed another but he also has awakened the farming instinct in the plastic youth of the land who thus learn to extract its real wealth most effectually.

Neglected Roadsides a Serious Evil.

The roadside is not only a hotbed for weed seed production, but a clearing house as well for seed distribution.

It is becoming more apparent each year that something must be done to relieve the scarcity of farm labor or the roadsides will become even a greater menace than ever they have been in the past. A pathmaster said the other day that he had tried to get someone to cut the weeds on his road beat, but failed to find anyone who would do it, even when the labor cost would be applied on their road tax.

The writer was recently traveling along a public highway which lay through what had been at one time a swamp, but was now drained, and some of the best of land was lying on either side of the road. The turnpike was high, and a ditch ran along the one side. Between it and a crop the farmer who owned he adjoining farm was cutting down the weeds. I stop-work, and incidentally remarked that I would see that the proper person was notified to cut the weeds on the roadside. A mower run up and down about twice would have made quite a clean job. The farmer said it was a county road, and some of the residents thought the weeds left standing there would retain the snow on the turnpike in the winter. I told him I had gone over the same road last spring before the snow had gone, and there was from two to three feet of snow on it, and that I considered their excuse a lame one.

"Well," said he, "as you see I have gone along the distance my farm extends and cut out one of the weeds there."

"Yes," said I, "I see it is the bue weed." "Oh, that's what you call itt?" "Yes," I answered, "but there are a number more here as bad, and one or two even worse if they get into your field." I pointed out out the perennial Sow Thistle and the Ragweed.

There was one of the greatest assortment of weeds one would see in a day's travel on that roadside. There was Canada thistle, common evening primrose, pigweed, lambsquarters, burdocks, milk weed, golden rod, and others, along with these already mentioned, growing most luxuriantly and loading with seed. It seems to me that it would pay farmers to take a mower and do something to check the spread of weeds from the roadsides adjoining their farms at least, if they cannot, without trouble, get the proper authorities to do the work. The work of the railroad corporations should bring a blush to the faces of the farming communities when it is seen what they are doing to destroy weed life along their tracks. Let out the cattle and sheep on the highways, anything rather than weeds.

A great deal of attention is being paid to grading and gravelling the highways these days. It is strange that when roadmakers take up the grass along the sides that they don't scatter some grass seed along the sides of the roadbed. This seed would soon form another sod that would prevent the weeds from growing there. Instead of that our road builders are making it easier for chickory, ragweed, and other weeds which are increasing amazingly on the public highways, to get a foothold. Then there are the ugly looking chaps, elecampagne and easel, so common in many places, while blueweed, oxeye daisy, burdocks, and hound's tongue are occupying others.

Something must be done, and that right early, to stem this tide of evil.—A Farmer.

Fitting Horses for the Show Ring.

It is a common thing to see stock exhibited at small fairs without any fitting whatsoever. Cattle, particularly, are often taken before he judge in a condition which prohibits his handling them—unless he possesses more than the average amount of nerve. Horse owners, however, very seldom take a horse to a show, even a very remote one, without having him well groomed at least. There is a tremendous scope in the fitting of show ring animals; it can be properly called an art among exhibitors of high class stock. Naturally it is hardly to be expected that the exhibitor at a small country fair should spend hours in fitting his cattle or horses for the judges' inspection, but in every case the animals should be clean and well groomed. This is only show etiquette, and it reflects credit on the exhibitor, whethe receives a prize or not.

Exhibitors at the larger exhibitions are not immune from criticism in this respect. One hardly ever sees an animal exhibited by an ambitious breeder in such poor showing condition that a city visitor would notice it, but many animals are put in the ring, under a great handicap, because the owner either does not understand or has neglected the fine points of fitting.

In a class where there is a wide gap between the winning horses, fitting may not have much weight with the judge, but where the placing hinges on details, as it generally does at our larger shows, the horse that is in the best showing condition has a decided advantage.

The failing of most exhibitors is the showing of horses in poor flesh. No matter how much an exhibittor may console himself with the assurance that his horse, although thin, is in excellent shape, he has no opportunity of calling the judge aside and explaining to him why his horse does not show the weight and smoothness of his competitor. Flesh covers a multitude of sins, rounding off the horse's body, giving him a more symmetrical and weighty appearance. There is a big difference between having a horse in good, fleshy condition, well rounded off and having a horse loaded down with fat to such an extent that his legs become stocky and his action ungainly. It is therefore essential that the exhibitor use discretion; his horse should not be thin, nor should it be in flesh at the expense at of cleanness of limb, style and action.

Quite often horses are brought into the show rings at big exhibitions and their manners quickly show that they have received no training for the ring. A display of action is demanded by most judges, and the horse that is trained to the halter, walks and trots without hanging back or jumping into the crowd at the ringside is going to show himself off to better advantage and create a better impression on the judge. The horse which is to be shown should be accustomed to halter leading and should be trained to stand quietly, walk and trot straightly and smoothly. Every exhibitor has his own way of decorating the mane and tail of the horse, of fixing up the feet and legs to show off the cleanness of bone, fineness of feather, slope of pastern and soundnesss of foot, and in fact one very seldom sees this part of the horse fitting neglected. Too often, however, one sees a horse in thin condition or green to the show ring. The judge places a horse on what he sees. The better a horse displays his qualities the better chance he has of getting into the short leet. It must always be remembered that the judge places on actualities more than on possibilities.

Preservation of Fence Posts.

An experiment covering twenty years, to determine the value of post treatment, was recently completed under eastern conditions, where decay is more rapid than in drier parts farther west.

The posts were treated by the following methods:

1. By charring.
2. By filling rock around the post when set.
3. Putting on the preservation with a brush.
4. By the open tank method of treatment, which consisted in keeping the posts and treating fluid heated up to the boiling point for 2 or 3 hours and then letting them cool down in the fluid.

The conclusions reached which should hold good under western conditions are as follows:

1. That charring the parts placed under ground does not add to their durability.
2. That filling in around the post with stone or brick-bats does not increase the durability.
3. That creosote is a better preservation than coal tar or petroleum.
4. That brush treatment is not nearly as effective as open tank treatment.
5. That cheap woods when treated by the open tank method are cheaper and just as durable as the high-priced cedar posts.—C. C. Carpenter, Colorado Agricultural College.

Jersey Records.

Among the number of Jersey cows that recently qualified for the Record of performance, we find the three-year-old Nellie of Draffan. No. 2447, owned by C. & H. Cann, Chegoggin, N. S., with a record of 8982 lbs. milk, 6.72 per cent. fat yielding 604 lbs. butter in 365 days.

HORTICULTURE.

Selecting Cover Crop for the Orchard.

A cover crop has been defined as one which has been used for the particular purpose of securing its mulching and physical effect upon the land in the intervals between the regular crops or the normal seasons of tillage, and to improve the soil chemically when legumes are thus employed. If we are to grow fruit economically and of superior excellence in northern latitudes, more and more attention must be given to the question of orchard cover crops.

In orchard management three main methods are recognized and employed in different sections: First, cover crop; second, clear culture; third, sod mulch. There are many things which may be said in favor of each of these systems, but for the northern fruit areas the cover crop has everything in its favor. Some of these advantages are summarized as follows: The cover crop will hold leaves and snow, thereby lessening the depth of alternate freezing and thawing; it will make the soil friable; increase its moisture-holding capacity and render it more capable of resisting drouth; when the cover crop lives through the winter, it dries out the soil in spring, and makes early tillage possible. From the chemical standpoint the advantages are equally great. The leaching nitrates are retained in the soil, humus is added, without which chemicals are of little avail and plant food already in the soil is made available, and increased in amount if the crop employed is a legume.

Prevents Trees Winterkilling.

That which makes the cover crop most essential in the north is winterkilling. Very often the prolonged dry weather of the summer months has prevented vigorous growth, so that on the approach of rain in early autumn the tree exerts itself to such an extent that growth is more rapid than during its normal growing period. There is no time for the proper ripening of this wood and "winterkilling" is the result with consequent weakening of the tree. Much of this may be prevented by means of the cover crop as well as that of the tree, and the cover crop is much the more greedy of the two. The result is the tree is robbed of moisture at just the right time and the succulent growth of autumn prevented.

It is true that in a very wet year the grower has not absolute control of moisture, as he would have in an irrigated district, where rainfall is a factor of small moment, but that it is effective there can be no question.

From one set of experiments conducted at Macdonald College while I was connected with that institution, the drying effect of different cover crops was ascertained. The experiments were conducted in a young orchard, and the percentage of moisture in the soil determined about the middle of September, with results as follows:

Soil Moisture Under Various Cover crops

Millet	7.24	per cent.
Oats	10	per cent.
Rape	10	per cent.
Winter rye	11.6	per cent.
Crimson clover	11.8	per cent.
Buckweat	11.8	per cent.
Red clover	12.3	per cent.
Vetch	12.8	per cent.
No cover crop	15	per cent.

Thus, we see that the strong growing cereal crops and rape run down the moisture content of the soil very rapidly under conditions, and that this effect is more quickly secured than with the clovers, owing, no doubt, to the fact that they are comparatively slow in producing much leaf area. Our experiments also indicated that the moisture content of apple trees increases in direct proportion to the soil moisture content upon which they are grown. Also, that an excess of moisture in the trees caused a lower percentage of blossoms to set fruit. All these problems, complex in their solution, suggest lines of investigation worthy of further study.

Granted that cover crops are necessary, the question at once arises as to what to sow and when to sow it. The date of sowing for any section must be determined by local conditions such as rainfall, frost, etc. Once I was severely critized concerning mmy date of sowing, as fixed for a certain section in Quebec, on the ground that in the Hood River section cover crops were sown some six weeks later than I was in the habit of doing. In many northern sections it has been demonstrated over and over again that all cultivation should cease by July 1 and the cover crop sown at once.

The best crop to sow for cover has been given much attention, but the solution is not easy. Bailey says that the golden scale of cover crops for orchards begins with rye and ends with crimson clover. In the main this is true, but for some soils difficult to obtain a "catch" of clover, rye may be the better of the two and buckwheat better than either.

My own experimental work has shown the relative amounts of green vegetable matter returned to the soil, the fertilizing constituents of same, depth of frost line, etc., when the usual cover crops are employed. Results are as follows:

Enormous as the amounts of plant food are, returned to the soil in this way, it should be remembered that these amounts of nitrogen, potash and phosproric acid were taken from the soil in every case except the legumes, and barring them, the chief work accomplished was in making invaluable plant food available from the fertilizing standpoint. With leguminous plants, however, the case was different As is well known the clovers, vetches, etc., have the power through their root nodules of taking up free nitrogen from the air, and building it up in the plant tissue. By plowing under such crops we have a distinct gain from the nitrogen standpoint.

In some sections leguminous cover crops have been used for so long a time that the soil has been overstocked with nitrogen. The result is just as would be expected—the trees are good to look at but are apt to become "shy bearers." Such conditions are being corrected by using buckwheat and rye in place of the legumes. Like everything else the use of cover crops must be made a matter of study by the individual. He must meet his own conditions and the meeting of them spells success.—E. M. Straight.

How Cover Crops Compare

Cover	Vegetable matter, tons	Depth of frost inches	Nitrogen, lbs	Potash, lbs	Phosphoric acid, lbs
Red Clover	15	—	367	210	102
Crimson clover	17	15	269	179	114
Vetch	14	12	244	173	55
Oats	10	11	136	81	41
Rape	48	19	499	606	183
Rye	11	18	92	112	41
Millet	9	12	120	98	44

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Fruit Crop Report.

From the Province of Ontario there have been no adverse reports so far as weather conditions are concerned. The season in Western Ontario was from one to two weeks late in opening.

In Nova Scotia and the Maritime Provinces conditions have greatly changed during the last two weeks. Up to that time the reports had all been very favorable and indicated a record crop. On the nights of June 3and 4, however, very severe frosts were experienced throughout the central and western portions of the Annapolis Valley, northern Nova Scotia and New Brunswick. In the Annapolis Valley this frost resulted in considerable injury to apple blossoms, especially of early varieties, and on low lying levels the injury was quite marked. On later varieties, such as the Ben Davis and Spy, in orchards on high land, and in those near the base of the North Mountain, the damage was not so great. So far as reports indicate, the section affected by this frost was in the central and western part of the valley in the counties of Kings and Annapolis, though no definite reports have been received as to the amount of damage done. The report is a particularly disappointing one, inasmuch as it is the third successive year in which the crop in Nova Scotia has been reduced to below average. In the northern counties of Nova Scotia it is not anticipated that the injury to apples will be great, since very few varieties were in full bloom at the time. Cherries and plums are quite seriously reduced. The weather in Nova Scotia has been cool

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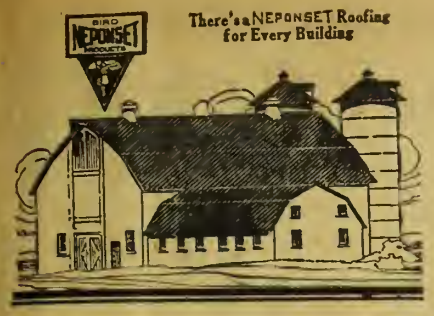

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and wet and conditions will be ideal for the development of apple scab unless thorough preventive measures are adopted.

In British Columbina, the weather during the month of May was admirable. There have been frequent showers, and practically all varieties of fruit have set well. The season has been from two to three weeks earlier than usual.

Apples

The season for apples, according to present indications, will be a very satisfactory one. There are certain sections, of course, where, on account of local conditions, the crop has been reduced, but these are, in the main, only small in area. In Nova Scotia where earlier indications pointed to a record crop, the latter repoprts are very pessimistic and state that a great many of the orchards in the Annapolis Valley have been completely ruined. It is perhaps safe to presume, however, that these reports are somewhat exaggerated, and that while the injury is undoubtedly severe, yet it is not so great as was first expected. It is probably true that the earlier varieties will be short and that orchards on low lying land have been injured, but that the injury has been general throughout the entire Annapois Valley, or that all varieties have been affected, is very doubtful.

In Ontario, too, there are certain isolated sections where the raveges of tent caterpillar have reduced the crop, but in all orchards where thorough spraying has been done and where the owners have given the orchards careful attention, the yield will be a very satisfactory one.

The general report from British Columbia is that a crop well above average will be harvested, particularly of the early varieties.

District 1, Counties North of Lake Erie.—But one adverse report has been received from Western Ontario regarding the apple crop. Several growers report it to be the best for many years. The bloom was particularly heavy and the set has been a good one. This report holds good throughout the whole of the district.

District 2, Counties on Lake Huron and inland to York County.—Reports are almost as optimistic from the inland counties as from those in District 1. There is a fairly general report that Spies will be short in Brant county and that the winter apples in Middlesex have not set well. Throughout this entire district there are quite a number of orchards which do not receive the best of care and which consequenty are a menace to growers who are more up-to-date.

District 3, Lake Ontario Counties north to Sharbot Lake and Georgian Bay.—Where spraying has been satisfactorily carried on, the crop will be a heavy one; but where orchards have been at all neglected, the trees are overrun with Tent Caterpillars and the quality of the fruit will be greatly reduced through the lowered vitality of the trees.

District 4.—Ottawa and St. Lawrence Valleys to Lake St. Peter and Southwestern Quebec.—Reports in this district are generally favorable. In the province of Quebec there has been a great deal of damage done by caterpillars in unsprayed orchards, particul arly in the county of Huntingdon. The crop generally, even in these infested areas, will be about an average one.

District 5, New Brunswick with Northeastern Quebec.—The same injury from frost that was experienced in the province of Nova Scotia, has also been reported in New Brunswick. In view of the fact that the ater varieties were not fully in blossom at the time of this frost, there is a possibility that on these the damage will not be severe. On the earlier varieties which were in full bloom, there is every likelihood that the crop will be greatly reduced.

District 6, Hants, Kings, Annapolis and Digby Counties in N. S.—In the eastern Annapolis Valley where the damage by frost was not so great as in some of the central and western portions, a large crop of all varieties is expected. Even where the frost was serious, some of the later varieties escaped and on these a full crop is expected. Starks, Baldwins and Blenheims are reported short in Annapolis county.

District 7, Nova Scotia not included in District 6.—No authentic reports have been received from District 7. The season was extremely late and in many sections trees were not in bloom on June 6th. Consequently, it is more than likely hat the injury caused by frost in the Annapolis valley has not been experienced to any great extent in this district.

District 8, Prince Edward Isand.—Practically the same conditions apply in Prince Edward Island as in District 7.

District 9, Lower Mainland and Islands of British Columbia.—Reports from the lower mainland of British Columbia are favourable and it is generally considered that the crop will be very much larger than that harvested in 1913.

District 10, Inland Valleys British Columbia.—In the Okanagan and Kootenay valleys the apple crop, according to present reports, will be between medium and full. The earlier varieties do not appear to have set so well as some later sorts, but taking the average of the district the crop promises to be a very satisfactory one.

Districts 1, 9 and 10 ship the commercial crop of peaches and other tender fruits.

Districts 1, 2, 3, 6, 9 and 10 grow plums, pears and winter varieties of apples for long distance markets and exports.

District 4 ships Alexander, Wealthy, Fameuse and McIntosh Red apples.

Districts 5 and 7 will not produce sufficient winter fruit for home consumption.

Pears.

The pear crop in Ontario will be a light one. In the southern counties the crop is reported fair, with Kieffers particularly abundant, but in eastern Ontario trees were badly winter-killed and the crop, except in a few instances, will be an entire failure. Practically the same condition applies to the few pear orchards in the province of Quebec. In Nova Scotia prospects are somewhat better and something over 50 per cent. of a full crop is expected. An excellent crop is reported in Brit ish Columbia.

Plums.

Plum trees blossomed well in southern Ontario, but the set was a very light one, and the crop wil be below average. In the county of Lincoln, Japanese varieties appear to be almost an entire failure, and even the European sorts are reported light. Further east in Ontario, the plum crop is a total failure on account of winter-killing of buds, and in many cases the trees themselves have been seriously injured. In the province of Quebec, the prospects for the native America-na varieties are good. Nova Scotia reports a very heavy blossom, but up to. date no information has been received regarding the set. In British Columbia the conditions are generally favorable and a crop considerably greater than last year is expected.

Peaches.

So far as Ontario is concerned the reports remain practically the same as those which were published a month ago. With the exception of the Essex Peninsula and a slight scattering in Lambton county, the peach crop in Ontario is a total failure.

In the Okanagan Valley of British Columbia, the later estimates are not so favorable as those received earlier in the season. The reports on early

(Continued on page 670)

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DAIRYING.

Economical Milk Production.

The manufacturer perhaps more than the retailer looks closely after the matter of cost knowing that his principal hope of making a good profit lies in attaining economy in the actual production of the article, for no profit can be expected if the selling price is below the cost price.

Is not the dairy farmer a manufacturer? So it would seem to be wisdom to look the more closely after cost especially as he does not expect the selling price of milk to soar. Assuming that the farm is in good condition and carefully handled, what does milk cost per hundred pounds? That can be ascertained only by keeping records of each individual cow.

This is all he more necessary because "men (and cows) were deceivers ever." They may appear to be good heavy roducers, but their value as economical producers can only be determined when their yield of milk and fat is checked up by the scales and test. Of what use is it when the factory pays 95 cents per 100 pounds o keep cows whose milk costs $1.25 per 100 pounds just for feed alone? This is what often happens till cow testing is taken up. Milk and feed record forms are supplied free on application to the Dairy Division, Ottawa.

It is quite possible to have one dollar's worth of feed return two dollors' worth of milk through good cows, that is, cows selected by the test. This is both economical and profitable milk production. The average cow is not an economical producer because she has not been selected, but, like Topsy, "just growed." A dairy farmer will prove his business ability as a manufacturer when the herd is composed of economical producers. Make each cow pay a good profit.—C. F. W.

Color Markings of Holsteins.

What are the correct markings of a Holstein cow? A clear knowledge of what constitutes good color is essential to intelligent breeding. In 1910 the Holstein-Friesian Association of America passed an important rule regarding colors that bar registry. The following explanations of the ruling have been issued from the Asociation:

"Upwards of 95 per cent. of the catte of Holland are black and white, and his fact was one of the strongest influence in leading the founders of the American herd-book to define eigible cattle as those large, improved, black and white cattle already registered.

"With such a broadly defined standard of color markings the question has often arisen whether any proportion of of black and white would still be eligible for registry.

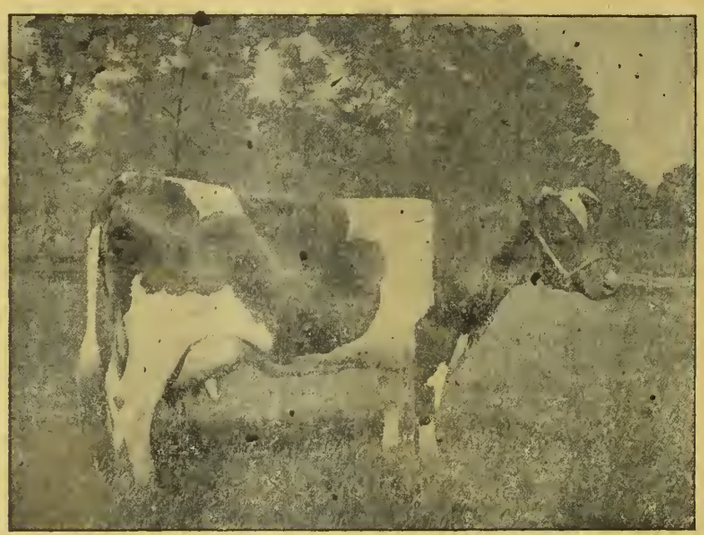
"The color markings of this breed constitute one of its many attractive features. Beauty of for mand beauty of color markings are valuable assets in an animal. Our predecessors wisely determined that cattle, to be eligible for registry, should be black and white, but did not limit the proportions or placing of the spots. Time and observation have determined that cattle of inferior blood, or those possessing an infusion of other blood, often disclose their blood lines through their color markings, and the markings of many of the so-called grade cattle are distinctive and easily recognized by the experienced breeder. These considerations and others, not tending at all towards a fad in color markings, have led to the establishment of the rule concerning color markings that bar registry. These are: Solid black; solid white; black switch; solid black, with only white on belly; black on legs, beginning at feet and extending to knees and hocks; black on legs, beginning at feet and extending to knees, with white interspersed; grey, or mixed back and white, generally prevailing; patches of other colors than black or white—red, brown or dun; red and white.

"Solid colors, either all white or all black, bar registry. That is readily understood. Solid black, with white only on the belly, is interpreted to mean that no animal upon which the white is not visible to the bystander without bending to look up under the belly, will be recorded. Black on legs, beginning at the feet and extending to knees and hocks. Well now, what does that mean? A good picture would be easier than words to describe it, but you are safe in not offering for registry an animal which is possessed of four solid black legs, the black extending up to the knees and hocks. Why? Because extended observation teaches that the chances are more than even that such a marked animal contains other than pure blood in its veins.

"Black on legs, beginning at feet and extending to knees, with white interspersed, is still another variation, and is often found in grades or mongrelbred cattle. It means four back legs. upon which are spots of white surrounded by the black.

"Grey, or mixed black and white, generally prevailing, means the condition of the coat often seen in horses known as roan, where grey or white hairs more or less thickly interspersed with the prevailing bay, sorrel, or chestnut color, only in our case the white hairs are always mixed with black. Now, this rule does not relate to that grey appearance sometimes seen in very old cattle, generally about the head and neck, but if you defer registry until such coloration does appear you will quite likely be debarred; but if you have a calf or youngster that is distinctly grey where it should be black, kill it, don't breed from it.

"It is also quite as futile to register cattle in which the black hair at maturity is interspersed with red, giving a general brownish or rusty cast to the animal. Such are not desirable, for you do not want them, nor does anyone else who knows a Holstein.

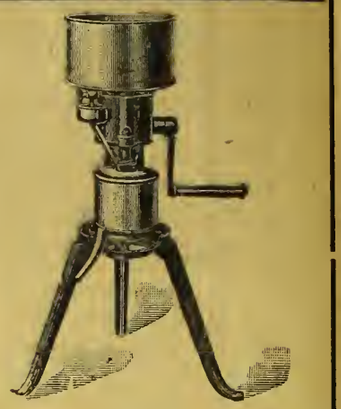


Example of a Well Marked Pure Bred Holstein

The Holstein-Friesian Association of America are drawing the line tightly against registering Holsteins that do not comply in markings with the 1910 ruling. This rule is given in the article adjoining and made clearer by illustrations herewith.

"Now, all this does not mean that Holsteins do not breed true to color. They do, and in this respect are the most prepotent of all improved breeds. A pure bred Holston bull bred to mongrels or grades of other breeds will almos invariably mark every calf clear black and white, even the calves from old cows which have for years dropped calves from bulls of other breeds."

"Melotte" CREAM SEPARATORS



The "Melotte" will increase your butter yield 25% besides improving the quality.

Saves time and labour, space and utensils.

Owing to its Suspended Bowl the "Melotte" is the simplest, most easy running and consequently the most durable cream separator made.

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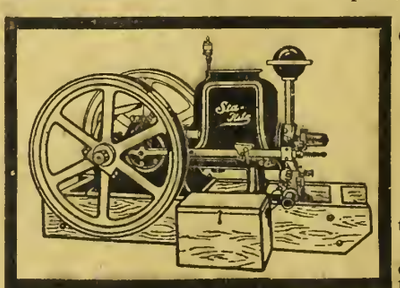

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Every "Sta-rite" engine is built to live up to its name.

It's not an easy job to build an engine that will always "Sta-rite," but we think we have succeeded. By painstaking attention to every detail of construction we have eliminated the troubles usually incident to carburetion, ignition, cooling and the other things that keep many an engine from "staying right" on the job.

The "Sta-rite" starts right and finishes right—does any task you set it to quickly and economically, without a kick.

Clip the coupon and send for the "Sta-rite" book—it tells how we took the trouble out of gasoline engines.

If you are interested in a Separator ask for the book on Empire Disc Separators or Baltic Separators—the Baltic is a machine for small dairies—the smallest size selling at $15.00.

We have some unoccupied territory in which we would like to hear from reliable agents. 5S

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Name.....
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E 10

Markings Such as This Debar Registration

The most noticeable failure here to comply with the H.-F. Association standard of color is the black switch. The black legs are also a disqualification.

Records or the Dairy Breeds.

Recenly there have been so many inquiries for information pertaining to the highest record producing cows of the various breeds that we present the following data:

The above tables are thoroughly interestng and they present in a concise form, in fact, a more concise form than is usually available, the successful work of the various breed associations in establishing yearly records of their cows.

It must be noted, however, that only the highest cow in each class is given It does not imply that these are the only great records of each breed. For example, in the first group there is another cow that has produced more han 999 pounds of butterfat. Banostine Belle De Kol has the highest yearly record of the Holstein-Freisian breed, but hers is not the only one over 1,000 pounds of fat. The same is true in the other groups and classes.

Another interesting feature in connection with these records is the progress that has been made in testing. If one were to take the highest records of the various breeds for 1912 or for 1911, he would find hat great progress has been made, that the world, certainly the dairy world, has been moving rapidly in the line of record making and the establishment of new standards toward which the breeders are working. This is surely an age of progress.

	Milk		%. Av.	Butter-fat	
	lbs.	oz.	test	lbs.	oz.
Cows 5 years old and over					
Banostine Belle DeKol—Holstein.....	27,404.4		3.86	1,058.34	
Sophie 19th of Hood Farm—Jersey....	17,557	12		999	2.2
Spotswood Daisy Pearl—Guernsey....	18,602.80		5.15	957.38	
Auchenbrain Brown Kate 4th—Ayrshire	23,022		3.99	917.60	
May Rilma—Guernsey	19,639.5			1,073	
Cows 4½ years old and over.....					
Lindenwood Hope—Holstein.....	20,404.7			931.45	
Olympia's Fern—Jersey	16,147	13.6		937	13.3
Dairymaid of Pinehurst—Guernsey...	17,285.30		5.27	910.67	
Agnes Wallace of Maple Grove—Ayrshire	17,657		4.65	821.45	
Cows 4 to 4½ years old					
Daisy Grace De Kol—Holstein.....	21,718.3		4.43	962.80	
The Abbess of Torr—Ayrshire	14,582		4.39	640.72	
Azucena's Pride 2d—Guernsey	16,203.90		5.28	855.7	
Spermfield Owl's Temisia—Jersey....	9,994			640	14.4
Senior cows 3 to 4 years old.					
Dolly Dimple—Guernsey	18,458.80		4.9	906.89	
Queen Juliana Dirkje—Holstein.....	19.124.3		4.2	817.38	
Lass 40th of Hood Farm—Jersey.....	15,362	1		747	5.2
Junior cows 3 o 3½ years old					
Dairymaid of Pinehurst—Guernsey...	14,562.4		5.91	860.26	
Dutchland Changeling Col. Lad—Holstein	21,239.8		3.57	757.37	
Landseer's Pacific Pearl—Jersey.....	9,045	15		659	6.6
Senior 2½ to 3 years old.					
K. P. Manor Kate—Holstein	22,106.4		3.70	818.73	
Langwater Hope—Guernsey	15,078.8		5.13	773.59	
Mary Golden Letta—Jersey	9,295	5		557	7.8
Beuchan Joan—Ayrshire.....	12,773		4.17	532.07	
Junior 2 to 2½ years old.					
Pearly Exile of St. Lambert—Jersey..	12,345	8		816	1.27
Woodcrest Rifton Lassie—Holstein...	19,560.9		3.71	726.66	
Dolly Dimple—Guernsey	14,009.13		5.02	703.36	

Another Example of Markings That Disqualify

Notice the black on legs beginnin g at the feet and extending to the knees with white interspersed. Disqualifications other than those illustrated are given in the article, "Color Markings of Holsteins."

—Cuts courtesy the H.-F. Association of America.

Skims Clean and Gives Rich Cream

You are sure of a good price for your cream at the factory if it has been skimmed by the

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Skims To .01 Per Cent.

cream separator. The Standard skims clean. It gives cream without a taint. It gives rich cream. In fact, the Standard can be regulated to deliver cream of any density the factory requires. Our new catalog explains fully the many features that make the Standard so popular with cheese and butter factories and with progressive dairymen. Write for a copy.

The Renfrew Machinery Co., Ltd.

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When shipping cream to creameries, set the separator so that the cream tests about 30 per cent. The creameries prefer cream of this richness, because it is just about right for butter making purposes. When you ship cream testing 40 to 50 per cent. you lose a certain amount of butter fat by the thick cream sticking to the inside of the can, and you run a risk of receiving a smaller test. With very thick cream testing is a little more difficult, and reading is apt to be charred, and the slightest mistake in weighing the sample makes a bigger difference in the reading than when the cream tests around 30 per cent.

Of course, the mistake may be in your favor, but the risk isn't worth it.

About Shipping Cream.

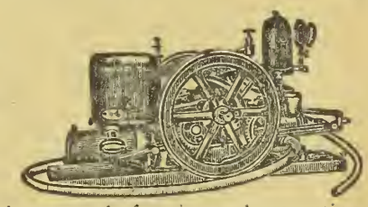
Big Price for Grade Holsteins.

Mr. H. F. Page of Matsqui, B. C., under date of April 23rd writes as follows:—

"At a public auction held today by M. E. Alexander, Clayburn, B. C., 28 grade cows made an average of $172.25 25 of which were Holstein grades. The top price made was $265.00. This cow was sold by the writer to Mr. Alexander a year ago for $200.00. Eighteen of the cows made over $200.00 each. This looks to me like a record for Canada or Unied States.

The prices certainly indicate the quality as well as he man behind the cows."—W. A. Clemens, Sec'ty Holstein-Friesian Association.

Protect your trees and garden



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The spraying machine illustrated here can be used for practically every spray use on any farm, and will quickly pay for itself in improved crops.

You can buy a Fairbanks-Morse or Gould Spraying Pump, from a brass hand pump costing a few dollars up to an engine-operated, truck-mounted outfit of the highest efficiency.

Send for free catalogue of spraying outfits and appliances. It contains much valuable information, tells you what to spray, what chemical compounds to use, how to prepare them, when to do the spraying, etc. We are the largest Canadian dealers in farm engines, scales, and mechanical goods of every kind.

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Sheep Dipping and Dipping Apparatus.

It is somewhat strange that it should ever have been necessary to compel the sheep owner to dip his sheep. The farmer, as a rule, in spite of all the reflections cast upon his alleged want of business methods, has a keen eye to the main chance, and his pocket appeals to him as it does to most others. It would have seemed the natural thing, when the good effects of dipping became evidenced—when it became obvious that the dipped sheep were free from infestation by insects, and were able peacefully to go on feeding and fulfilling their mission in the world, while their undipped relatives were suffering tortures which often made them into scarecrows, and in many cases actually caused death—that there should have been a rush for dips and dipping apparatus, and that the farm on which dipping was not part of the regular routine would soon become a rarity. In point of fact, the utility of the "dip" has been generally recognized, but there are always backward members in every family. Some farmers in remote districts were behind the times, large numbers would not take trouble which they considered unnecessary, while others were simply inefficients who could not overtake their work or were too careless to trouble about it. It is to some extent true that the farmer who neglects his sheep at this time of the year has to pay pretty severely for it, but it is also true that he may inflict damage on other owners by disseminating sheep scab—and hence it is that the State has thought it necessary to step in and protect the sheep owners generally from the consequences that might follow on want of care shown by individuals; and thus the sheep dipping orders, irksome as they may be considered by some, are really a provision of the State to protect the careful business-like farmer from the negligent or careless owner. That the protection is still needed is shown by the prosecutions occasionally reported for failure to dip, and it is alleged that evasions of the orders, by imperfect or incomplete dipping, are frequent in some districts. This is one reason why the progress made in the elimination of sheep scab is so slow.

Objects of Dipping.

We have made reference above to sheep scab as the worst of the pests whose attacks dipping is designed to prevent or to frustrate; but the objects of dipping, of course, extend far beyond scab, which is fortunatey mainly confined to a few districts and unknown in the majority of flocks. The sheep is attacked by several insects and lice, kebs, ticks and flies have to be warded off or destroyed. There is no method of dealing with these that is as satisfactory in its results as effectual dipping, but it is necessary that the word "effectual" dipping should be emphasised. The Board of Agriculture, within certain limits, leave the farmer free to chose his own dip, and home-made preparations may be put on the "approved list," but the compounding of dips is a matter that requires technical skill of a high order, together with appliances for which home substitutes are not easily provided. and the home made dip, even if the formula may be reasonably good, may very easily be spoilt in the making. We advocate, therefore, unhesitatingly, the buying of a dip that has a good general reputation. It may, or may not, be cheaper than the home made article—probably it will be if any allowance is made for the work—but it will certainly be more reliable; it will be properly compounded and, if used acording to the directions of the makers, it is tolerably certain to be safe and efficient.

One of the chief properties of a dip should be that its affect will remain in the wool an appreciable time. It is not a very difficult matter to kill the insects affecting the sheep unfavorably, but "there are plenty more where they came from," as a veterinary friend of ours used to put it, and much of the value of a dip is absent if it does not render the animal an unsuitable host for the pests for a considerable time after dipping. As the season when dipping becomes compulsory is at hand, the matter should be fully considered and the claims of the various preparations offered duly taken into account.

The Dipping.

The methods of dipping adopted have been very diversified, but there can be no question that the swim bath, which provides for the complete immersion of the sheep, is far and away the most effective. The sheep is in a natural position all the time, so that there is little risk of injury—even sheep in lamb may be safely dipped; the motion of swimming brings the dip in contact with all parts of the fleece, and the actual labour is lightened. This means that a greater number of sheep can be dealt with in a given time and that fewer hands may be employed to get through the work. Flocks vary greatly in size, but the needs of the small owner have been provided for by several makers of apparatus, and visitors to our great agricultural shows will have seen on exhibition baths of various types, both hand and swim. Mesrs. W. Cooper and Son express the opinion that hand baths are wasteful of time, labour, and money, and they add also that they are unsatisfactory. On the whole, therefore, we advise the intending purchaser, if he can manage it, to provide a swim bath, the extra cost of which will be repaid in a comparatively short time in the labour saved and the greater efficiency attained. One of the savings will be the amount of dip used. The sheep carries away an enormous amount of fluid in its fleece, and if this is not allowed to drain back into the bath, the bill for the dip will be needlessly heavy. However, in all these matters the farmer has to cut his coat acording to his cloth, and if he cannot see his way cear to the swim bath there are numerous hand baths of good type with which he can carry out the work.

Some Points to Note.

There is an old and much quoted saying that you can take a horse to the water but you can't make him drink, and the truth underlying this has some bearing on the question we are dealing with. It is easy to find an efficient dip, and it is easy, if one is prepared to spend the necessary cash, to get suitable apparatus, but notwithstanding this, it is not always easy to get the dipping carried out properly, and it is much to be feared that in a large proportion of cases the protection which dipping should yield is not afforded to the sheep. There are a few points on which emphasis should be laid. First see that you get a good dip, one that is not only eectual in killing insects on the sheep but will make the fleece uninhabitable by the pests for a considerable time afterwards; next see that the directions of the makers are strictly followed as to quantity, etc. See that the mixing is done properly. It is possible to mix most things, from household mustard to sheep dip, in the wrong fashion, and inexpert handling may easily result in the fluid being really less potent than it should be, though of course, the solubility of the different dips varies. If a deposit of solid matter lies at the bottom of the bath, it is not of much use to the sheep, so that care should be taken so to carry out the preparation that the dip is really dissolved. Next, time the dipping properly. If the sheep are to remain one minute in the bath, let the seconds be checked of by means of a clock or watch, and let it be some one's duty to call the time. It will facilitate matters if the time piece be hung up close at hand. Many people think they can calculate a minute "near enough" without a

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No man or boy should think of buying ANY workshoes until he SEES and TRIES my "steels" at home. My "steels" are better in every way than any all-leather workshoe or rubber boot you ever wore. I will send a pair of "steels" your size, for your Free Ten-day Try-on, without cost, risk or obligation on your part to prove them an ABSOLUTE NECESSITY in your work.

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Sizes for Boys, 1 to 4

Steels 6 in. high	$2.50
Steels 9 in. high, extra grade of leather, black or tan	3.50

Each style of "Steels" is worth, at least twice as much as the best all leather workshoe of the same height.

My "Steels" run in the same sizes as ordinary, all leather workshoes. In case of error in ordering, exchange will be made to larger or smaller size, without extra cost to you.

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It tells How to Keep Your Feet in Good Condition; Tireless, Powder-dry and Comfortable. How "steels" save your feet, your health, your money. Read my free book, "The Sole of Steel"—SEE and TRY my "steels" before buying workshoes.

E. M. RUTHSTEIN, The Steel Shoe Man, Dept. 62, TORONTO, CAN.

watch. If they can they are the exceptions, but in all propability if they submitted to the test they would find that they are frequently very far "out." This would be the case even if they had their attention fixed on the calculation, and the liability to error would obviously be much greater in the circumstances attending the work of dipping. We have known the minute to be called when less than thirty seconds have passed, and the only safe plan is to keep a clock or watch, with a second hand, and to refer to it for each dipping. It is good economy to provide that the drainings shall run back to the bath. The fleece holds a tremendous amount of moisture, and there will be great waste of material if this provision is not made. Failing a proper draining pen, see that the sheep are kept in an enclosure that will not be grazed over, or after consequences may be serious.

Is the Cow in Calf?

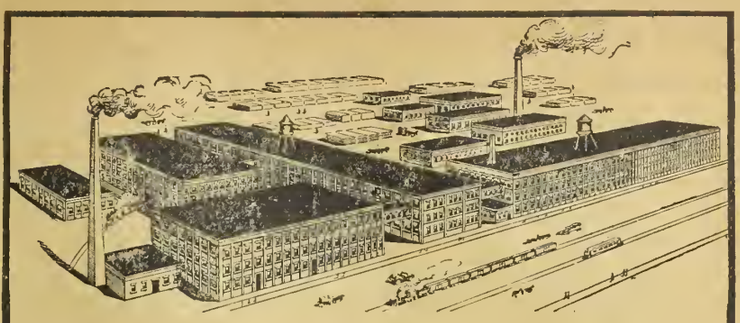
This is a question which often perplexes the dairy farmer, and it is a very important matter for him to decide aright. There are many signs relied on, but none are infallible, and even experts are occasionally mistaken. There are absolutely no "sure" or "certain" indications, and readers of experience in breeding will doubtless remember to have seen cases in which the condition of a particular animal has remained undetermined right up to the time when the offspring was produced, or unti the lapse of a period long beyond that of a normal uterogestation had practically settled the question. We say practically, because the failure to give birth to a calf is not positive proof that the animal has not been pregnant, for there are many cases on record of the mummified remains of a foetus having been found in the uterus of a cow killed fat by the butcher, or on post mortem examination when death has taken place from accident or disease entirely unconnected with gestation or parturition. They will also know of other cases in which cows have been most unexpectedly found with a calf at foot, or discovered in the act of presenting it when their pregnant condition was not even suspected.

Some Signs.

The sign chiefly relied upon by the cowkeeper is the continued absence of oestrum subsequent to service, the cow not coming into season at the usual period, and refusing to take any notice of the bull, and he of her. Implicit confidence in this often leads to error. In the other direction, the appearance of oestrum at the usual recurring period is equally inconclusive of the cow not being in-calf. In the cow, as well as in other animals, oestrum may recur not only once but several times after conception. Cows have been known to appear at oestrum regularly, and to acept service within a month of parturition, although the rule is that the bull refuses to consort with such animals. The cessation or non-appearance of oestrum subsequent to service may, of course, be taken generally as an indication taht the cow is in-calf, and its re-appearance that impregnation has not resulted, but the exceptions are so numerous that the absence or recurrence of oestrum cannot be regarded as absolutely a safe guide, either one way or the other. Another rational or subjective sign is a considerable improvement in condition or a tendency to fatten. Cows are not usually vicious, capricious or "jady," as are many mares, which often become completely changed in character when in foal; but to a limited extent an improvement in the temper of "wicked" cows has been observed, and the in-calf cow early becomes more tranquil in disposition, and takes a great deal more rest. Taken with other signs, an improvement in condition, a greater evenness in temper, loss of vigour, and a greater tendency to rest may assist the observant owner in coming to a conclusion as to the state of his cow. As the foetus gradually grows in the uterus its capacity increases, and becomes visible externally, especially on the right side of the cow, but the abdomen also enlarges generally, and towards the end of gestation it becomes pendulous, and the flanks hollow. The spine appears to drop, while the lateral portions of the croup sink so much as to make the sacrum and haunches towards the root of the tail look more salient. Increase of weight is a physical sign, and it has been proposed to weigh animals from time to time to demonstrate the presence or absence of a foetus, but either weighing or measuring must be an extremely fallacious test as to the pregnancy of an animal. An empty cow may increase in size and weight by slow degrees as readily as the man who weighs her, or a pregnant cow may lose flesh faster than the growth of the foetus would compensate for.

Improvement in Condition.

There is generally a rapid improvement in condition during the first period of gestation, and often a loss of it during the last. The enlargement of the udder is a material sign of pregnancy, but one that varies very much in different animals, and it is reliable only in the case of heifers carrying their first calf. In heifers the mammary gland begins to undergo development soon after conception, or towards the second or third month, but when we remember that virgin animals can, and frequently do, produce milk, it will be seen that absolute reiance cannot be placed on this. Changes in the milk do not become apparent until quite late in the gestation period, when, in the majority of cases at least, there will be numerous other and more reliable signs of the condition of the animal; and they are not always reliable.



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Sensible Signs of Pregnancy.

The sensible signs of pregnancy do not begin to be apparent until the fourth or fifth month, when the contractility of the foetus muscles begins to be developed. These movements are feeble at first, but towards the end of pregnancy become, in the majority of cases, vigorous and unmistakable. The milker recognizes them readily as he leans against the cow with his head while milking her, and it is during this act that he frequently beomes aware of the cow's condition by feeling the calf "kick." In many cases these foetal movements can be distinctly seen as well as felt, and various experiments, as barbarous as they are stupid, are resorted to to determine the presence of a foetus in the uterus by exciting its movement. A favorite one is to give a drink of cold water after heating the cow by driving her round the pasture or yard—a test that may demonstrate the animal's condition by causing her to abort. The only really useful and practical means of detecting the sensible signs is to combine the senses of sight, touch and hearing. What can be seen of the foetal movements is not very reliable until the closing days of gestation, when other signs will probably be equally apparent, and it must always be remembered that the fact that the calf has at no time been seen to kick, and that movements cannot be detected by employing the sense of touch, is never reliable evidence that the cow is not in calf. It is said that the beats of the foetal heart can be detected by auscultation in front of the symphysis pubis, but the part is an awkward one to get at in the cow, and the inexperienced may easiy be confused by other sounds. The indications obtainable by manual exploration are through the abdomen, the rectum and the vagina. Exploration by way of the two last is a method of examination which should be confined to the veterinary surgeon, but the farmer and dealer commonly undertake the abdominal examination with success, and, if ordinary care be exercised, it may be employed with perfect safety. In the case of the cow, it is about the fifth month when the foetus can be detected by manipulation of the abdomen. The cow should be standing up when examined, as the signs are not so easily perceptible when she is recumbent. The examiner stands on the right or milking side of the cow, with his back towards her head, and applies the palm of the left hand against the abdomen, pressing it firmly, the right hand resting on her back. The movements of the foetus can then be detected as it stirs at regular intervals. These movements are generally strongest in the morning, and while the cow is feeding.

Buying Cows "In-Calf."

In buying a bunch of heifers for feeding or of baren cows to go on grass, mistakes are commonly made, and qquite a number of them are found, after they have been kept for some time, to be forward in-calf. This mistake neither skill nor care can always guard against. In buying cows alleged to be in-calf, or as due to calve on a certain day, it is always wise to take a warranty where this is obtainable, and at cow sales, sometimes with the connivance of the auctioneer, cows are sold as to profit on a certain date, the purchaser being allowed to assume that

(Continued on page 674)

THE HORSE.

Crib-Biting and Wind-Sucking.

With the exception, perhaps, of kicking, crib-biting or cribbing and wind-sucking rank as the two worst of the various so-called stable vices of horses, they being decidedly subversive of he horse's condition and wind, and tending more or less to impair its usefulness for work. A horse afflicted with either of them should never knowingly be bought, and, fortunately, it is very often possible readily to spot a cribber or wind-sucker by the mark made on the neck by the cribbing or throat strap which is commonly employed to repress the evil. A horse in which either habit is of long standing and strongly developed is also usually characterized by possessing a big, flatulent belly, while in the case of crib-biting there is a possibility of detecting the presence of the habit by certain marks of abnormal wear to be seen on the front teeth. Cribbing and wind-sucking may be looked upon as being merely two different forms of the same bad habit, and sometimes a horse will practice them both. The former is much the more prevalent, but the latter is, generally speaking, the more serious. Both consist in the horse drawing air into its mouth and swallowing it by a convulsive movement of the muscles of the throat, the essential difference between the two forms being that in crib-biting the animals lays hold of the edge of the manger or some other convenient object with its teeth when indulging in the habit, whereas, wind-suckers are able to suck in the air without catching hold of anything. The latter is the more difficult feat, and requires more practice, but once wind-sucking has been acquired it is apt to be much more inveterately indulged in than cribbing, with correspondingly more insidious effects on the condition. Both forms are readily recognized, for the horse places its head and neck in a peculiar attitude, and there is the convulsive contraction of the throat as the air is gulped down, while in most cases a grunting sound is also to be heard. Those not acquainted with this kind of stable vice sometimes think that the horse is merely belching. The inexperienced also occasionally confuse cribbing with the trick, which many horses have, of biting at the manger edge when rendered irritable during grooming by the use of the curry-comb or the application of the brush to sensitive parts of the body, or on the girths being drawn tight when they are being saddled. Such biting at the manger from irritability is quite a harmless trick, though it is said sometimes to lay the foundation of the cribbing habit, but, speaking from personal observations, that is very rare.

Cause.

The exact cause of crb-biting and wind-sucking is often obscure. It is usually considered that these bad habits in the first instance principally originate as a result of idleness and a mischievous propensity, the horse having nothing to occupy itself with while standing in the stable between meals, in the same way as some horses, from a similar motive, are caused to eat their bedding and others to tear their clothing or to gnaw at the wooden stall partitions. This explanation is certainly supported by the fact that it is chiefly horses which pass most of the daytime in the stable and are taken out for only comparatively short periods daily that become cribbers or wind suckers, whereas, those which regularly work long hours are relatively seldom addicted to those vices. Indigestion is also sometimes assigned as a cause, but it is very questionable whether this theory is correct. Undoubtedly, marked symptoms of indigestion go hand in hand with both cribbing and wind-sucking, but in these cases the indigestion is in all probability, as a rule, rather the result of the vice than its cause. The constant swallowing of mouthfuls of air, which dilates the stomach abnormally, must naturally react more or less adversely upon the digestive functions, and in bad cases either habit, but particularly wind-sucking, may be so persistently practised as to render the animal subject to attacks of flatulent colic. But not only does this air-sucking interfere with the digestion, but the undue distention of the stomach which it causes gives rise to pressure upon the diaphragm and the lungs so that the wind also suffers impairment. Both cribbers and wind-suckers mostly prove untrifty doers, and are troublesome to maintain in satisfactory bodily condition. Often they carry but very little flesh.

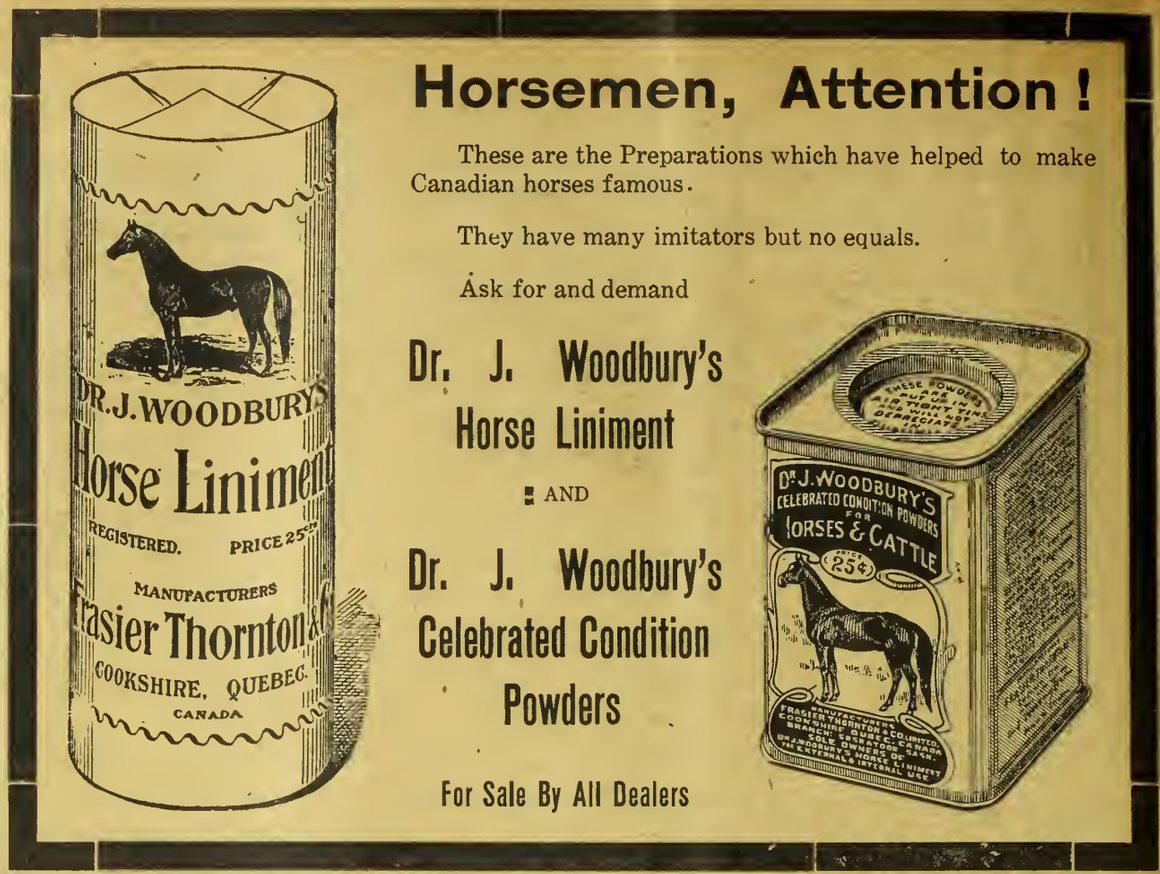
Prevention.

The expedient most usually resorted to is a broad, padded cribbing strap, which is buckled tightly round the neck at the throat; this proves perfectly effectual in a certain proportion of cases but in others it is found unavailing. Other contrivances are the cribbing muzzle and crib-biting and wind-sucking bit. The former prevents the horse from catching hold of the manger or any other object; and as the animal can eat its hay with it on the muzzle need merely be removed when it is eating its grain. The wind-sucking bit consists of a hollow tube, with holes in it, which is placed in the horse's mouth, being fastened to the headstall. Whenever the animal attempts to suck in air with this bit in its mouth the air passes out again through the tube, so that its effort to swallow it is frustrated. Unfortunately, the bit is apt to make the mouth sore after a while, for which reason it is in many cases not practicable to use it for any length of time. Occasionally another contrivance is used, this consisting of a short ash staff, with a buckle and a spring-hook, which is fastened to the headstall at one end and to the roller at the other, its object being to prevent the horse from arching its neck and drawing in its muzzle towards the breast for the purpose of getting air. Crib-biting is frequently successfully checked by putting the animal in a loose-box, where there is no fixed manger or rack, or any other projection of which it could catch hold with its teeth, a wooden box being used for feeding it, which is removed directly after the food has been eaten. Sometimes, however, this plan will cause the horse to start wind-sucking when it finds its attempts at crib-biting foiled, or it may even continue to crib by using its knee as a support for its mouth. Smearing the edge of the manger with tar or some evil smelling substance, which is sometimes recommended as a preventive of cribbing, is rarely found successful in practice.—Argus.

Horse Collars Wrong—Remedy.

As long as the collar is illy formed and bears unduly upon any particular portion of the shoulder, the horse will continue to have blisters until he finally overcomes them by developing callouses. These not infrequently cause deeper and still more troublesome injuries.

The rational and proper proceeding in the case of sore shoulders is to treat the collar. When that is corrected the sore shoulders will disappear, even without treatment, though a reasonable attention will probably hasten their recovery. As put out by the manufacturer, the new collar has two serious defects: First, notwithstanding the fact that the cross-section of the neck at its juncture with the shoulder of the normal draft horse would show some kind of a curved line entirely around, yet the manufacturer makes his collar with a small curve at the top, a larger one at the bottom, and connects these two by long, straight tangents, just as engineers make railroads. This design causes a collar that in size is otherwise a fit to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set too closely to the horse's neck about midway of its length on full-necked horses, and above and below it does not rest down upon the shoulder where it should. The principal pressure is thus concentrated upon a few inches in length upon a very narrow bearing, and as the collar is too loose both above and below, a slight twisting motion is established, highly productive of blisters.

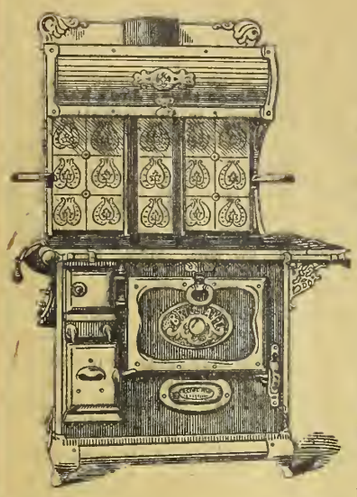
In order to avoid this result the purchaser frequently buys a collar too large. The collar then works up and down and still makes blisters. Second, notwithstanding the fact that the bearing surface of the draft horse's shoulder is either flat or slightly convex, depending mainly upon his condition of flesh, yet the collar maker takes no account of so important a detail, but forms the bearing surface of his collar, particularly at the draft point, as convex as he can get it, so that when placed upon the horses neck, the contact of the two bearing surfaces, collar and shoulder, will be along the narrowest possible surface instead of the broadest possible as it should be. The effect is to again concentrate the pressure and hasten the blister. The horse owner endeavors to avoid this trouble by loading his horse with all kinds of pads under the collar, some of which help matters, but all are inconvenient and generally unnecessary.

What Farmers Can Do.

We can, in a measure, avoid the results of their misdeeds by comparatively little effort. First, by taking a long collar as it comes new from the dealer and soaking it in water for several hours until in a degree pliant. Then, having the horse that is to wear it close at hand for trial, and some rigid arm or device, like the horn of an anvil, to work upon, by bending and shaping the collar until in its general form it actually fits the horse's neck. Second, on each side of the collar upon the surface toward the horse's head and a little above the draft point, just under where the hame rests, cut a cross with your pocket knife, both the vertical and horizontal arms of the cross to be 2 inches or more in length. Then with your fingers on a hook, pull out through these holes enough of the straw or stuffing to entirely remove the convexity on the face part, as the maker calls it. Be sure and take out enough, there is little danger of getting out too much. Then, after the excess is removed and the remaining portion uniformly distributed, take a smooth, round stick like a baseball bat, or smaller, and beat the face of the collar until it is both smooth and of such shape as when placed upon the horse's neck and bearing portion of the collar will rest upon the entire bearing surface of the shoulder.

Your collar will then fit the horse. He can work in it tin comfort. If he already has galls from previous work, you may either treat them or leave them alone. If you have fitted the collar according to these directions they will get well just the same. If his blisters are raised into bunches, make corresponding depressions in the collar, so that the surface will still bear throughout its whole extent. Have no fear of injuring the collar by soaking and cutting it, you cannot do it half the injury that the maker did. The water will soon dry out, and the crosses you will have cut will do but little harm, as the wear a these points is not great. This treatment has been specified for new collars. Old collars have usually been shaped by he horse himself with much pain and trouble, until in a measure they come to fit, just as we used to shape our boots and shoes with our feet before the shoemakers learned how to make them properly. If, however, you have old collars that the horse has been unable to fit by the effort of his shoulders, attack them just as above described for new ones. You can't do such a collar any damage and the worst bungler in the world may help it some.—N. E. Homestead.

STOVE ECONOMY



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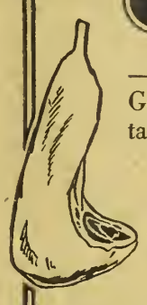

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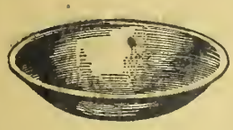

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POULTRY.

Geese as Farm Fowls.

Hundreds of dollars more yearly might be made in farming communities if goose raising was more generally cultivated. It is a branch of farming that women and children can attend to from start to finish with the exception of a little assistance at killing time.

Any farmer who has a cow pasture with running water within reasonable distance from the farm buildings has an ideal place for the rearing of geese. There is no other fowl so intelligent as the goose; it is tractable and easily kept out of mischief. The larger varieties never fly over, and seldom try to get through or under fences, if they have plenty of grazing ground and drinking water. Although they delight in a swimming pond it is not a necessity; they wll find pools along any little stream sufficient for their daily bath, and while goslings are wearing their garments of down they thrive better to be on the water very little.

Geese are almost immune from disease; I have reared hundreds and never lost one from sickness. But for many years I did lose a large percentage of my goslings, as did my neighbors, always before the goslings were feathered out. I watched long and patiently before I discovered the cause, also a preventative, which I will explain later.

The Embdens are an excellent breed of geese; they are pure white and yield an abundance of feathers. They are faithful sitters and good mothers. The Tolouse is a larger and more rapidly growing bird, and in some localities is more popular. The latter breed are prolific layers, often laying more than twice the number they can incubate. Fifteen or sixteen eggs are as many as should be given to the largest goose; more would mean loss from the outside eggs in the nest becoming chilled. The first of the clutch can be set under hens, and though hens are not natural mothers for the little foraging goslings, if a little extra trouble is taken in keeping the hen cooped, and moving the coop around occasionally to "pastures green," she makes a very good foster mother. Whenever possible, however, give me the goose mother.

The Laying Season.

Slaked lime, leached hard wood ashes should be left within reach of laying geese. Feed very little grain through the laying season; give plenty of bran mash, corn fodder, clover hay and vegetables. Little food of any kind is required after the grass begins to grow.

Geese usually begin to lay about the first of March. When you see an old goose coming from her house picking up straws and casting them behind her you may know she has laid an egg, or is thinking seriously of doing so. Now is the time to look after the nests. Each goose must have her own separate nesting place, always on the ground floor, and space enough partitoned off for her to turn around easily. Put two or three handfuls of straw into each pen, and see that the goose goes into her own apartment to lay her first egg. This will prevent all disturbance, as each goose will generally keep her own nest.

A goose lays every other day. Removing the egg from the nest, where she has overed it with straw, does not discourage Mother Goose; on every second day she returns, pokes over the straw and deposits another egg, then marches noisy from the goose house and joins the other geese. The eggs should be removed from the nests when laid, placed in a box or pan on cotton wool, covered with a light flannel and kept in a cool place. Turn the eggs evry other day; if this is negected the heavy yolks will adhere to the shell.

When a goose becomes broody let her sit two or three days before giving her her eggs; in the meantime she will shape and feather her nest. To make the nest remove the straw and feathers, turn in half a bushel of fine, dry chip dirt—or better still, dry horse manure—add as much dry chaff, hollow out the nest and put one of the two armfuls on top. Make the nest shallow and roomy, and finally add the feathers you had taken from the nest. It is then ready for the eggs.

Hatching Time.

A goose incubates four weeks; the goslings pip 24 hours before hatching. Never disturb the geese at hatching time; they will manage all right if left alone. If there is a weakling unable to get from the shell without assistance, better leave it there, as it would not be likely to amount to much if it lived.

I once had a pen of five geese, sitting in separate stalls side by side, all due to hatch at the same time. Three geese came off with five goslings; the fourth followed with two. They began feeding outside, and, much disappointed over the poor hatch, I went into the goose house to ook for the fifth goose, expecting to find her sitting on a nest of addle eggs. I found on her nest, but to my surprise her pen was iterally filled with yellow goslings; some were sitting on her back, and others were peeping out from under her wings. and she was mothering them in evident pride and satisfaction. There were 48 in all, and I never understood the secret of the little goose atracting the goslings from their rightful mothers. I found, however, before the season was over, that she was by far the best mother and caretaker in the flock.

Geese are very nervous when they first come off with their young, and should be disturbed as little as possible. Goslings are clumsy little fellows and not very strong the first day out, but if the day is warm and sunshiny they will gain strength remarkably fast. Feed a little wheat bran mush the first few days, and provide plenty of water in shallow pans or troughs raised an inch or two from the ground, just high enough for the goslings to reach the water easily and not topple over into it.

Gosling Mortality.

Sixty or seventy years ago New England grandmothers tried goose raising, and sooner or later nearly all of them gave it up because the goslings were so prone to die while in pinfeather. The cause of this no one could explain. The flock would be all right when they went to pasture in the morning; at night perhaps half or more of their number would be found dead along the road where they had fallen on their way home. The next morning what remained of the flock would be unable o walk, and their feet and legs would be hot and swollen. Sometimes they lived for several days, but none ever recovered. After years of discouragement and loss the cause of all the trouble was found to be toad polliwog poisoning, the goslings having eaten the polliwogs from pools and stagnant ponds. Common salt was found to be an antidote and it put an end to this menace of goose raising.

Feed a salted mash every morning before the goslings go to pasture, the quantity of salt about the same as one would use in preparng food for the table; or what is just as effectual, slightly salt their dringing water before they go out in the morning. After the goslings are fully feathered there is no more danger from this poisoning. Frog polliwogs are not poisonous to them.

Plucking Geese.

Geese may be plucked three or four times a year; the ganders as soon as the geese are through laying, the geese not until after the goslings are a week or two old. Geese that aret o be wintered over in a cold climate should not be closely plucked the last of the season. Goslings lose their feathers when ripe; a light plucking does them no harm and saves the feathers. To pluck a goose, tie her legs together, put a thin stocking over her head and hold her firmly in the lap. Do not remove too many feathers at once, and never the bolster feathers that support the wings. Ripe feathers pluck easily, and cause the goose little inconvenience; unripe feathers pluck hard and are of proper quality, the quills blood-tipped. As soon as plucked put the feathers in moth-proof sacks where they are to cure.

Two or three weeks before killing begin feeding corn; this with plenty of dringing water is all that is necessary for fattening. Kill the same as Turkeys or other poultry, cut off the wings at the first joint, hold the dead goose by the head and feet and immerse in boiling water; then wrap in a thick blanket and let steam 10 or 15 minutes. Pluck the feathers to within two or three inches of the head. As soon as plucked have ready a pan of very thin boiled starch with which to moisten the skin; this lays the down and gives the body a smooth appearance.

Goose wings sell for 25 cents a pair; live feathers for $1.50 to $2.00 per pound, and dead feathers for a ittle less, prices varying according to quality.

Backward Chicks.

In every flock of brooder chicks, no matter how promising, there will usually turn out to be from one to half a dozen or more that fail to keep pace with the rest. This is not always due to natural defection, but may be the result of various circumstances or conditions, by reason of which certain individuals get a setback or poor start. A careful glance does not discover them. The breeder may flatter himself, as he watches an animated bunch, all seemingly as "bright as buttons," that he is to raise every chick. But some morning he is surprised to find one dead. Others soon follow. Then he looks over his charges more closely. He finds that several are tottly on their legs, that while they rush in with the others at feeding time, they are so buffeted about by their stronger brothers that they eat but little, and that they are weakly and not growing as fast as the rest. These may be saved by a little extra attention, as doubtless a portion of the dead ones might have been saved if taken befcre it was too late.

I always keep close watch of my flocks for first signs of these laggards, and fancy I have developed considerable expertness in the early detection of them. On first spotting a suspect, I grab him up and feel of his crop. If it is empty into the feed-dipper he goes, which should be deep enough so he cannot jump out, as he may try to do at first. As I chore about the brooder, I keep an eye out for any other not up to size, weak-legged, or with an injured eye or foot, or defective in any way, until I have perhaps a half-dozen in the dipper helping themselves. This I repeat daily, being careful to crumb in a good bit of hard boiled egg to go with the "chick-feed," and in "extreme cases providing flour bread soaked in warm milk. It is surprising how soon these favored ones will learn to come up to you, like little beggars, each meal, not forgetting the habit long after they are able to fight their way with the rest

Of course, there are thousands of chicks hatched each year that cannot be made, by human power, to live more than a few days. Erors in incubating and breeding (mostly the latter) are responsible for them, and it is utterly useless to bother with them. They look about as well as the others perhaps tor the first few days, but the experienced breeder soon learns to distinguish them, from their lack of vigor and weight, and the fact that although they may make quite a pretense of eating, but little is ever found in their crops. It is not of this cass I

PEERLESS PERFECTION
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Every form of poultry life is more or less afflicted with lice. They suck the blood and sap the life of your fowls, thus seriously interfering with egg production. **PRATTS Powdered Lice Killer** instantly reaches and kills all lice on hens and chicks, and destroys insects and bugs on vines, plants and flowers. Sifter-top cans, 25c and 50c.

PRATTS Liquid Disinfectant keeps the poultry houses clean and sanitary. Highly concentrated.

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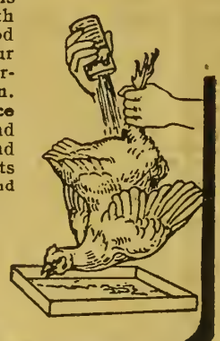

RED ROSE TEA "is good tea"

Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

Dr. Morse's Indian Root Pills 48

write, but of the chick with a fairy good constitution that meets with a setback of some sort. He may not get quite what he needs to eat some day, or gets crowded or overheated during the night. This woudn't matter much if he were a member of the old biddy's flock of 10 or 12, but one of a rioting mass of 50 or 100 he is borne hither and thither, in his weakened condition, until he quite loses heart. I have brought chicks like this around all right, when I actually had to force soaked bread down their throats at the outset, and have carried those afflicted with all sorts of deformities along to the broiler stage. The very worst forms of leg-weakness, too, can usually be cured by the simple means indicated above. Some say leg-weakness is caused by over-feeding. Perhaps true, but somehow, the more I can get my cripples to eat, the quicker they get strong on their pins. Try the plan for yourselves. Give all the ailing chicks free access to the contents of the grain-dipper, being careful not to keep them out of the brooder long enough to get chilled. If this doesn't bring them out right, the chanches are nothing else will.—John L. Woodbury, Cornish, Me.

Poultry Culture.

Sanitation and Disease.—Good sanitation means clean houses and clean yards. A common shortcoming is to neglect the poultry house until the droppings acumulate in such quantity as to menace the health of the fowls. as often as once or twice a week the dropping board should be cleaned. Good sanitation means sunlight, fresh air, absence of dampness, pure water and opportunity for exercise; it means the removal of sick fowls from the flock and the swift cremation of any that may die, as well as dead animals of any kind that may be found on the premises.

Medicines and stimulants are not necessary to keep a fowl in health. A healthful environment is better. Drugs often undermine the physical vigor and bring on a condition of disease. The notion that egg production must be stimulated by cayenne pepper, coperas, Venetian red or Spanish fly is a serious laying, even under normal conditions aying, even undrr normal conditions, so weakens the vitality as to seriously reduce the facility of eggs. What must be the effect when egg production is unnaturally forced by stimulating drugs?

Not the least feature of good sanitation is the dust bath in winter to fortify against the invasion of lice and mites. Overcrowding is a menace to health. So also is pampering. On the farm, where a free range invites to exercise and there is an abundance of sunlight and pure air, health should be the rule and disease rare occurance.

Disease in the flock has been the stumbling block of many a hopeful poultryman. Here are a few general principles for prevention: The foundation stock should be strong and vigorous if we expect to maintain the stock in a healthy condition. The environment must be kept as nearly ideal as possible at all times. When disease appears in a flock these remedies must be promptly applied.

White Diarrhoea.—This most fatal of all diseases is handed down from hen to chick. It is caused by a species of bacteria known as Bacterium Pullorum. It secures lodgment in the ovary and develops there. When the egg is laid some of the cells are found in the yolk. When the chick hatches it becomes infected with the disease. Other hicks contract the disease from the infected ones. Nearly all die and the few that survive have low vitality, and, if kept as breeders, are sure to perpetuate the disease in their offspring.

Treatment.—Inject all fowls from which eggs are to be used for hatching with ten drops of Oculum. Disinfect the incubator with a sppray of creoline sponge the eggs with the alcohol, and supply the chicks in the brooder with green food.

White Comb is a species of mould. The remedy is to place the fowls in dry quarters and apply a mixture of lard and iodoform, or even lard and sulphur.

Roup.—This is probably dreaded more than any other disease. There need be no fear of it if the environment is made sanitary. The common remedy is the axe. Isolate all sick fowls by placing them in warm, dry quarters and applying to the head a mixture of lard and sulphur, giving a liberal portion internally. About three applications will cure the worst cases. —H. A. McKeene, Secretary Illinois Farmers' Institute, Springfield, Ill.

To Shippers of Eggs.

The following instructions to merchants who ship eggs are sent out by the Swift Canadian Co. Farmers may profit by the suggestions:

1. If buying from others, insist on first quaity eggs only.
2. Keep in mind the perishable nature of the product, and do not hold eggs, but ship while fresh.
3. Never keep eggs near kerosene, onions. fish, or any other strong smelling substance; they readily absorb odors.
4. Never expose eggs for market to direct sunlight, rain, or to extreme heat from any source.
5. Do not wash eggs.
6. All eggs should be shipped in good strong cases, with fillers in good condition, and packed with excelsior flats on top and bottom. Do not use newspapers as flats.
7. Remember that 10 per cent of the eggs produced are wasted due to improper handling
8. Tag all cases plainly, so as to assure prompt and proper delivery.
9. When shipping, always mail bill of loading, express receipt, and memorandum invoice. Your shipments can then be properly checked and in case a shortage occurs, it will not be necessary for you to write full particulars after you receive your returns.

Cleanliness an Important Factor.

There are two most undesirabe conditions resulting from the usual accumulation of filth around the poultry buildings on most farms.

First, it encourages disease, ice and mite pests. Second, these influences combine to force the birds into a sickly, unhealthy condition, curtaiing the profits from both the sale of fowls and the eggs produced by the flock.

Cleanliness is very easily maintained in and around the poutry buildings by frequent removal of the droppings from the roosting house (if every day, so much the better); frequent changing of the nestings; and a knock-out blow against the lice and mites every time they are discovered about the yards.

Examine the roost occasionally, looking closely on the underside of them for mites; likewise, keep a close watch on the nest boxes and if any of the pests are discovered spray the building and shut the chickens out for a day or two, the roosts being left out out in the sun during the day. If lice are on the birds, powder them thoroughly with lice killer, or if the weather is warm enough dip them in the ordinary solution used for that purpose.

McCormick—The Binder of Satisfactory Service

HERE are some of the things that stand back of McCormick binder service. On a McCormick binder the reel has a wide range of adjustments and handles successfully, tall, short, down or tangled grain. A third packer assists in handling grain that is full of undergrowth or that is very short. The tops of the guards are nearly level with the top of the platform, allowing short grain to pass freely without obstructing the guards or knives.

The floating elevator on a McCormick binder handles grain in any quantity and does not clog. The cutter bar is built to use either smooth section or serrated knives. The improved McCormick knotter does good work without the usual close adjustments.

The McCormick local agent will explain these and other important features on the McCormick binders which are built especially to meet Western Canadian conditions. You can get catalogues from him, or, by writing the nearest branch house.

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Amherst, - - Nova Scotia

An Egg-Laying Record.

Pictou Advocate: Mr. Arthur Davidson, of Waterside, has a flock of 70 hens, which laid 1,782 eggs in the months of March, 107 dozen, all but two eggs. At an average of 30 cents a dozen this figures out a nice little sum of money. In February Mr. Davidson sold 66 dozen of eggs in addition to what was used on the farm. These hens are simply barn-yards, a mixture of all breeds.

One of the most important points in egg production is to keep the male away from all the hens whose eggs are being used for commercial purposes. Fertilized eggs are very easy to spoil unfertilized ones can never be spoiled by partial hatching, and this is where the trouble has begun with most rotten eggs.

Valley Farmers Visit Truro.

The annual farmers excursion from Annapolis Valley points to the College farm, Truro, took place on the 19th inst. A large number of farmers with their wives and families enjoyed the excursion and spent a profitable day at the College viewing the ideal methods that are there practised under the careful management of Prof. Cumming and his efficient, obliging staff.

FOR HOME AND COUNTY

This Department is devoted to the best interests of the Homes of the Maritime Provinces. Contributors to these columns are leaders in the "For Home and County" movement. This Department is yours. Use it to the best advantage by sending us timely suggestions, short articles dealing with your experiences, and reports of your Institute meetings.

From the Old World to the New.

Some fifty years ago, a Scotsman, by the name of Malcolm McKenzie, residing in Scotland was in very poor circumstances. His family consistsed of a wife and seven children, four daughters and three sons. Mr. McKenzie was a mason by trade and always had plenty of work, and his wife and eldest daughter did fine sewing and lace making, but with all their efforts, they coud barely earn enough to keep the wolf from the door, and it is a fact that the hard-working father and mother often went hungry or scantily clad that their children might not suffer. It can be readily imagined that in an over-crowded town like Linlithgow, where rent and provisions were high, and wages low, that the problem of providing for a family of nine was a serious one, and ofen had Malcolm McKenzie and his wife held consultations when their children were snug in bed, as to how they might better their circumstances or reduce their expenses but all to no purpose. The anxious parents always talked such matters over alone and never in the presence of their children whom they loved so dearly. "They'll have cares enough to trouble them in life as the grow older" they used to say, "so we'll not burden their young minds nor cause them any worry as long as we can shield them from it."

One day as Malcolm McKenzie was at work building a cellar wall for a man by the name of Davidson, by chance he over-heard his employer talking to a strange gentleman, whom he rightly conjectured was a Canadian by the run of his conversation, which was in this wise: "I tell you Davidson," he was saying, I can't manage to see how so many people manage to live in these Old Country towns; the people moving about reminds me of bees around a hive.

"Yes, this town, at any rate, is pretty well populated," laughed Mr. Davidson, "and weare all very much alive, too, but there are some very poor people here just the same."

"There must certainly be," replied the Canadian. "I have visited many towns in both England and Scotland, and I am sure that they are all overcrowded. How unevenly the world is divided. Here, you have hundreds of people more than you need for the good of the country, and in Canada, we don't have half enough. Why don't some of them pack up and go to Canada or the 'new world' as you people call our fair Dominion, and take up farms. There are hundreds of acres there to be got for a song, both in the western part and in the Maritime Provinces. A man can take up a piece of land there, I mean in Nova Scotia or New Brunswick, covered with timber more than enough to pay for it and set him on his feet. The soil is fertile and the climate ideal. I tell you Davidson, Canada is the coming land, good settlers are all that's needed."

"I dare say," answered Mr. Davidson, "no doubt many of us would be better off if we were out there digging in your Canadian soil, and raising our living from mother earth."

"Now! that's the time you said it, Davidson, for there are hundreds and hundreds of acres just waiting to be taken up. We have pioneers in both New Brunswick and Nova Scotia and they are prospering, too, and the happiest people living. I would rejoice to hear of some of your stalwart men coming out."

"I presume, by your glowing account, they might do all right," replied Mr. Davidson, with a smile of derision, "but the majority of the working class here are too poor to live, let alone have money to go prospecting to Canada." "Yes, I suppose that's true," answered the stranger.

"Which part of this wonderful Canada do you reside in Mr. Fletcher?" asked Mr. Davidson.

"From Maitland, Nova Scotia. I have a cousin, though, who started farming in pioneer style in the back woods of central New Brunswick eight years ago and now he is in comfortable circumstances."

As these gentlemen passed out of sight and hearing, Malcolm McKenzie, the mason, sat down in serious thought. "If I were only in Canada," he thought, "and could take up some land where we could raise our own vegetables, keep some cows and in a few years make a home of our own. I'm tired of paying rent, moving from tenement to tenement and barely feeding and clothing the family. If I had the money I've paid out for rent alone since Alice and I have been married, I'll bet I could go to Canada and buy a good farm. I wish I'd spoken to that gentleman and asked him more about it, but I'll tell Alice what I heard him say and I'll make it my business to go see him tomorrow and tell him that I happened to hear his conversation about Canada and enquire more into the particulars."

Soon the hard-working mason arose and continued his work in a pre-occupied mood. His thoughs were full of Canada. That night after the children were in bed and he and his wife talked over their joys and sorrows, hopes and fears of the day, as was their custom, he told her of the conversation he had accidentally overheard between Mr. Davidson and a Canadian gentleman by the name of Fletcher.

"Oh, Malcolm!" cried his wife, "if we could only go. Think, we could all help you on the farm and raise everything we'd need, instead of buy, buy, all the time, we would have all our own butter, eggs, meat, vegetables, in fact, everything. I lived two years on a farm years ago, and I always look back to the time as one of the brightest spots in my life. I've told the children about those times so often, and they will listen so eagerly and then ask, "why can't we live on a farm, now, mamma?"

"Yes, I know," replied her husband, "I spent one summer on a farm with my uncle just before we were married and I liked it very much and was getting to know considerable about the work. How often we have talked about those times and longed to give our children the happiness and freedom of the country. I should have taken up a farm in the highlands but father urged me to continue at the masonry."

"But if we could go to Canada, Malcolm," continued his wife. "Think of the advantages! I have ofen read of the acres and acres of land yet to be taken up but the thought never occurred to me for us to go."

"But, my dear, I'm afraid you don't know the hard-ships and privations the pioneer people have to endure, I could not think of allowing you to face them."

"But my dear husband, are we not facing hardships and privations here every day?"

"Yes, Alice, we certainly are, and the future looks black and unpromising before us. If I could only go to Canada a cauple of years first."

"No Malcolm," answered his wife, "I shall never allow you to go alone, if we ever go we must all go together."

"Much as I would like o go Alice, I see no prospects of it for years, or at least until the children get old enough to help earn money to take us there."

"Yes, that's so answered Mrs. McKenzie, "we can't save anything yet, but only think Malcolm, if we ever could go and take up a farm, what help the children will be to us. Here we cannot afford to educate them and they play about the streets with all classes of children. Our poverty debars us from mingling with our equals and I shall make no friends among the degraded people of the town. Mr. and Mrs. Davidson and Harry Gordon are our only friends."

"Yes, dear, I know," replied her husband. "It is a hard way to bring up the children in idleness, poverty and bad company. We can do no better for the present, however, but I intend to talk with Mr. Davidsson and the Canadian man to-morrow and tell them I accidentally heard part of their conversation regarding Canada, and how much we are interested, and the hard struggle we are having to live here. Perhaps he can tell me about the conditions of taking up land in the pioneer style, it may be, our luck will change, and it will be no harm to have the information."

"That's so," returned his wife, hopefully, "we should not complain while we all have our health, but trust in God to plan our future."

Malcolm McKenzie and his wife were blessed with happy, hopeful dispositions. They worked hard and did the best they could to get along, but they never wasted time in useless complaining, so long as they could provide for the children and make them happy, they were happy themselves. Often the thoughts of the future troubled them when they might not be able to provide for all, but they did not let it have a depressing upon their spirits.

CHAPTER II.

Several weeks later as Mr. and Mrs. William Davidson sat conversing before a cosy fire in their handsome residence in Linlthgow, Scotland, Mr. Davidson suddenly exclaimed turning to his wife. "I'm really going o buy that laundry, Sarah. You know I told you about Harley's laundry being closed up, and there has been many complaints about the work done at the Cornet laundry, so I'm going to buy the Harley and set up, myself, I believe there's money in it."

"Yes, I should think there would be money in the laundry business, providing they do first class work," his wife replied.

"That's what I think," returned Mr. Davidson, "I am going to make all the arrangements this week and be ready to start operations next Monday if possible. I think I can get Mrs. Malcolm McKenzie and their two or three eldest children to work in it. You know Mrs. McKenzie is a very capable woman at all kinds of work. I spoke to Malcolm about it yesterday and he was almost sure that his wife would go."

"Oh, William, I'm glad you spoke about them. They are dreadfully poor, I know, and such a large family, it has puzzled me how they manage to live at all. Mrs. McKenzie is a nice, lady-like woman and always does her work so nicely. I always get her to do all my sewing, in fact, any work I can to help them. Go see her William, by all means, before engaging any one else."

"That I will," replied her husband, "she's a very nice woman, and Malcolm's a fine man, too. Many's the job I've put in his way. He is in a great way to go to Canada and take up land. He overheard me talking to Mr. Fletcher, the Canadian from Nova Scotia, last week, and he was giving Canada in general a great puff, and the many advantages there for the pioneer. Really, Sarah, I believe a family like Malcolm McKenzie's to once get a start in Canada, if they had their health, their fortunes would be made."

"Ugh, pioneer life," exclaimed Mrs. Davidson in disgust, "the lonliness and hardships make me shiver to think of them. I don't believe Mrs. McKenzie would ever consent to go."

Mr. Davidson laughed. "But Malcolm tells me, my dear," he said, "that she is very anxious to go, so you see she has better courage than yourself, after all. However, if I get them into my laundry to work and making an easier living, I trust they will forget the new world entirely."

So William Davidson bought the Harley laundry and Mrs. McKenzie and her two eldest children, Ellen and George were employed in it. Fanny, the second daughter had to remain at home to look after the work and care for the younger children in her mother's absence. Mr. McKenzie continued working at his trade and found steady work.

It will be readily understoodt hat the McKenzie family were now living more comfortable, and as the weeks and months slipped by, saved a little money. But how about going to Canada? Did hey abandon the idea, now that they were living more comfortably? Oh no, it was the talk of them all, the parents having told the children sometime before, of their desire to go out to Canada, and poor children, they were wild with delight at the prospect, and many were the questions asked of what the life would be like. It was al-

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Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, contains no narcotic or harmful drugs, and to-day holds the record of being the most successful remedy for female ills we know of, and thousands of voluntary testimonials on file in the Pinkham laboratory at Lynn, Mass., seem to prove this fact.

For thirty years it has been the standard remedy for female ills, and has restored the health of thousands of women who have been troubled with such ailments as displacements, inflammation, ulceration, tumors, irregularities, etc.

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JULY and AUGUST 22

G. Y. CHOWN, Registrar, Kingston, Ont.

most wholly the topic of conversation of their evenings after work.

"Now, papa, tell us what it will be like when we go o Canada," one of the little folks would ask for the hundredeth time.

"Well my child," the father would reply, "we must first sail many, many days to reach Canada, then we must buy horses and wagons and drive many miles into the woods, then cut down trees and build a house, after which we will dig up the soil and plant our seeds. And you must remember we will be miles and miles from other people, no trains nor teams nor children for you to play with, nothing but woods all around. How will you like that?"

"Oh, we'll like that," they would cry, "all of us will be there together, won't we?"

"Yes, all of us."

"Then we'll be happy," they would say. "Horses to drive, cows to milk, chickens to feed, and help you to raise everything."

"Did you get Mr. Davidson to write to that man in Nova Scotia to find out how new setters get their land, and when is he best time to go," his wife asked.

"Yes, I've been taking to him about it and he told me he would give me his address and I could write him personally. He said also he would write to him too, that I was anxious to go."

So the sequel of the matter was that Mr. Joseph Fletcher, Maitland, N. S., received two letters six weeks later from far-off Scotand the purport of which was that a gentleman by the name of Malcolm McKenzie wished to learn all the particulars he could of the conditions of taking up land, the best part of Canada to locate, and the best time of the year to reach Canada.

Several weeks later William Davidson received a reply from Mr. Flecher saying: "He was glad to hear that one Scotsman, at least, had come to his senses, and realized the possibilities of success in Canada. Don't discourage him," he continued. "I can't just recommend any part of this province as yet, but I have written a cousin of mine in New Brunswick. I hear there is land there of the very best, and the climate I know is ideal. As soon as I get a reply from him will write Mr. McKenzie, with all the information I can receive to assist him."

Mr. Davidson gave Mr. McKenzie his letter, which he read to his family that evening.

The children called regularly at the post office for Mr. Flettcher's promised letter to their father, day after day for nearly two months and at last were rewarded by receiving a plump package for their father, bearing a Canadian stamp. What anxious children they were as they waited for the return of their parents that evening and how eagerly the large letter was thrust into his hand with the exclamation of, " there papa, we'll know now if we are going to Canada won't we?"

"I expect we will my dears," he answered as he gave them a kiss all around, "but we won't read it until after tea, then we shall all sit around the fire and take the evening to master its contents."

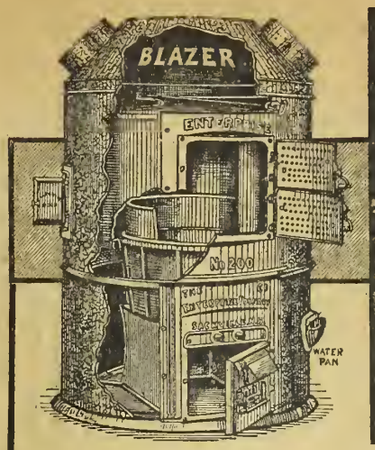
So the eager children had to be content. Nevertheless, a couple of hours later when the mother had her housesold duties all performed and they gathered around the fire, Malcolm McKenzie broke the seal and read the letter aloud, which was as follows:—

Maitland, N. S.,
Feb. 1st, 1863.

Mr. Malcolm McKenzie,
Linlithgow, Scotland.

My Dear Sir,

I received your letter a long time ago requesting information about Canada and the mode of taking up land. I also received a letter from Mr William Davidson, your friend, also requesting me to interest myself in your behalf, said letter I answered some time ago. I did not answer your letter before as I have been investigating matters a little. I am sorry to say I can't seem



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S. J. GOODLIFFE,

Sussex Concrete Products Plant, - Sussex, N. B.

to hear of any suitable location for you in Nova Scotia, but I wrote to my cousin in New Brunswick, who went there eight years ago and began farming in real pioneer style, and who is now prospering. He replied at once, saying "if this Mr. McKenzie, of Scotand, is coming out to take up a new farm, he can't do better than to come here. My nearest neighbor is eleven miles away but there is a tract of excellent land with a fine growth of lumber consisting of spruce, pine, cedar and the best of hard-wood. There is no cleared land at all, but the soil is a black loam and very fertile. The piece of land I refer to contains one hundred and sixty acres, and is situated half way between my place and my nearest neighbor, so you see he will have a neighbor on each side o him, about five miles away. The best time for him to arrive here is early in April, he then will have time enough to build a log shanty before croping time. Next fall and winter he can get out lumber for sale, clearing his land at the same time. There is also a big demand for Shingles, which we make by shaving them out of the soft lumber. If he wants to start farming from the stumps, this is his chance. I guarantee no failure if he is willing to work My wife and I are anxious to have them come as we want nearer neighbors. You say he has a large family, so much the better, he will be having more help every year. You better send this fellow my address and he can write me if he likes. I am also sending you papers from the government about the piece of land and the method and conditions of getting it, which will interest him. He, however, can arrange all that after he gets here." That's about all he says concerning you," wrote Mr. Davidson. You will find the government papers he speaks of encosed, also his address, if you wish to write him.

In closing I will say if you decide to go to New Brunswick and settle you will find Thomas a good friend and I feel sure this is an excellent chance for you. Hoping this information will be satisfactory and that I will hear from you again if I can aid you in any way, I am

Yours truly,
Joseph Fletcher.

P. S. This is my cousin's address: Mr. Thomas Richardson, Ruther Glen, Carleton Co, New Brunswick, Canada.

(Continued in next issue)

The Saving of Child Life.

Of 36,686 deaths in Nova Scotia during the five years' period ended Sept. 30th, 1913, 7,153 (19.5 pepr cent. of the total), ocurred in children under the age of one year.

After the end of the first year, the first year the proportion of deaths amongst children decreased as age increased, as follows: during secocnd year 3.3 per cent. of the total; during the third year, 1.7 per cent. of the total; during the fourth year, 1.1 per cent. of the total; during the fifth year .9 per cent. of total.

An analysis of the statistics shows that three of the commoner infectious diseases have a special bearing ppon mortality in young children. Thus 55 per cent. of all deaths from measles, and 83 per cent. of all deaths from whooping cough occurred in children who were less than two years of age, while nearly 60 per cent. of those whose death resulted from scarlet fever were under the age of five years. This is in keeping with the experiene of most countries. Both measles and whooping cough are especially apt to destroy life in infancy, while scarlet fever claims its largest share of victims from those who are about five or six years of age.

During the five years under consideration, 191 lives were lost to our province through measles, 229 through scarlet fever, and 366 through whooping cough. Such figures indicate very cearly that these diseases are not the trifling ailments which they are commonly thought to be. Moreover, even when they do not kill they often leave behind exceedingly troublesome and disabling conditions. and they frequently open the way to infection by the germs of pneumonia, tuberculosis and other diseases.

It is the consensus of opinion that increasing age not only renders one less susceptible to these diseases, but that it also protects against a fatal issue and against serious complications and sequelae in those who are attacked. For these reasons, it follows that every effort should be made to protect young children against infection by these,, as by the other, infectious diseases. Deliberate exposure of young children to such infections should be regarded as a criminal procedure—one which not only endangers the life or subsequent healthfulness of the child so exposed by which establishes an additional focus from which infection may spread to other children. The longer the child is enabled to escape infection, the more likely it is to escape either completely or with a comparatively mild attack.

Sixteen per cent. of the deaths which occurred during the first year, and thirteen per cent. of those which occurred during the second year of life, resuted from infantile diarrhoea. This condition is mainly caused by improper feeding, and is one of the diseases which might be completely abolished by careful attention to certain simple rules. Success, however, necessitates the co-operation of all who deal in or handle milk, and a thorough system of milk inspection and control is a prime necessity. It is particularly amongst "hand fed" infants that diarrhoeal troubles are found, and mothers should know how to prepare and preserve the milk for their babies.

In five years, no less than 1143 children under one year of age, and 157 children between one and two years of age, died of infantile diarrhoea in Nova Scotia. These deaths were almost confined to the hot months. It is therefore particularly during warm weather, that the greatest care must be given to the feeding of young children. Carelessness at this period may cost your baby its life or may condemn it to a lifelong invalidism. "They who pine in their youth can never look spruce in their old age."

The Department of the Public Health, Nova Scotia, isues a booklet on the care of the baby which may be had free on application to the Provincial Health Officer, Halifax, or to any Medical Heealth Officer in the province.

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

To Can Raspberries Without Sugar.

Pick berries early in the day before they are heated by the sun, put in preserving kettle with enough cold water to almost cover, and bring them to a boil. When all are thoroughly heated through, turn into jars and seal while hot. We have canned them by this method for many years, and always with success.

Gooseberry Jelly.

Boil 4 pounds sugar and 3 cups water together until it is ready to jelly when cooled. To this syrup add an equal measure of gooseberry juice, let it boil a few minutes, and then turn into jelly glasses.

MARITIME DELIVERY STATIONS

IN order to give our customers in the Maritime Provinces quicker and better service we have opened delivery stations in Halifax, N. S. and St. John, N. B. At these stations we will always have large stocks of

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Mutual Helpfulness.

In these days of rush and hurry, of commercialism and greed of gain —which reduced to the last analysis is only and purely selfishness—that loftier and finer virute of mutual helpfulness seems in large measure to be crowded out. Now it is this spirit of helpfulness that the organizers and promoters of Women's Institutes aim to create.

The Hon. John Dryden, for many years Minister of Agriculture for Ontario, regarded the organization of Women's Institutes as the greatest work accomplished, during his tenure of office; and the Hon. C. C. James characterized them as one of the greatest achievements of the twentieth century. Surely, then, some benefits may be had or hoped for from their organization and maintenance in our province.

As the Institute has, for its main object the improvement of the social life of the community in general, and of the home in particular, in what way may it be a benefit to us? For it is said, that the home of a woman lies nearer to her heart than anything else.

Perhaps one of the many ways it might be helpful is by producing a spirit of sociability and neighborliness, and also by giving us an opportunity to look away for a short time from the confines of our own, perhaps, restricted environments and see some of the conveniences and accomplishments of others.

One would naturally think of cooking as one of the subjects to be discussed with interest at the meetings for good cooking is one of the essentials of good house-keeping, but not by any means, the only one. And when good house-keeping has been thoroughly attained to it may not always mean good home-making. Although one cannot be realized without the other. Yet, there might be a danger of having things so scrupulously clean and straight-laced that one could not feel comfortable lest at some time the cushions, rugs or draperies should be put out of their proper order.

Perhaps one of the great essentials of home-making is the coveted virtue of amiability, which is so much easier described than attained.

Another feature of home-making is hospitality, which we are enjoined to use without grudging, and which we all so much admire as recipients. And, should not all the family feel free to invite to their home occasionally their friends and associates? If not, they will go elsewhere, and the ties of home will be severed rather than drawn closer together, for we never forget the associations of the old home, away back in our childhood days, when the enjoyment of life did not depend so much on the abundance of things which we possessed.

Then, there are so many qualifications required nowadays in the modern housekeeper and home-maker that life assumes a very serious aspect when viewed from the standpoint of modern scientists, with regard to the rearing of children and the care of grown-ups, when we remember that it is claimed by those scientists that half a million lives are cut short and five million people are made ill yearly by preventable diseases caused by germs, bacteria, microbes, atoms, etc., etc.

That six hundred infants die under two years, and millions of children fail to reach the best physical development because their parents or guardians did not understand how to care for them in the light of science. One cannot but wonder what possible geniuses some of us might have developed into had science only come to our rescue in our infancy. But, no doubt, life was easier when, as Kipling aptly puts it, there were

"No theories of germs to chill affections budding blisses,
When ardent lovers took their fill, no microbes on their kisses,
How happy they were, not to know the germ fad, forty years ago."

But you will say this sociability, this hospitality, this scientific care of homes and their inmates requires time, and we are so busy now, from whence then, this extra time?

Something must surely be left out, but what. Perhaps by making a closer study of our work we might plan to leave out some of the non-essentials, for

"Labor with what zeal we will,
Something still remains undone,
Something unaccomplished still
Awaits the rising of the sun."

Yet, when all the material side has been summed up of house-keeping, cooking, social entertaining and kindred duties and pleasures, there is yet something which far outweighs these things in importance to us who are mothers, viz., the moulding of the character of those committed to our care; for we realize that as the twig is bent the tree is inclined.

How important then that the young minds should be stored with the elements which make for the purity of life, and nobility of character. —By Mrs. M. W. Townsend, Grangemount, P. E.I.

SCROGGIE'S mid-summer sale

The Scroggie Midsummer Sale Catalog

is the most wonderful book of summer bargains we have ever issued. It contains bargains for men, women and children—bargains in things for the home, sporting goods—things that will make summer life worth while. It will be ready for mailing soon. Fill in the coupon, mail it to-day, and your copy will be mailed you the minute it comes off the press.

Every article quoted in this Catalog will be at a big price reduction

The dress section contains all the cleverest of summer dress creations at most unusual bargain prices—in other sections there is a host of bargains in catchy summer apparel, dress accessories, and other smart summer suggestions at big savings.
If you are interested in getting the best merchandise that the world has to offer at the lowest prices, you should not be without a Scroggie Summer Sale Catalog in your home.

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Town.....
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When you shop from this Summer Catalog you are buying in Montreal's Largest Department Store

You get plain facts and figures, more reliable than the statement of clerks—you have merchandise so faithfully shown you that you can not only admire the pictures, but you can see the fineness of the thread and almost feel the soft nap of the fabric.
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W. H. Scroggie Limited
MONTREAL

Sunshine Jam.

To 1 pound berries allow ¾ pound sugar, place on back of stove and stir until sugar is dissolved, then let come to a boil and boil a few minutes, after which spread on a platter and set in the hot sun until it thickens. It may be 2 or 3 days, but it will well repay one for the trouble. Put up in glasses and seal with melted paraffin.

Currant Jelly Without Cooking.

Pick over ripe currants carefully, wash, mash, and strain through jelly bag. For every pint juice allow one pound sugar. Stir until sugar is dissolved, and then put away in air-tight jars. Expose jars to hot sun for two or three days, and then put away in a cool, dark and dry lace.

DON'T SWAT THAT FLY
and leave the disease germs to be scattered through your house.

USE WILSON'S FLY PADS
and kill both the flies and germs. Sold by all Druggists and Grocers all over Canada.

Winter Evenings in the Home.

It is with a decidedly shy feeling I present my paper today as it is the first I have ever written for any cause. But as the Women's Institute has eliminated the words "I cannot" from the English language I must go ahead whether I sink or swim.

Eve had many domestic problems, no doubt, and no Women's Institute to help her. Poor Eve! But from the nature of her clothing, I presume she did not have winter evenings in the home to confront her. It has been a subject of much discussion, and has lain close to the heart of many mothers and has been a problem in many homes.

It is said that the Englishman's home is his castle. 'Tis a lovely thought that there at least the humblest reigns supreme. Bobby Burns, the inimitable, in his "Cotter's Saturday Night" gives us his idea of an evening.

"The cheerful supper done—
They round the single for circle wide".

The day's work done and the heart at rest. The Irishman, bless his happy heart! Some way we always think of that home as a jolly happy spot with the pig in the parlor on a winter's evening, with love-making and scrapping the order of the day.

At the end of the day the Arab pitches his tent, kindles a fire and his winter evening has begun.

Drummond, in his "Habitant" shows us a winter evening in a Canadian home. The fire, the parents, the maiden—poor Philemon who "look for de moon on de wrong side de house." And always and ever the lover in poetry at least.

But when it comes to winter evenings in your home and mine it seems a harder matter to discuss.

Those first winter evenings when there are just "we two" is not much of a problem—is not, pernaps, worth discussing.

Then when the babies, so dear, so wee, the joy of an evening is to know they are safely tucked in bed and as we watch them sweetly sleeping we wonder how such dear hands and feet can make so many steps and cause so much work and worry.

Then, while we are thinking it over, and laying our plans we suddenly find those tiny hands are large as our own and those tiny feet are beginning to walk in paths we had not shown them. It is beneath their dignity to have a bed time and—oh, you know it all now or will so soon that you may as well get ready now. So our winter evenings have come with our young folks around us and how they shall be spent is the question.

Now is the time when we have made the huge mistake of leaving our youth behind us, the only thing for us fathers and mothers to do, it seems to me, is to turn around as quickly as we can and run back for it. Do you remember how it used to be when we got started for school and had forgotten a book. The sudden dash back for it lest we be too late? 'Tis so we must go back for our youth if we are going to use it in this evening school for the session will be short.

We need games and I think we should learn to play them. Not haphazardly; be a good partner and don't have to be coaxed in just to fill a side and then let that side loose through your inattention or lack of knowledge. What higher praise do we want than "if mother plays on our side, we will win?"

You who can make music be thankful; it fills such a large place. If you can make music, then in the name of our common humanity make music. Don't have to be coaxed and flattered until people would rather go without than yield to your vanity.

Good books and the best papers should be provided. You would call a man unwise, at least, who would sow chaff in his field instead of grain. Yet the chaff is carefully stored in the yong minds if opportunity is given, and the spirit of unrest created by the impossible adventures in many books and papers. Don't let us forget, the "mind is the measure of the man."

Then we must have our friends and our children's friends. It need not always take a lot of preparation. Some home-made candy and some fruit or cake, a royal welcome and a happy time. If there are young people living near, be thankful and make the most of them. Let some of the fancy work and the fussy things go but make the young folks have a good time and so have one yourself.

I have taken this from a parents point of view. There is the other side. What part must the children take? A large part. Don't think mother and father do not understand. Their youth is such a little piece back, and it is for you in a measure to keep the distance short. Do your part in these winter evenings. Don't think some one else is having it easier to be happy than you are. Put your young shoulder to the wheel and show what you can do to make, not just yourself happy, but those around you happier. "'Tis what you give you keep."

There is an old legend of the people who heard of the vine of happiness that might be planted and would bring them joy. They left home to search for it. After journeying in many lands searching, they became discouraged and returned home only to find the home covered with the vine. I fear we do not count our mercies. It was a homeless man who wrote "Home Sweet Home."

I cannot tell you how to spend the evening in your home for I do not know. And so you see my paper misses the point for which it was written. I only know they should be spent in the happiest manner it should be possible to attain.—Mrs. W. O. Logan, East Leicester, Cumberland Co., N. S.

A Real Lever Simulation

GOLD WATCH FREE.

A straightforward generous offer from an established firm. We are giving away Watches to thousands of people all over the world as a huge advertisement. Now is your chance to obtain one. **Write now**, enclosing 25 cents for one of our fashionable Ladies' Long Guards, or Gents' Alberts, sent carriage paid to wear with the watch, which will be given Free (these watches are guaranteed five years), should you take advantage of our marvellous offer. We expect you to tell your friends about us and show them the beautiful watch. Don't think this offer too good to be true, but send 25 cents to-day and gain a Free Watch. You will be amazed.—WILLIAMS & LLOYD, Wholesale Jewellers (Dept. 69), 89, Cornwallis Road, London, N., England.

DUSTLESS—By opening dust damper and direct draft damper when shaking

McClary's Sunshine Furnace

all dust is carried up smoke pipe. See the McClary dealer or write for booklet. 35

Wholesome Summer Beverages.

More wholesome than the beverages you get at the soda fountains are those prepared at home of pure fruit juices and syrups. They are not only harmless, but refreshing and nourishing for both sick and well persons.

Juices of all kinds of fruits may be canned or bottled at home by straining through flannel cloth, then heating to a temperature of 200 degrees and sealing in bottles or mason jars. If put in bottles pour melted paraffin over the cork. Do not boil, but seal while simmering, just before reaching the boiling point. If boiled it will be necessary to skim. Syrups are made by adding as much sugar as you have juice, and reduced to syrup by boiling.

Big Ben

They Say He's Worth 8 Million Dollars

Yes Sir! American farmers and business men, and their wives and children have said, "He's worth eight million dollars," for they've paid that much to 20,000 jewelers to get him to come to work in more than three and a quarter million homes (3,250,000).

Big Ben is only four years old, but he's made a bigger success for himself than any other clock alive.

You'll find him on all the big farms—helping to get the farm hands out on time—helping to get the bigger, better yields. You'll see him 'round the house telling the womenfolks the time all day so they can have the meals on time.

You'll see him in the parlor on the mantelpiece—7 inches tall, sturdy, handsome, triple nickel-plated, ticking quietly and *'tending to his knitting.*

In the bed rooms in the morning you'll hear him calling different people different ways—in "that" room, with one straight "hurry-up" five minute ring, and in "that other room," with ten short "reminder" calls lasting ten minutes. Tell him how you like your call—he'll accommodate you.

Call on Big Ben at your dealer's. His price is $3.00. Let him show you what he does. If your dealer hasn't Big Ben, a money order for $3.00 addressed to his makers—*Westclox, La Salle, Illinois*—will bring him to you anywhere in Canada duty charges prepaid.

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Land Agency or Sub-Agency for the District. Entry by proxy may be made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required in every case, except when residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead Price $3.00 per acre.

Duties—Six months residence in each of six years from date of homestead entry (including the time required to earn homestead patent) and 50 acres extra cultivation.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price $3.00 per acre.

Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land.

W. W. COREY,
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—58783.

Now is the Time to Plan for the Summer

Students can enter at any time as we will not this year have any summer vacation, the number in attendance from a distance making it inexpedient to interrupt their work.

Besides, St. John's cool summer weather makes tudy during the warmest weather just as pleasnt as at any other time.

Send for catalogue.

THE ST. JOHN Business COLLEGE

S. KERR
Principal

FREDERICTON BUSINESS COLLEGE

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NOW is the time to write for FULL PARTICULARS.

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PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers. Box P. 309 Windsor. Ont.

A sprained ankle may as a rule be cured in from three to four days by applying Chamberlain's Liniment and observing the directions with each bottle. For sale by all dealers.

Grape nectar is made by adding together the juice of 2 lemons, 1 orange, 1 pint grape juice, 1 small cup sugar, and 1 quart water. Serve ice cold. If served in sherbet dishes the lemon and orange should be sliced.

A drink that is among the best for invalids who cannot take solid nourishment is made by heating the white of 1 egg and pouring over it a little grape or other fruit juices, adding cracked ice and a little sugar.

The whites and yolks of two eggs well beaten and the juice from 2 lemons, with sugar and water to make four glasses of the beverage, constitute one of the best summer beverages when served ice cold. This drink is relished by almost anyone, and contains real nutriment. It can be taken into the stomach when other things are nauseating.

What is known as berry vinegar may be made of any ripe berries, such as strawberries, raspberries or cherries. Put 4 quarts of berries into a bowl and pour over them 2 quarts of good cider vinegar. Keep in a cool place for two days, then strain the vinegar through a cloth. Again put 4 quarts of berries, either the same kind or different, as desired, and pour over them the vinegar strained from the first lot. After two days strain again, and put the strained juice in a preserving kettle with three quarts sugar. Heat slowly, and when the vinegar boils skim carefully. Boil 20 minutes, then put in sterilized bottles. About 2 tablespoons of the vinegar to a glass of water makes a very refreshing drink.

Lemonade has always been one of the most satisfying of cold beverages. To have always at hand the material for making a glass of lemonade, extract the juice from half a dozen lemons, add to this juice a pint of sugar and an ounce of tartaris acid. Pour into this a pint of cold water and boil till thin syrup. Put in a sealed jar or bottle, and when needed, pour a little of the syrup in a glass and add water and ice. It is the work of amoment to prepare a glass in this way.

Strawberry Sun Preserves.

Use only the best berries, perfectly ripe, and of a deep, dark red color. Boil together 3 pounds granulated sugar and 2 cups boiling water without stirring, until the syrup will spin a thread when dropped from a spoon. Cook the berries in this syrup about about 15 minutes after they begin to boil, then pour the preserves on large china platters, cover with gauze, and set in the sun for two or three days. Remove the plates to the house as soon as the sun sets, and put them out again as soon as the sun rises, moving them about so as to keep them in the sun all day. Pack in jelly glasses and seal with melted paraffin.

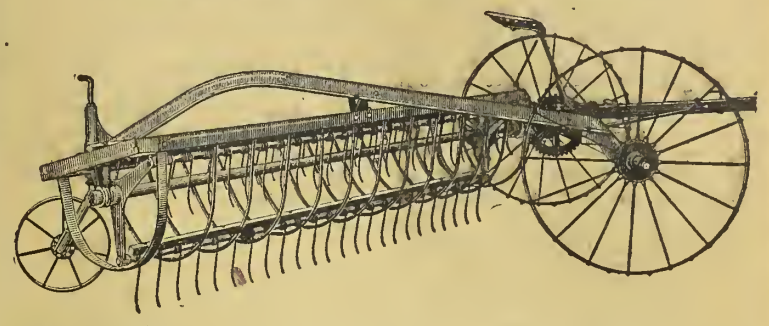
Canned Strawberries Without Cooking.

Allow 1 quart best granulated sugar for each quart strawberries. Mash the strawberries with a silver fork, and be sure that every berry is thoroughly crushed, or they will not keep. Mix thoroughly with the sugar and then pour into the jars, shaking down firmly, and let stand a few minutes to settle. Be sure that there are no air bubles in the jars, then fill to overflowing and screw on the covers. If the jars are sealed air tight, strawberries done in this way will keep indefinitely. Currants can be canned in the same way.

Sunshine Jelly.

Allow 1 pound sugar for 1 pint fruit. Use only just enough water to dissolve the sugar. Let it boil, and skim, and then add the fruit and cook as follows: For strawberries cook slowly 10 minutes; gooseberries and cherries 15 minutes. All fruit is to be cooked very slowly if the shape is to be retained. Spread on a platter, and place in the sun until the syrup thickens and "jellies." Put away in glasses.

International Harvester Haying Machines



The I H C Line

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Binders, Cultivators
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NO matter how you handle your hay crop after the mowing is done, whether with rake, tedder and loader, side delivery rake and loader, or sweep rake and stacker, the best machines for your work are those that are sold under the International Harvester trade mark.

I H C local agents sell these machines. It is to their interest to see that your hay is put into the barn or stack in the best condition, regardless of weather or accident. When they sell you an I H C tedder, side delivery rake, self or hand dump rake, stacker, sweep rake, loader, combined sweep rake and stacker, they sell you a machine that you can depend upon, that will give you perfectly satisfactory service.

Write the nearest branch house and we will direct you to the nearest agent handling our machines, and will also send you interesting catalogues describing any one of the above machines you may be interested in.

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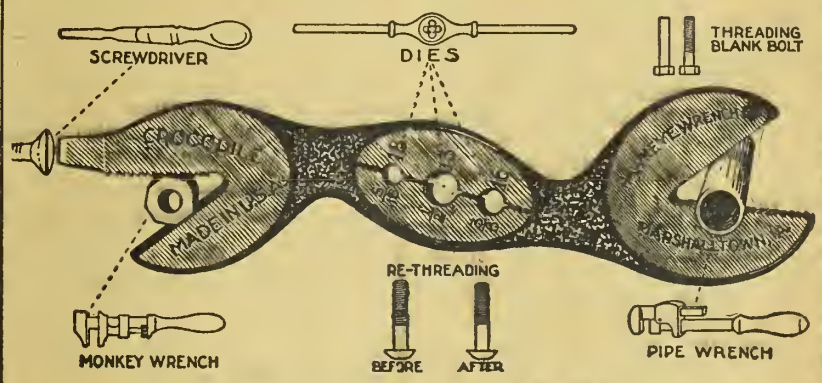
The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wreuch, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

The Menace of the Fly.

It has now been established that flies are not only a nuisance, but that they are very active distributors of disease.

While by preference they infest places where filth abounds, they are of ubiquitous habit, and pass cheerfully from the manure heap, the privy, the garbage pail or the sick room to get the first taste of food intended for our dining tables to deposit on it such filth as they are able to conveniently carry and mayhap the germs of such diseases as typhoid fever, tuberculosis, infantile diarrhoea, etc. The infection of the dreaded infantile paralysis is very probably carried by the stable fly, which in biting the little victim 'inoculates it with this disease.

The chief breeding places of flies are collections of garbage and manure—particularly horse manure. In such places they multiply with great rapidity. Each adult female fly deposits several hundred eggs, which pass through the cycle from egg to fly within eight to ten days. Seven to ten generations are bred annually. Thus the progeny of a single female fly, which has survived the winter, may amount to several millions in but one season. The Merchants' Association of New York estimates that the progeny of one pair of flies for one summer, if all survived, would occupy a space of 14,000,000 cubic feet, even if pressed together. There is good reason therefore, why the campaign against the fly should be commenced at the very beginning of the season.

Our houses (particularly the dining room and kitchen, and all sick rooms our food, (including fruits and vegetables which are eaten uncooked), and the faces and bodies of infants should be protected against flies by suitable screening. Every fly should be killed on sight. But the principl means of controlling the fly pest is by doing away with the breeding places.

Particular care should be given to the removal of stable manure, which during warm weather, should under no condition be allowed to remain at a less distance than a quarter of a mile from a human habitation. Garbage, contents of privy vaults, and refuse of all kinds should be similarly removed if the preferable destruction by fire cannot be carried out. Manure pits, garbage receptacles, etc should be made very tight, to prevent the maggots from getting into the underlying soil, and should be systematically and completely emptied at least every four days during warm weather. They should moreover, be carefully guarded by screens or otherwise made fly tight, or should be sprinkled liberally and frequently with chloride of lime or a solution of sulphate of iron. Privies and privy vaults in particular should be thoroughly screened.

Cuspidors should be given special care. A little solution of formalin, a teaspoonful to a pint of water, should be placed in each cuspidor. This solution, sweetened with sugar and exposed in saucers, will kill flies in a room.

It is important to carry out these precautions from the very commencement of the warm weather, and to persist in them throughout the fly season.

The presence of flies indicates the presence of filth or of insanitary conditions in the neighborhood, and in a certain sign that a cleaning up is necessary. The trapping and swatting of flies is undoubtedly of value, but reliance must especially be placed on the elimination of breeding places.

Do not patronize dealers in food stuffs whose wares are not kept carefully screened from flies.—W. H. Hattie, Dept. of the Public Health, Nova Scotia.

You save time and money

on every crop you harvest with the aid of a

LOUDEN Junior Sling Carrier

Patented Brace Block

A heavily ribbed malleable iron block attaches to the truck arms just below the track, and the bolt connecting the sides of the carrier frame passes through the lower end. This takes all strain off the bolt and increases the strength of the truck arms. No load can spread them.

Adjustable Trip

Used when desired to carry the load into the mow without elevating to the track. Slip it up or down on the centre draft rope as desired. A simple, effective adjustment without complicated parts. This trip is supplied when ordered without extra charge.

The Great Triple Purchase Feature

Three ropes lifting the load instead of two, as with the ordinary carrier; gives the horse one-half more power, reduces the strain on the ropes and lengthens the life of the outfit.

Engine Trucks

Distribute the load well along the track, increase the strength of the carrier and cause the load to run more steadily. No four-wheeled carrier, however much spread out, is so easy on the track or runs so steadily.

Short Truck Arms

The Truck Arms are only 5 inches long, nearly straight and extremely well braced. They cannot be sprung.

The Unbreakable Axle

These Axles are simply an extension of the main frame. Note how they are shouldered out at the frame; impossible to break them. No riveted or bolted pin axles are used on Louden Carriers. Such axles are always causing trouble.

Patent Bushings

The Pulley Sheaves run on Patent Bushings, recessed into the side of the frame. This takes all the strain off the bolt and puts it on the frame where it belongs. The sheaves are large, of extra strength and easy running.

Sure to Work

A trip stirrup extends below the carrier frame and attaches to the locking mechanism. It is impossible to keep the horse going on the draft rope and not bring the sling pulleys in contact with the trip stirrup. Once this is done the car is bound to leave the stop block and run back into the barn with the load. Side winds or uneven loads, cannot affect the proper working of the LOUDEN JUNIOR SLING CARRIERS.

Write for catalogue and special descriptive circular dealing with above Carrier.

LOUDEN MACHINERY CO., Dept. 38 GUELPH, Ont.

Hay Tools, Feed and Litter Carriers, Stable Equipment, Barn Door Hangers. (3)

Ten Tons Strawberries and a few Bouquets.

Bliss M. Fawcett, Esq., Sackville, N. B., who is one of the progressive farmers of the Maritime Provinces, is showing just what agriculturists in this part of Canada can do, by applying moderm methods to their business.

Mr. Fawcett writes the Maritime Farmer that he expects to harvest 10 tons of strawberries this year.

This spring Mr. Fawcett sold seven Shorthorn Bulls and could have disposed of as many more if he had been possessed of them. He expresses satisfaction at the particularly good prices that Maritime Province farmers are receiving for goods.

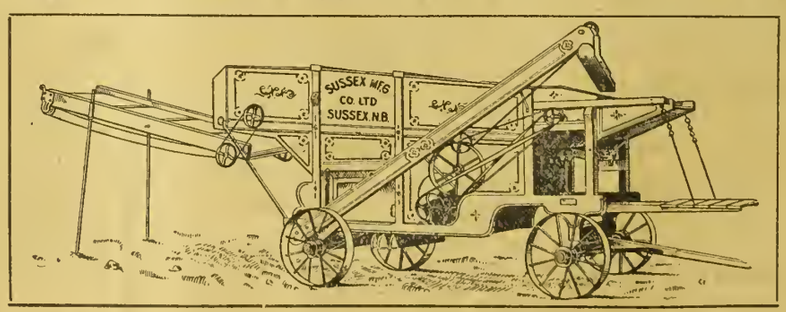
Incidently Mr. Fawcett expresses his high appreciation of the helpful articles which appear regularly in the Maritime Farmer. He has been an interested reader ever since the Maritime Farmer started, 20 years ago.

There is no real need of anyone being toubled with constipation, Chamberlain's Tablets will cause an agreeable movement of the bowels without any unpleasant effect. Give them a trial. For sale by all dealers.

The Sussex Manufacturing Co., Ltd.

OF SUSSEX, N. B.

Have the Largest and Best Equipped Agricultural Plant in Eastern Canada



In the Farm Machinery Line they manufacture the Little Giant Thresher in four sizes, the Sussex Wood Cutter in three sizes; also Tread Powers, Hay Presses, Grain Grinders, Root Pulpers, Garden Seeders, Farmers' Feed Boilers, etc.

A catalogue will be promptly sent for the asking.

Mention the Maritime Farmer when writing.

Address

THE SUSSEX MANUFACTURING CO., LTD., - - - SUSSEX, N. B.

Little Boy Was Not Expected to Live

Was taken Sick with Diarrhoea

They Were 30 Miles From a Doctor

SO GOT

DR. FOWLER'S

Extract of

WILD STRAWBERRY,

Which Cured Him

Mrs. Fred Schopff, Pennant, Sask., writes:—"I used Dr. Fowler's Extract of Wild Strawberry when my little boy was not expected to live. We were thirty miles from a doctor, when the little fellow took sick with Diarrhoea. He at first would sleep nearly all day, and at night would be in pain, and would have a passage every five or ten minutes. This went on day and night until he began to pass blood. I gave him "Dr. Fowler's," but without any good effect at first, so I began to give him a larger dose, and soon he began to get relief. It was the only medicine I had in the house at the time, and I always keep it now for inside of three days my boy was out playing, and was as well as ever."

This grand remedy has been on the Canadian market for nearly seventy years, and is without a doubt, the best known remedy for all Bowel Complaints.

Refuse to take any other preparation when you ask for "Dr. Fowler's." There is nothing else that can be

"JUST AS GOOD."

Price, 35 cents.

See that the name of The T. Milburn Co., Limited, appears on the wrapper.

HAWK BICYCLES

An up-to-date High Grade Bicycle, fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Enamelled Wood Rims, Detachable Tires*, high grade equipment, including Mudguards, Pump and Tools, **$22.50**

Send for **FREE 1914 Catalogue,** 90 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON,
27 Notre Dame St. West, Montreal.

RIDER AGENTS WANTED

everywhere to ride and exhibit a sample 1914 Hyslop Bicycle with coaster brake and all latest improvements.

We ship on approval to any address in Canada, without any deposit, and allow **10 DAYS' TRIAL.** It will not cost you a cent if you are not satisfied after using bicycle 10 days.

DO NOT BUY *a bicycle, pair of tires, lamp, or sundries at any price* until you receive our latest 1914 illustrated catalogue and have learned our special prices and attractive proposition.

ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you **Free Postpaid** by return mail. **Do not wait.** Write it **now.**

HYSLOP BROTHERS, Limited
Dept. R TORONTO, Canada

FITS CURED

Send for Free Book giving full particulars of **TRENCH'S REMEDY**, the world famous cure for Epilepsy and Fits—Simple home treatment 25 years success. Testimonials from all parts of the world; over 1,900 in one year.

TRENCH'S REMEDIES Limited
434 St. James Chambers, Toronto, Can.

Each age of our lives has its joys. Old people should be happy, and they will be if Chamberlain's Tablets are taken to strengthen the digestion and keep the bowels regular. These tablets are mild and gentle in their action an especially suitable for people of the middle age and older. For sale by all dealers.

FLORICULTURE.

I have been asked for remedy for that common pest, the cut-worm. I have described in previous articles its habits and appearance but I have as yet found no remedy that is of any value save that of digging them out and destroying them. A number of so-called remedies are always published at this season of the year. I have tried a great number of them but have never had any success with them. The best and surest thing is to dig carefully about a plant that has been cut off and if you look closely about half an inch from the surface quite close to the plant you are almost sure to find him. This is not half so much work as it seems to be as the number of this insect are really quite limited and if you would examine your beds carefully every morning for two or three days you would soon exterminate your foes. By the middle of July, they will have commenced to transform and they will not trouble you to any extent the remainder of the season.

I often see palms, ferns and other ornamental plants placed in position in a room remote from the light of the windows which, in this season, of the year are apt to have the curtains too closely drawn for the benefit of plants that may be in the room.

Now, while removing a plant to the interior of the room for exhibition or ornament for a few hours will not injure it, a stay of even one day in such darkened position may seriously affect the health of your plant, especially if it is in a vigorous growing condition. Remember plants are like animals. They must have both light and air to assist the chemical changes constantly at work in order to make healthy, vigorous growth.

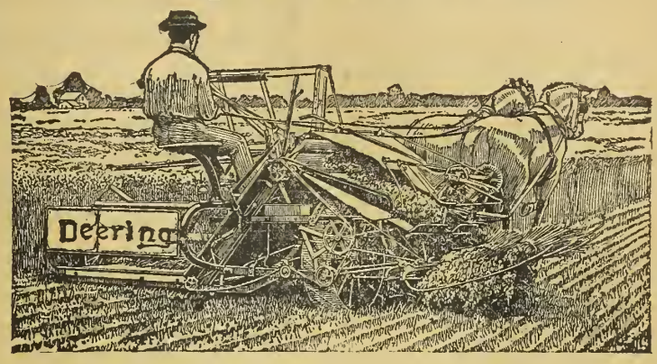
Many persons think that palms, ferns, etc., that naturally like shade from the sun will do well in the dark but the full light from a north window is none too much for them in our climate. Those plant lovers who can afford the luxury of a wardian case for a north window can reap a harvest of enjoyment without much care in the vigorous growth that such plants are adapted to such a situaton will make. As many do not know how they are best made or the class of plants best suited to them, I will briefly give information as I have two inquiries on both points.

The base of a wardian case that will fill an ordinary window should be made five or six inches deep as long as the window is wide and from eighteen inches to two feet wide and about the same in height as the width the side ends and top of glass, hinged and loosely fitted to give a little air. If fitted tight the top will occasionally have to be lifted a little to give air inside the base. A zinc trough should be filled about four inches deep. The case thus finished should be placed on a stand high enough to bring the base of stand and window on a level, thus bringing the plants in case out in bold relief against the window.

To stock your case put into the bottom of the zinc drawer at least an inch of coarse gravel or other drainage material, then fill up with good, light rich soil.

For your plants you have a wide circle for selection. Ferns, Orchids, Lycopodiums, Rex Begonias, all flourish in these cases. For a centre plant for a case, nothing is better than a bright foliage Rex Begonia, the remainder of the case filled with ferns, Lycopodiums, low-growing Marantas, etc., with two or three of some small bright-green creepers at the sides of the case. Water thoroughly and as the case is quite close water is not often needed, the evaporation condensing on the glass and returning to the plants.

Deering New Ideal Binder



A Deering New Ideal binder will go into any grain field and cut, bind and deliver all the grain in that field. Any Eastern Canadian farmer can prove this statement to his full satisfaction by studying Deering binder features and trying the machine.

The reel is adjustable for tall, short, down or tangled grain. The special T-shape cutter bar enables the operator to tilt the platform close to the ground when necessary. The bottoms of the guards are almost level with the bottom of the platform, preventing trash being pushed in front of the knife.

Either smooth section or serrated knives can be used. Three packers and three discharge arms aid in doing efficient work. The main frame is made of tough, strong steel bars, forming a unit which the hardest usage can not twist out of shape. Then there is the famous Deering knotter—simple, accurate, unfailing.

Get a catalogue from your local agent, or, write the nearest branch house.

International Harvester Company of Canada, Ltd

Hamilton, Ont. Ottawa, Ont. London, Ont. Quebec, P. Q. Montreal, Que. St. John, N. B.

These machines are built at Hamilton, Ont.

Mail This Coupon Today

MESSRS. CATESBYS LTD. (of London)
Dept. "H," 119 West Wellington St., Toronto.

Please send me your new season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit—overcoat,*

Full name.....

Full Address .....

.....

*If you only want overcoat patterns, cross out the word "suit", If you only want suitings, cross out "overcoat."

"Maritime Farmer-" Coupon No. 2

We Want Every Reader of The Maritime Farmer to Sign and Mail This Coupon

Mail it and get a free set of Catesby's suit or overcoat patterns and be convinced that it is possible to buy a better suit in London, England, for $13.25 than could be bought in Canada for $25.00.

You've heard that clothing is much cheaper and better in England—you know that English fabrics are the finest in the world.

Think, then, of the advantage of securing a suit made of the best English woolens, cut in the latest Canadian, New York or London style (whichever you prefer), and tailored to your individual measure, delivered to your door all duty and carriage charges prepaid, for about half what you would have to pay if you bought it in Canada.

Isn't it worth while, then, to get our patterns and see what there is in this offer? You can't lose anything by it but you may save a whole lot.

All you need do is to fill in the coupon and mail it to our Toronto office. By return we'll send our latest Style Book, 72 pattern pieces of fine English suitings, a letter explaining our system of doing business, and a self-measurement chart that is so simple you can't go wrong in taking your own measure.
We will also send you testimonials from Canadians who at first were as sceptical as you are, but who are now satisfied and regular patrons.

Write now. If you don't want to cut this paper, send a postcard or letter. We will mail the patterns anyway, But to get them you must mention the Maritime Farmer.

CATESBYS LTD.
(Of Tottenham Court Road, London, Eng.)
119 West Wellington St.
TORONTO

The "CARRINGTON." A very dressy model, full three-button double-breasted style, in tweeds or fine blue serges, $13.25, all duty and carriage charges paid right to your door.

Had a Weak Heart and Bad Shaky Nerves for Years

Milburn's Heart and Nerve Pills Cured Him

Mr. H. Percy Turner, Marie Joseph, N.S., writes:—"I have had a weak heart and bad, shaky nerves for years, and have tried almost everything, but nothing did me any good till I was advised to try Milburn's Heart and Nerve Pills. I was surprised to find how one box helped me, so I tried two more and am now completely cured. You may use my letter as an aid to others suffering from heart or nerve troubles."

Milburn's Heart and Nerve Pills are a specific for all run down men and women troubled with their heart or nerves.

Milburn's Heart and Nerve Pills are 50 cents per box, or 3 boxes for $1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

The above cut clearly demonstrates the advantages to be gained by planting trees in holes exploded with C. X. L. STUMPING POWDER. The ground is so pulverized that the roots can immediately expand in search of nourishment.

Also used for clearing land of stumps and boulders, ditching and subsoiling.

Write for Booklet.

BLASTERS WANTED

Many farmers prefer to hire blasters. Demand exceeds supply.

Write for information.

Canadian Explosives, Limited,

Montreal, P. Q.; Victoria, B. C.

When your child has whooping cough be careful to keep the cough loose and expectoration easy by giving Chamberlain's Cough Remedy as may be required. This remedy will also liquify the tough mucus and make it easier to expectorate. It has been used successfully in many epidemics and is safe and sure. For sale by all dealers..

Whitewash.

Whitewash is the cheapest of all paints, and for certain purposes is the best, according to Farmers' Bulletin 474. Lime, which is the basis of whitewash, makes a very sanitary coating, and is probably to be preferred for cellars and the interior of stables and directions for making whitewash are taken from "White Paints and Painting Materials," by W. G. Scott):

Ordinary whitewash: This is made by slaking about 10 pounds of quicklime with 2 gallons of water.

The lime is placed in a pail and the water poured over it, after which the pail is covered with an old piece of carpet or cloth and allowed to stand for about an hour. With an insufficient amount of water, the lime is "scorched" and not all converted into hydrate; on the other hand, too much water retards the slacking by lowering the heat.

"Scorched lime is generally lumpy and transparent, hence the use of the proper amount of water for sadking and an after addition of water to bring it to a brush consistency.

Factory whitewash. (Interiors): For walls, ceilings, posts, etc.

(1) Sixty-two pounds (1 bushel) quicklime, slake with 15 gallons water. Keep barrel covered until steam ceases to rise. Stir occasionally to prevent scorching.

(2) Two and one-half pounds rye flour, beat up in ½ gallon cold water, then add 2 gallons of boling water.

(3) Two and one-half pounds common rock salt, dissolve in 2½ gallons of hot water.

Mix (2) and (3), then pour into (1) and stir until all is well mixed.

This is the whitewash used in the large immplement factories and recommended by the insurance commpanies. The above formula gives a product of perfect brush consistency.

Weatherproof whitewash. (Exteriors): For buildings, fences, etc.

(1) Sixty-two pounds (1 bushel) quicklime, slake with 12 gallons of hot water.

(2) Two pounds common table salt, 1 pound sulphate of zinc, dissolved in 2 gallons of boiling water.

(3) Two gallons skimmed milk.

Pour (2) into (1), then add he milk (3) and mix thoroughly.

Lighthouse whitewash: (1) Sixty-two pounds (1 bushel) quicklime, slake with ten gallons of hot water.

(2) Twelve pounds rock salt, dissolve in 6 gallons of boiling water.

(3) Six pounds Portland cement.

Pour (2) into (1) and then add (3).

Note.—Alum added to a lime whitewash prevents it rubbing off. An ounce to the gallon is sufficient.

Flour paste answers the same purpose, but needs zinc sulphate as a preservative.

Molasses renders he lime more soluble and causes it to penetrate the wood or plaster surface; a pint of molasses to 5 gallons of whitewash is sufficient.

Silicate of soda solution (about 35 per cent. Baume) in the proportion of 1 to 10 of whitewash produces a fireproof cement.

A pound of cheap bar soap dissolved in a gallon of boiling water and added to about 5 gallons of thick whitewash will give it a gloss like oil paint.

An old receipt of whitewash, issued by the Lighthouse Board of Treasury Department, said to be very good for outdoor exposure, is as follows:

Sake half a bushel of unslaked lime with boiling water, keeping it covered during the process. Strain it and add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water and boiled to a thin paste; half a pound of powdered Spanish whiting and a pound of clear glue, dissolved in warm water; mix these well together and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace; and when used, put it on as hot as possible, with painters' or whitewash brushes.

SPECIAL ADVICE FOR MEN

Strength Restored By New Method

MANLY MEN ARE THE WORLD'S POWER TO-DAY

The little book described below (which I gladly send free, sealed, by mail, to any young or elderly man anywhere) contains in its 85 beautifully illustrated pages everything a man need know with regard to certain strictly personal subjects, and as a guide through his entire life, from the delicate period of youth, when wholesome advice is most needed, on through early manhood to a ripe, vigorous, healthy old age. Over a million of these books have been thus distributed by me all over the world. Therefore, please use coupon below and get YOUR free copy by return mail. SANDEN CO., DISTRIBUTORS.

Do you know, my friend, that there is a wonderful new way to apply a certain, great, natural FORCE to your body, and by which you may, without effort, trouble or inconvenience, treat your own self in the privacy of your home for debility and lost vitality, without using a single drug or medicine? This great FORCE, as a restorer of vitality and as a means to overcome those weaknesses which result from indiscretion and unnatural practices, is to-day being used all over the civilized world, and I give it as my honest opinion, based upon a vast observation and study, that any man anywhere, who leads a decent, manly life and who applies this marvellous FORCE in a scientific and rational way, can, without employing a single drug, be restored again to a state of perfect, rugged health and vigor, without a remaining ache, pain or weakness.

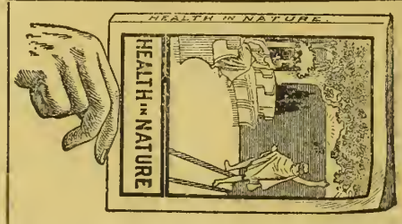
As we all know, these debiliating weaknesses handicap a man in every condition of life, while, on the other hand, a perfect speimen of vigorous, robust, lusty manhood is ever admired by both women and men alike, while, of course, it is certainly only such a man who can attain the really great success of life. Therefore, I say to you, no matter what your size, whether you are small or large, no matter what your occupation, no matter whether you are a college graduate or workng on the farm or in the factory, no matter whether you are young or elderly, it is all a question of your vigor and your vitality, and if I can give you a good, abundant supply of this same great power of VITAL FORCE, then it is easy to believe that I can completely restore your vigorous health, can overcome the evil of past indiscretions so you will be exactly the same in your influence over people, exactly the same in your manly bearing as other manly, strong-nerved, warm-blooded fellows of your acquaintance.

With an idea of attaining this all for you, I recommend you to investigate a simple little VITALIZING APPLIANCE of my invention, which I am now sending out in great numbers for use by men everywhere who need new manly strength. This little VITALIZER is very light, weighing only several ounces, and can be worn without any one suspecting that you are wearing it. You buckle it on your body upon going to bed and take it off mornings. Thus while you sleep it sends its wonderful power which I call VITALITY or VITAL FORCE, into your blood, nerves and organs. Users say it takes pain and weakness out of the back from one application, and further say 60 to 90 days' time is sufficient to restore a state of health, strength and vigor. I am not offering this VITALIZER here for sale, but want you first to send for my book, that you may learn all about the whole wonderful subject, and why I get such quantities of testimonials from users everywhere telling of results after drugs completely and utterly fail.

NOTE— With special attachments VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health. Please write for book to-day, or, if near by, I should like you to call. Hours—9 to 6.

Use Coupon; Get Free Book

Remember, the little illustrated book which I send free, sealed, by mail, as per coupon below not only fully describes my VITALIZER, telling of a special offer by which you may get one on special terms for use in your own case, but contains a great fund of private advice for men, some good, wholesome cautions, and a lot of general information that might be of value to you to the end of your days. Therefore, please write or call.



DR. M. F. SANDEN CO.,
140 Yonge St., Toronto, Ont.

Dear Sirs:—Please forward me your book, as advertised, free, sealed.

NAME .....

ADDRESS .....

The washes which contain milk, flour, or glue are not to be advised for use in damp, interior places, owing to danger of decomposition of the organic matter. For such locations it is better to use one of the formula containing none of these ingredients. Whitewash is applied with a broad whitewash brush and is spread lightly over the surface, no attempt being made to brush it in as in the case with an oil paint.

Growing Good Carrots.

Carrots grow best in light soils. The long varieties require a good depth of soil which must be deeply stirred and thoroughly pulverized. Long, shapely roots cannot be produced if they encounter hard clods of earth and hard soil formations.

Light soil that has been well manured for a former crop is excellent for carrots. A lot of fresh barnyard manure or any animal manure worked into the soil only a few inches below the surface causes the roots to be short and forked. Shallow plowing has a like effect. If manure is applied it should be plowed under so as to allow the roots plenty of room for downward growth.

When planting with a garden drill carrot seeds are very likely to stick together. To facilitate sowing the seed and insure a more even distribution, it is a common practice to mix the seed with sand. After the plants show through the soil, the space between the rows should be stirred frequently with the hoe. This keeps down weeds and aids the growth of the plant.

As soon as the plants are large enough to handle they should be thinned to from four to six inches apart, according to variety. Showery weather is best for this work. Early thinning is desirable, as it encourages the production of large, shapely roots. Delay often results in the production of thin, ill-formed roots.

It is now well known that not more than one case of rheumatism in ten requires any internal treatment whatever. All that is needed is a free application of Chamberlain's Liniment and masaging the parts at each appication. Try it and see how quickly it will relieve the pain and soreness. Sold by all dealers.

An Improvised Road Drag.

If no road drag is kept on the farm one can easily be made for temporary use from a spiketooth harrow, a plank and a few boards. The plank should be about six inches wide, or at least wider than the protruding pointed ends of the harrow teeth. It must be as long as the harrow is wide, and should be placed on edge on the ground beneath the harrow, so that it fits back against the rear cross row of teeth. Make two auger holes near the top edge of the plank and pass wires through these, to fgsten about the crossbeams.

On top of the harrow and between the cross rows of teeth place two or three boards to stand on. It is now complete, and by hitching the team so as to give a slight angle to the harrow, one has a good scraper. By standing on the boards and varying one's position relative to front and rear, you can change considerably the amount of raking done by the front rows of harrow teeth, and the amount of the surface dirt loosened up and carried to the centre of the road.

Last spring we used this arrangement. The road had been cut up badly and then dried. We found the raking of the front harrow teeth to be just the thing as they knocked off the knobs so they were loose and ready to be shoved into the depressions by the plank.—P. C. Grose.

Road Building.

Start with a system and keep to it
Take the worst places first.

Keep a good cross slope on all of your roads.

Grade the hills and protect the ditches.

Put in permanent bridges and culverts.

Use the best and most durable culverts obtainable, and put them in wherever there is a possibility of the water lying for any length of time by the side of the grade.

Grade up the roads in the flat or low-lying places as much as possible.

Give the earth road drag a fair trial, and use it every time you get a chance—oftener if you can make it.

Put clay and sand together; they do better together than by themselves.

Never put sod on the travelled way

Encourage first yourself and then your neighbor to buy wide tired wagons.

Forget who voted for you or that you will run again. Build roads, not a political machine.

After the road is once built don't stop there, maintenance is then the most important factor. Keep the road constantly in repair. A few hours' work spent in repair when first needed will save endless trouble in travel and days of repair work later on.

What you do, do well.

Jersey Performances.

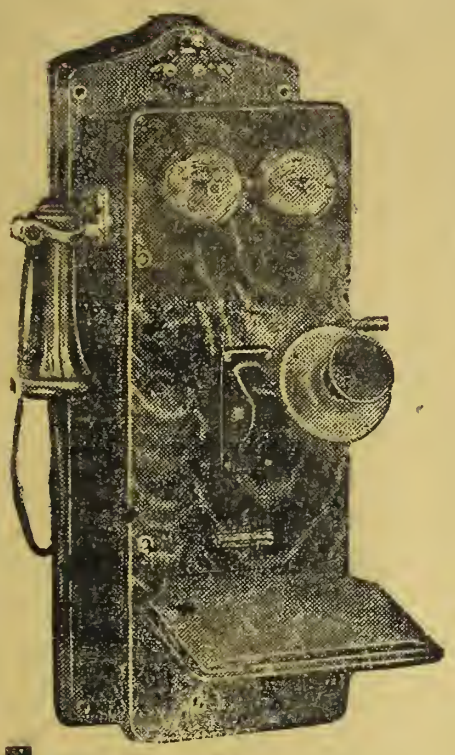
The following cows have lately qualified for the Record of Performance of the Canadian Jersey Cattle Club:

Sadie Mack 2nd, No. 3237, commenced her test when 1 year, 329 days; 8446 lbs. of milk and 481 lbs. of butter fat. This heifer is owned by H. E. Gee, of Hagersville, Ont., and is sired by Boyle's Highland Laddie.

May Daisy Bell No. 2425, owned by Wm. Clarke, No. Wiltshire, P. E. I. Sired by Brampton Rex; produced in one year 8507 lbs. of milk and 442 lbs. of butter fat.

Foxy's Queen, No. 3238, also owned by Mr. Gee and by the same sire as above, produced in 2 year old form, 8711 lbs. of milk and 464 lbs. of fat.

It's a Pleasure To Use These Telephones



They are the clearest-Talking and loudest ringing bridging telephones on the market. They are guaranteed to be superior in design, material and workmanship. They have several exclusive features that add to their efficiency. Made in wall phones, as illustrated, and desk or table styles. If you are operating a telephone line and not using our telephones and equipment, write for our Free Trial Offer. If there is no telephone line in your locality, write us and we will tell you how to organize an independent municipal or local company.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4, describing our magneto telephones, is free on request.

Send for a Copy.

Let us quote you on your years supply of Dry Cell Batteries.

Canadian Independent Telephone Co. Ltd.

1820 Duncan Street, - - Toronto

"Also Manufacturing Agents for the Magnaphone Co., under Mr. Geo. R. Webbs' Canadinn Patents No. 123363, No. 124537, No. 131145."

Brampton Pontaine Rose, No. 4600, tested by B. H. Bull & Son, Brampton, produced in her 4-year-old form, 8784 lbs. of milk, 535 lbs. butter fat.

Feed the Soil.

The dairy farm is the farm that is fed and not robbed. It is just as important to feed the land as it is the stock if one would maintain his farm in a high state of production. There is a certain standard in the production of any grain crop or any other farm commodity which must be reached if more profit is to be enjoyed. In raising corn the United States Department of Agriculture has given us the following figures.

Forty acres of corn yielding 75 bushels per acre makes as much net profit as 104¼ acres of corn yielding 50 bushels per acre or 293 acres of corn yielding 40 bushels per acre or 3,270 acres of corn yielding 35 bushels per acre.

The above figures taken from the United States Department of Agriculture year book.

Corn figured at 42.4c per bushel, expense per acre, $14.63.

Of a class of eighty-eight young men and young women, who graduated this year from McGill University Montreal, over fifty percent. were from the Maritime Provinces.

Strongest and Most Stylish-Looking
MARITIME Ornamental Fencing and Gates have *the quality*. There is no gainsaying that. Only *first* quality tubing is used for the gate frames. We could, like many makers, use *second* quality and save *one-third* to *one-half* the tubing cost. We could also use *small* wires and save some more. But we use *large,* strong, stiff No. 9 wire. This wire is more smoothly, thoroughly and *heavily galvanized* than the wire generally used for fence and gate purposes. You know what that means. Strongest, *most lasting,* as well as most stylish-looking. Write for *free catalogue,* showing the different designs, and from them choose a gate you'll be proud of.
NEW BRUNSWICK WIRE FENCE CO., Limited
Moncton - New Brunswick
MARITIME ORNAMENTAL FENCING AND GATES

Fruit Crop Report.

(Continued from page 651)

varieties are still quite promising, and for the later varieties the general report appeaprs to be that slightly over half a crop will be harvested. In the Kootenay Valley the peach crop is a failure.

Tomatoes.

In Western Ontario, the acreage under tomatoes is unquestionably the largest for many years. As a direct consequence of the peach crop failure, a number of growers planted tomatoes presuming that the profits to be derived from them would offset the loss sustained through the failure of the peach crop. There is consequently a grave danger that the supply of tomatoes this year will be much greater than the demand and that prices will be very low. The heaviest plantings appear to be in the counties of Lincon and Wentworth. There has also been a heavy planting of tomatoes in the Okanagan Valley in British Columbia.

Cherries.

An abundant crop of all varieties of cherries is reported from the Niagra district and from the southern and western counties of Ontario. In the counties of Norfolk, Peel and Went worth, the reports indicate that the sweet varieties will yield only a light crop, but the report is extremely good for all other varieties. The same injury which reduced the crop of pears and plums in eastern Ontario, has seriously affected the crop of cherries and the result will be a very light yield and in many orchards a complete failure. Practically a full crop is reported from Nova Scotia. There have been some reports from British Columbia stating that in the Okanagan district the set was not a particularly good one; in the Kootenay Valley the prospects are excellent.

Grapes.

The grape crop is one upon which growers are generally safe in relying for it is only in very unusual cases that there is any shortage in commercial orchards. This season is no exception, and reports from the Niagra district indicate a crop between medium and large, and in many instances fully 25 per cent larger than was harvested a year ago. In other sections of Ontario, where vineyards are few in number, there has been considerable injury by frost.

Strawberries

As a general rule the strawberry crop will be below average and prices will run high. The cause of this shortage varies with the particular district from which these reports originate. In eastern Ontario there was a great deal of winter injury to the plants, and in some instances the drouth of 1913 so weakened the mother plants that the stand this year was not a good one. In other parts of Ontario the wet spring interfered very seriously with the proper fertilization of the blossoms In British Columbia, no adverse conditions have apparently arisen, and a full crop berries is expected in the principal small fruit sections of the province.

Insect Pests.

Undoubtedly the most serious insect pest this season is the Tent Caterpillar which is completely defoliating many orchards throughout Ontario and Quebec. The situation seems to be very bad in Districts 3 and 4. In orchards which have not been thoroughly sprayed, the trees have been completely over-run with the pest and are now almost beyond control. It is unfortunate that such a state of affairs should exist since there is no reason why the Tent Caterpillar should not be controlled by efficient spraying. Bud moth is quite serious in the Annapolis Valley. It has also been reported in the counties of Lambton and Norfolk in Ontario and in New Brunswick. Cut worms are doing considerable to young tomato plants in District 3.

Fungous Diseases.

The only disease which appears to be seriously in evidence is the peach leaf curl. In western Ontario where the orchards have been to some extent neglected, as a result of the winter killing of the buds, and where early spraying has been disregarded, the disease is very widely spread. It has also been reported from the Kootenay District of British Columbia.

Fire blight or pear bight is reported from the Okanagan Valley but does not appear to be spreading to any serious extent.

Foreign Prospects.

United States.—New York State reports a fair crop of Baldwins with a falling off in Greenings. Prospects throughout the entire Republic, however, are that an excellent crop of apples will be harvested. Peaches, on the other hand, are short; in New York State the crop is practically a failure except along the shore of Lake Ontario, and even there it is light. In West Virginia peaches, plums and small fruits were injured by frost and will be short. The Missouri peach crop is also short.

England.—Plums and gooseberries slightly damaged by frost in April. Apples are reported a full crop, with plums, pears and cherries about 75 per cent.

Holland.—Slight damage to all fruits from frost, and to small fruits from insect pests. Conditions generally are reported good.

Germany.—Prospects for apple crop favourable, although some sight damage is reported from frost. Cherries are reported a full crop, with some slight local injury from insects.

Later

Fruit Commissioner's Office, Ottawa, June 15th, 1914.

The following information has been received this morning by telegram:

Lake Ontario Counties.—Present indications point to an apppie crop double that of last season. Heavy June drop expected. Weather conditions favorable. Cherries and plums a failure. Caterpillars plentiful.

Lambton County.—Prospects are for an abundant crop of all fruits except peaches, which are reported very light. Apple crop promises to equal that of 1912. Rain needed for small fruits.

Annapolis Valley.—Indications point to a light crop between Bridgetown and Kentville. On high lands conditions are better and in eastern Kings and Hants prospects are good Duchess, Gravensteins, Ribstons and Greenings will be light. On other varieties, crop will be double that of last year. Frost and continued dry weather seriously affecting small fruits.

Okanagan Valley.—Showery weather interfering with shipments of early which have matured two weeks earlier than last year and droppeed heavily. Fire blight well under control. Weather conditions excellent. Jonathan and Yellow Newton fair. Wealthy, Wagener and Spitzenburg heavy. McIntosh light. Big increase in tomato acreage. Following are estimated comparisons with 1913 crop: Apples, 25 per cent increase;; Pears, 20 per cent. increase; Plums, 15-20 per cent. increase; Cherries and Peaches, no increase.

Pacific Coast.—Strawberry crop badly injured by drouth and softened by recent rains. Prospects of raspberries good. Aphis troublesome.

Quebec.—Prospects better than for several years past. Excellent bloom and no frost. Some drop on account of drouth. Wealthy trees promise a very healthy crop, and Fameuse and McIntosh a good crop. No trouble from caterpillars except in Rouville and Huntingdon. Strawberries came through the winter well, but drouth is shortening the crop. Slight winter killing of raspberries.

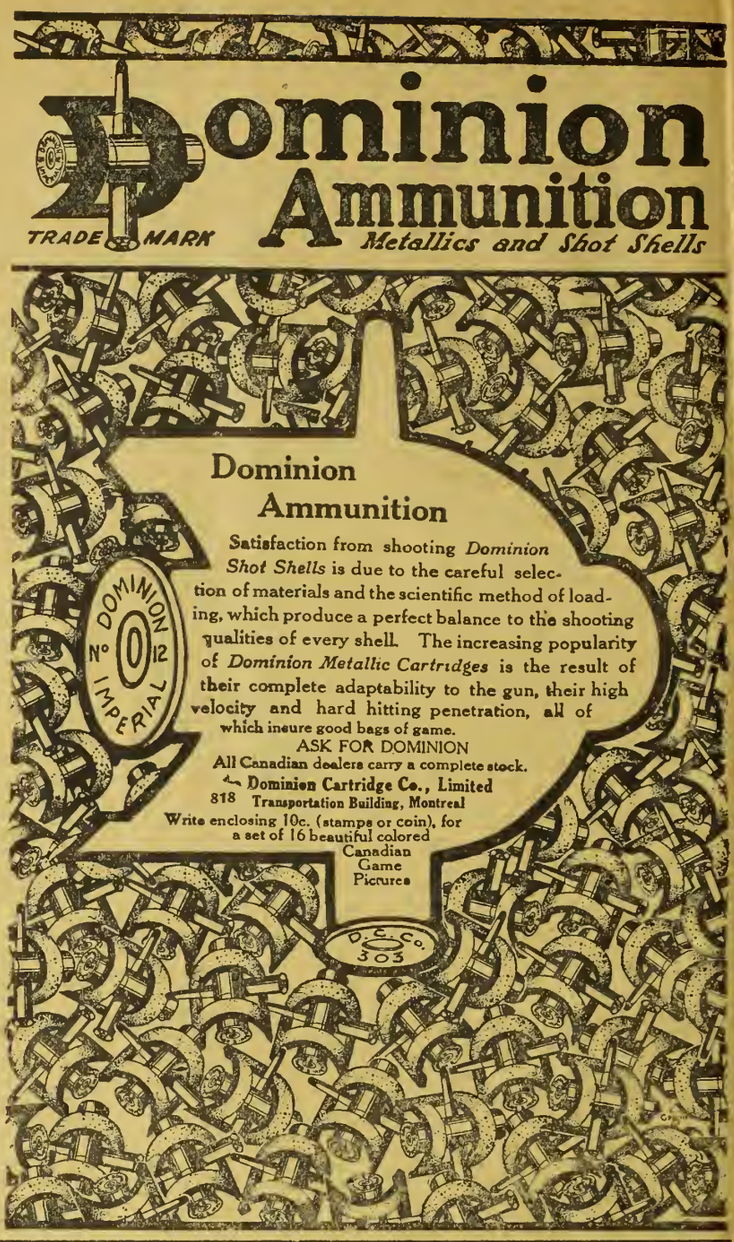
London, England, June 12th.—All fruits damaged by frosts in May. June weather unfavorable. Trade predicts 50 per cent. crop of apples and black cherries. Late varieties of cooking apples badly damaged. Pears and plums estimated at 75 per cent. Currants very poor. Present season regarded as most unfortunate ever experienced.

Essex, Ontario.—Apples well loaded except Greenings. Cherries promise a full crop. Large acreage of tomatoes in fine condition. Peaches promise a full crop, with no leaf curl. Some young trees winter killed.—Donald Johnson, Fruit Commissioner.

A Good Record.

During the month of May the semi-official records of 45 Holstein-Friesian cows and heifers were received and accepted in the Record of Performance. In the mature class Birdie 2nd's Netherland comes first with 800 lbs. butter. Countess Carrie Mercedes adds one more to the lists of Canadian cows giving over 20,000 lbs. milk. As usual the four-year-olds are not overly strong. Grebegga 2nd stands highest with 670 lbs butter. Prince Edward Island comes to the front in the three year-olds with Ruby Nig, making the good record of 750 lbs. butter. Ruby Nig produced 16,555 pounds milk, and is owned by Lea & Clark, Victoria, P. E. I. Even stronger are the two-year olds which are led by Duchess Wayne Calamity 2nd with 846.25 lbs. butter, a new Canadian record for that age. Closely following her are the two British Columbia heifers, Lady Pietje Canary's Jewel and Lilith Pauline Calamity Jane 3rd with 830 and 825 lbs. butter respectively.

See that your hog yards and pastures are tightly fenced. The roaming hog makes slow gains and lots of trouble.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Satisfaction from shooting Dominion Shot Shells is due to the careful selection of materials and the scientific method of loading, which produce a perfect balance to the shooting qualities of every shell. The increasing popularity of Dominion Metallic Cartridges is the result of their complete adaptability to the gun, their high velocity and hard hitting penetration, all of which insure good bags of game.
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MAKES THE WHITEST, LIGHTEST

MAGIC BAKING POWDER

CONTAINS NO ALUM

Halifax Exhibition.

The Nova Scotia Provincial exhibition will be held in Halifax, N. S., on September 12th to 19th. Competition is open to the Maritime Provinces. Enteries close as follows :— Manufacturers, June 15th. All classes of Live Stock and Agricultural Products, Saturday, 29th August. The usual generous prizes are offered and prospects are good for numerous exhibits. To study exhibits and enjoy the various amusement features of the exhibition should be the aim of every farmer in Nova Scotia. Transportation rates are low. Plan to take a holiday. It will do you good.

Ring-Bone

There is no case so old or bad that we will not guarantee

Fleming's Spavin and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists, 41 Church Street, Toronto, Ont.

Fruit Farm and Saw Mill

400-acre farm from which 800 bbls. of apples were picked last year, 80 pear trees, also plums, peaches, cherries and berries; soil and location just right for large commercial orchard; apples sold here last year for $3.50 per bbl.; brook-watered pasture, wire-fenced; wood and timber to pay for farm; 10-room house with running water; barn for 12 head; carriage house and shed; saw mill with water right 26-ft. head, complete with machinery; owner is all alone and will sacrifice; price only $5500, part cash, easy terms; for full details and traveling instructions to see this and many other good bargains throughout the Annapolis Valley, see page 84, "Strout's Farm Catalogne 37", just out, choice selections of real bargains at wonderfully low prices throughout N. S. and the N. E. States; write today for your free copy, it will show you where to find just the farm you want at the price you wish to pay. Address FARM, c/o Maritime Farmer.

Dates to Remember.

St. John Exhibition, St. John, N. B., Sept. 5 to 12, 1914.

Haliax Exhibition, Halifax, N. S., Sept. 12 to 19, 1914.

St. Stephen Exhibition, St. Stephen, N. B., Sept. 15 to 18, 1914.

Charlottetown Exhibition, Charlottetown, P. E. I., September 22 to 25, 1914.

Sydney Exhibition, Sydney, N. S., Sept. 29 to Oct. 3, 1914.

Lubricating Axles.

Many lubricate axles only to prevent wear; they over-look the fact that by reducing the friction they lessen the draft. A well-oiled axle lightens the load. Oil to axles is best governed by the rule of "little and often." If too much is used, it exudes at the ends, gathers dust, and thus the lessening of the friction is not so great, while oil is wasted. In nearly every case where the lubricant is wasted, it is because it is stuff not fit to be used, for a good lubricator costs enough to keep the average man from allowing it to waste. Oil that "gums" much is unfit to be used. Castor oil is a splendid lubricator for axles, but used alone may gum too much. This is corrected by the addition of refined coal-oil (that used for lamps) or lard; the coal-oil is the better. Some wagons are yet made unprovided with metal shields or "thimbles," being banded with steel; for these some tallow may be used, as it is one of the best lubricants when iron and wood are brought together. Pine-tar is a good addition to the lubricant for wagon axles, and is part of the "axle greases" sold. Plumbago is another good addition; its fine particles fill the small irregularities in the opposing surfaces, thus making them smoother. A mixture of lard and plumbago is good for the journals of reapers, mowers, etc.; we have found castor oil and refined coal-oil also good for this use, particularly for use on the "sickle-driver." For carriages, nothing is better than castor oil and a very little lard oil or refined coal-oil. Lard oil alone has not "body" enough for the journals of reapers, mowers, etc.; add a little castor oil, or tallow or plumbago. While the axles of reapers, grain-drills, hay-rakes, etc., will not need lubricating so often during the year as the axles of the wagon, oiling them must not be neglected, as the rough ground the wheels pass over makes the wear on unoiled axles quite rapid. The axles of corn-cultivators require frequent lubricating. For these the best lubricants are those recommended for wagon axles.

The St. John Exhibition

The 1914 St. John Industrial and Agricultural Fair will be held at St. John, N. B., on September 5th to 12th inclusive. The prize lists are now in the hands of the public and competition is open to the Dominion of Canada. Entries in all departments close on August 1st. Be prepared to make entries in as many sections as you can and plan to visit the fair, where you will find matters that will interest and amuse you, thus combining instruction, business and pleasure in the right proportions.

Special Prizes.

In the prize list of the St. John exhibition, recently received, we read that the Clydesdale Horse Society of Great Britain and Ireland has donated a gold medal for the best Clyde stallion and another for the best Clyde mare, any age. The only condition implied is that no animal can win two of the Society's medals in the same season.

The Shire Horse Society of England also offers a gold medal for the "best Registered Shire Stallion."

The Canadian Hackney Horse Society offers silver medals for the best Hackney Stallion and mare.

Disastrous Fire at Sussex.

On the afternoon of the 17th inst., Geo. W. Fowler, M. P., Sussex, N. B., who takes a deep interest in farming, and who had, in the course of the past two years, erected horse and dairy stables that were a credit to the town and a model of high ideal to the entire farming community, had the misfortune of losing the magnificent and splendidly equped structures by fire and thus sustaining a loss of upwards of $20,000, only a very small portion of which was covered by insurance. The origin of the fire still remains a mystery. So rapid was the progress of the flames that it was with the utmost difficulty the valuable Holstein cattle were saved. It was found impossible to save the horses, seven of which perished in the flames. Among the number were several valuable animals that Mr. Fowler prized very highly. Included in the number was the Thoroughbred stallion "Waterlight," one of the most famous show and speed horses ever imported to Canada. Waterlight won his thousands on the American turf and left a lot of exceptionally fine colts. His untimely death is a distinct loss to the horse breeders of Kings County. Several valuable Standard Bred fillies of great promise, also perished. By strenuous efforts, the piggery and beef stables were saved. We were sorry to see the magnificent buildings wiped out for we looked on the Fowler barns as one of the places of interest to which we could direct visitors to town as we knew that there they could see ideals, which would set them thinking along the lines of modern equipment for the care of farm stock.

Concrete Hog Houses and Feeding Floors

Enable you to raise bigger hogs and better pork without heavier feeding. A concrete feeding floor permits the animals to clean up *all* the feed without waste, and eliminates the possibility of your hogs contracting disease. To you they

Mean Bigger Profits

Hog houses of concrete are sanitary, easily cleaned, maintain an even temperature and give plenty of light and air, which tend to better the quality of pork. Concrete will not rust or rot. Never needs repairs or painting. It will outwear any other material for farm structures. Write for this beautifully illustrated free book "What the Farmer can do with Concrete." It shows how to build Hog Houses, Feeding Floors and many other things the farmer needs.

Farmer's Information Bureau,
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FARMER'S HANDBOOK ON CONCRETE

SAINT JOHN EXHIBITION

SEPT. 5 TO 12 1914

SPECIAL AGRICULTURAL FEATURES
SPLENDID DISPLAY OF INDUSTRIES
INCREASED SCOPE IN WOMEN'S WORK
CHILD'S WELFARE EXHIBIT

GREAT PROGRAM OF FREE ATTRACTIONS

CHEAP EXCURSIONS ON ALL LINES

H.A. PORTER MANAGER.

Dr. T. Fred Johnson, veterinary surgeon has been appointed by the St. John Board of Health to inspect the conditions, surounding the production and distribution of milk suplied to St. John, the premises on which they are kept, the utensils in which the milk is put, the methods of shipping to St. John, with the conditions of the receiving and delivery stations, etc.

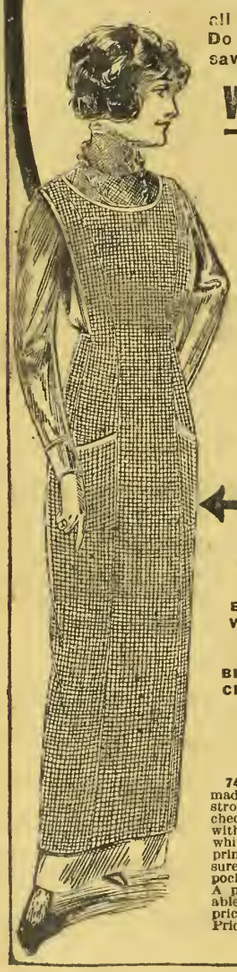
EATON'S

SEMI-ANNUAL SALE CATALOGUE

HAVE YOU RECEIVED *This* BOOK OF BARGAINS?

SEND FOR THIS CATALOGUE TO-DAY--IT WILL SAVE YOU MONEY

We have just published the best Bargain Catalogue we have ever known. That is our opinion, and we believe you will say the same once you look your copy over. There are unlimited buying opportunities in this Catalogue that mean a saving, measured best by the volume you secure. It will pay you to make regular purchases from this Catalogue, so that you may benefit to the fullest extent. This announcement is particularly directed towards those who for some reason or other have not received a copy of this Catalogue. We desire to furnish all who are interested enough to write us so that we may forward a copy without further delay. Do not forget that, over and above all the wonderful buying this Catalogue affords you, a further saving is assured in our free delivery offer.



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EVERY WOMAN WILL WELCOME THIS OFFER

BLUE AND WHITE CHECK GINGHAM APRON

29c

74.FA47. A neat, well-made **Allover Apron** of strong blue and white check gingham, trimmed with narrow folds of white. Cut in a semi-princess style, which assures a good fit; two pockets, easily laundered. A practical and serviceable apron at a very low price.

Price..... **29c**

WOMEN'S GLOVES 59c Each Pair

Women's Double Tipped 20-inch Long Silk Gloves. Made with 2 domes, Atlanta slit, and double wear finger tips. By placing an order in August 1913, and thus keeping a manufacturer busy during the dull season we are able to give you this exceptional bargain. Many big merchants would be pleased to have such a glove as this to sell at seventy-five or eighty-five cents. If you need gloves, order now.

20-F553. Black.
20-F550A. Tan.
20-F550B. White.

DON'T FAIL TO STATE SIZE

Sizes: 6, 6½, 7, 7½ and 8.

Shipping weight: 2 ounces each pair.

Pair..... **59c**

GINGHAM HOUSE DRESS

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USUALLY SOLD AT DOUBLE THIS PRICE

84-F057. This splendid **House Dress** is made of Shepherd Check Gingham—one of the best washing fabrics known, and is the product of one of our factories making a specialty of this line of garments, which accounts for the very low price. **Bust sizes 34, 36, 38, 40, 42, or 44. Skirt length 40 inches** (with deep hem). **Choice of Oxford Grey and White or Navy and White.**

Price..... **73c**

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To Keep the Nails Clean in Gardening.

Gloves are useful for gardening, but not only do the finger-tips quickly wear out, but if the soil be wet when planting they get clayed up and become a hindrance. So that it is advisable, whether gloved or gloveless, to take some means of protecting the nails from grit, and this is most effectually done by pressing the tips of the fingers into a quantity of flour till they are so packed with it that the soil gets small chance of entrance. After gardening operations wash the hands with toilet soap, and brush the nails, and when the hands are dry, rub in a very little lanoline, which will prevent roughness of the skin.

Advantage of Farm Separator.

There are some excellent reasons why a farmer should own and operate his own cream separator. There is little or no loss of skim milk, which of course, is very valuable for feeding. There is less danger of introducing diseases like tuberculosis if the milk is skimmed at home, and only the milk produced upon the farm is fed. Time is saved in not having to haul whole milk to the factory. Less bulky products have to be cared for upon the farm- There is a wider market for cream than for milk.

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Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

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F. W. C. Nase, Nerepis Station, Kings Co., N. B
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
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The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

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B. H. Power, Selma, Hants Co., N. S.
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Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

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E. W. Heurtley, P. O. Sutherland's River, N. S.

Oxford Down.

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E. W. Heurtley, P. O. Sutherland's River, N. S.

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E. W. Heurtley, P. O. Sutherland's River, N. S.

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C. A. Archibald, Truro, N. S.

Yorkshires.

R. J. Messenger, Lawrencetown, N. S.
E. W. Heurtley, P. O. Sutherland's River, N. S.
Steward Bros., Murray River, R. R. No. 1, P. E. I.
J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
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Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

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Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

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For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

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Guernsey and Ayrshire Bulls ranging from four months to twenty months old.
One Pure Bred Ayrshire Cow 5 yrs. old (Fresh milch.)
Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, - Shubenacadie, N. S.

Riverview Stock Farm

High Class Holstein Cattle and Yorkshire Pigs

Several young Bulls fit for service for sale, sired by Bob Dorindo, 9532, several times champion and a son of the well known champion Mercena Vale 828. Dams are heavy producers and show ring winners.

D. R. NICHOLSON, Coxheath, N. S.

EGGS FOR HATCHING

Buff Orpingtons, $1.50 per 15.
White Wyandottes, $1.50 per 15.
Siciallian Buttercups, $2.00 per 15.
Get your order in early.

HIGHLAND VIEW DAIRY,
R. R. BLACK, - Amherst, N. S.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

"Homestead Farm"

Holstein-Friesian Cattle
Clydesdale Horses
Shropshire Sheep
Berkshire Pigs

Our present offering is three bulls, fit for service. They are all good individuals and have good official backing. Can part with a few heifers ready to freshen next fall; also some bull calves. Our Berkshires are about all sold and we are now booking orders for ram lambs for fall delivery. Write for description and prices.

Long Distance 'Phone.

LOGAN BROS., Amherst, N. S.

KYLES RHODE ISLAND REDS

If you look up our winnings at the Maritime Fall and Winter shows or if you visit our yards, you will see that we are headquarters for the best Rhode Island Reds in the Maritime Provinces. Eggs for hatching at reasonable prices. Let us book your order for delivery at any set date.

Thomas A. Kyle, Sussex Corner, N. B.

SHORTHORN CATTLE

Best blood of this breed obtainable, with size, style and quality. Also a few choice grades.

Prices within reach of every farmer who wishes to improve or renew his stock.

J. E. Hetherington,
Cody's N. B.

GET A START CHEAP

Four Bronze turkey eggs, six Sicillian Buttercups eggs, five Single Comb Rhode Island Red eggs, all for $2.50. Turkey eggs $3.00 a dozen Single Comb Rhode Island Red eggs $2.00 for 15. Sicillian Buttercups, $3.00 for 15 Grey African goose eggs, 50c each. A good 120 egg incubator and brooder, $15 00 for both if taken at once.

SARAH E. MOSES SMITH.
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STRAWBERRY PLANTS

We make a specialty of Strawberry Plant Growing. All the leading varieties, true to name. Prices reasonable. Send for descriptive catalogue.

JOHN N. CHUTE,
Berwick, N. S.

EGGS FOR HATCHING

From Rose and Single Comb Rhode Island Reds. Silver cup winners at Amherst Winter Fair. Best pens $3.00 per 15 eggs. Second pens $2.00 per 15 eggs. No mating list. Write for particulars.

W. H. Henry, Shubenacadie, N.S.

DURHAM BULLS

Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale. Also a number of nice calves and yearling heifers, well bred for milking qualities and in fine shape.

C. C. H. EATON,
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FERTILIZERS

We carry the famous
HARAB FERTILIZERS
Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,
Moncton, - - N. B.

PURE BRED SIRES

THE LIVE STOCK BRANCH

Dominion Department of Agriculture.

WILL PURCHASE during 1914, a number of CANADIAN BRED Stallions, Bulls, Boars and Rams.

Animals must be of right type, in good breeding condition and of the following ages.

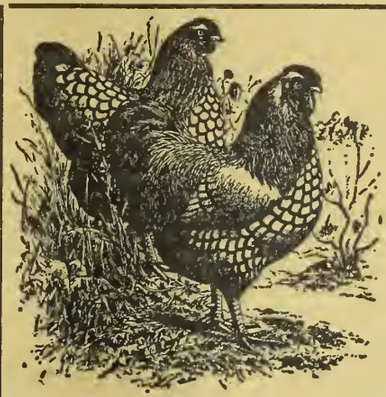
Stallions, three to five years.
Bulls, not under one year.
Boars, not under six months.
Rams, not under six months.

All stallions will be purchased subject to veterinary inspection and bulls subject to the tuberculin test.

Breeders in Eastern Canada having CANADIAN BRED male animals for sale, filling the above requirements and registered or eligible for registration in the Canadian National Live Stock Records, are requested to communicate with the Live Stock Commissioner, Department of Agriculture, Ottawa.

The purchases of stallions and bulls will be made during the current spring months. The purchases of rams and boars will be deferred until the autumn.

Communications must state age and breeding of animals offered and price asked.—60271.



"SILVER LACED WYANDOTTES"

Stock and Eggs for Hatching for Sale.

The Silver Laced Wyandottee is a breed combining quality and beauty, prolific layers, fine table fowl and rank high among breeders of poultry.

The Magnolia Poultry Yard's stock of Silver Laced Wyandottes were winners of first breeding pen at the Amherst Fair in 1913, among strong competition This is only one of the reasons why you should buy this stock The work is personally supervised by the owner, and the stock this spring has never been in better condition. Some of my customers have reported 100 per cent. hatches from eggs purchased from me this spring.

Write for information and get your pick of the stock now.

The Magnolia Avenue Poultry Yards
E. KYLE, Prop., Sussex, N. B.

SCOTCH COLLIE PUPPIES

We have some fine Scotch Collie Puppies for sale, the puppies are from the finest stock in Canada both sire and Dam being prize winners at the recent dog show at St. John, N. B. as well as other big shows in Upper Canada. These Puppies are finely marked, dark in color and should make very fine dogs. Write for prices, pedigree and full particulars.

Kingsdale Poultry & Supply Co.
SUSSEX, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

HEAVY Horses for sale. Apply to F. L. GILLIS, Norton, N. B.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

WOULD YOU MARRY IF SUITED? Best Matrimonial Paper Published. Mailed Free. THE CORRESPONDENT Toledo, Ohio.

PURE BRED HAMPSHIRE RAMS FOR SALE —First orders get best choice. BOX 45, Hillsboro, N. B.

FOR SALE—2 pure bred Holstein Bull Calves one 3 months old, the other 2 moths, choice stock. Address F. W. C. NASE, Nerepis Station, N. B.

GUERNSEYS FOR SALE—Two bulls ages nine and thirteen months. Out of Record of Performance cows, D. G, McKAY & SON, Scotsburn, Pictou Co., N. S.

BLACK, WHITE, AND BUFF ORPINGTON Eggs for Hatching from birds that have size, shape, color and great layers, only $2.00 per setting of 15 eggs. C. H. WISENER, Pictou, N. S.

100 POST CARDS, POSTPAID, 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Two six H. P. gasoline engines, both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A. McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R J. Pictou Co., N. S.

WANTED.—Man and wife wanted immediately, Man to do barn work, wife to keep house for 3 or 4. Also experienced man and wife to look after farm. Scotch preferred. Apply giving full particulars to L. E. Y., care of Maritime Farmer

FOR SALE—Six months Guernsey bull for $30.00. Sire "Nonpareil of Glen View" 39081 21472 A. G. C. C., dam "Glen View's Comely" A G. C. C. W. H. HODGSON, R. F. D. 3, Fredericton, N. B.

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

FOR SALE—2 Pure bred Holstein Bulls, one 3 years and one 2½ years, good size, best of breeding. For extended pedigrees, price and photos, write WALTER PAYNE, Lake Edward, N. B., Breeder of Holstein Cattle.

ONE HUNDRED BEAUTIFUL HALF TONE and colored Maritime Province views or 100 side splitting comic postcards 40c. A postcard album free with each order. P. D. AYER & CO, Moncton, N. B.

FOR SALE—(1) Meadowbrooks Milkman 41830; (2) Helena of Bloomfield 38034. (3) Eva of Bloomfield 38035; (4) Irene of Bloomfield 38033. No. 1 calved May 17, 1913; No. 2 calved Aug. 22, 1912; No. 3 Sept. 16. 1912; No. 4 Sept. 14, 1912. Price $200 f. o. b. station. Reg. and Transfer in name. HY. McDONALD, French River, Pictou Co., N. S

EGGS FOR HATCHING

Brom Bright Highest Class Exhibition Barred P. Rocks. The leading winners of America's largest shows—the Best. The verdict of three world's fair, Cockered and Pullet Mating. Regal W. Wyandottes winners at Kentville Poultry Show of 5 firsts, 2 seconds, 1 third, and 6 Specials. Winner of Silver Cup.

Setting $2.00 per 13.

Kentville Poultry Yards,
KENTVILLE, N. S.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA.

Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association

W. A. CLEMONS, St. George, Ont.

Is the Cow in Calf ?

(Continued from jage 655)

they are in-calf, and will calve on a date coresponding with the date of the alleged service. Very often the cows have not been near a bull, and in other cases the date of the alleged service has been so antedated as to lead the purchaser to conclude that she is weeks nearer to calving than she really is, if in-calf at all. There seems no remedy in such a case, for a calf is not guaranteed, and the statement that the cow was to profit on a certain date means nothing. It is a trick often practiced by the seller at the expense of the buyer, a trick that many dairymen consider smart when they success fully practice it on a fellow farmer, but which they call by another name when they themselves are the victims of the fraud. The only thing, where a warranty is not obtainable, is to rely on personal skill and judgment as to whether the cow is in caff, and, how far advanced; and, in those cases where the signs are wanting, to leave the animal alone.—Vet.

On Dehorning Cattle.

Theodore Ross. Secretary for Agriculture for Prince Edward Island writing on the question of dehorning cattle in the May issue of the Farmers' Advocate says:—

"This is the best time of year to dehorn cattle. Nearly all agricultural papers are advising the use of caustic potash when calves are about three days old to prevent the growth of horns, but the writer found that in his case at least, this method defeated the purpose. Cows that have been dehorned as calves, use their heads almost as viciously as if they had not been dehorned, and although they cannot tear one another, they frequently do serious damage. They are liable to be hard on fences, throwing off poles or batons and breaking down wire. If, however, their horns are alowed to grow till they are coming two years of age, and are then removed the cow is practically quieted for life. As yearlings they are learning that their horns are their means of defence, but they have not yet been able to do any injury. When their horns are taken off at this age they are completely defenceless, and are hardly ever troublesome. The writer has been dehorning regularly at this age for some years. About fifteen years ago we first dehorned cattle. A valuable mare had been hooked, and the experiment was the result. Of ten cows milking, we dehorned nine, the remaining one was old and was besides very quiet. That evening some of them did not eat all their feed, and they were off in milk from two to nine pounds each. The next morning they all took their feed as usual and were off from four to nine pounds ech. The following evening all except one were up to the old standard and inside of a week we were getting from twenty to thirty pounds more milk daily from our ten cows than we had been before they were dethroned. That spring we used the Caustic Potash on our calves, as we did also for the next two years. The poll cows gave us considerable trouble and we attribute the loss of some premature calves to the fighting of the cows. Since that time we have dehorned regularly and with the best of results. If done at this time of year, the cut is healed before the flies become troublesome.

Docking Lambs.

In recent issues several contributed articles have appeared relating to the methods practiced by sheepmen in docking their lambs. No doubt there are thousands of lambs in the country yet to be docked and for those who may be called upon to attend to the operation we may say we know of no better plan than to stand the lamb up on all four of his legs with an attendant holding him while the operator cuts the tail from below upwards, with a sharp knife. All that is necessary is to double the tail down over the knife and make the cut close enough to the back of the lamb. By this method the knife slips between the vertabrae and there is far less injury than when the old method of laying the tail on a board and cutting it off with a chisel is practiced. This often drives the chisel or knife, if the latter be used, directly through one of the vertabra causing considerable pain and set-back to the lamb. We would urge sheep breeders not to neglect the practice of docking their lambs. Do it while the lambs are young, from one to two weeks of age.

Where the pigs are alowed to run with the sow and to wean themselves it is almost impossible for the mature female to produce more than one litter a year.

$12,000 Farm, $4200

1500 apple, 250 pear trees, besides plums, cherries, peaches and berries on this 50-acre farm, which experts estimate will soon be producing fruit to warrant a valuation of $12,000; cuts 25 tons hay; brook-watered pasture; near depot, village, neighbors, schools, and adv.; splendid 9-room painted house supplied with spring water, large barn, carriage and poultry houses, pretty lawn with century shade trees; a great bargain for part cash; for travelling instructions to see this and many others throughout the famous Annapolis Valley, see page 83; "Strout's Farm Catalogue 37," just out; choice selections of real bargains throughout N. S and N. E. States; write today for your free copy. Address Farm c/o Maritime Farmer Office.

Boys and Girls!

We will Send you *FREE* an Electric Flash Light, which sells for $2.00, for two new subscribers to the Maritime Farmer.

¶ You can earn a Light in a few minutes near your home.

¶ The Light is one that will prove most useful in your home.

¶ Write us if you require further information.

The Maritime Farmer

Sussex, - - N. B.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.

Correspondence solicited. 'Pone 111.

J. FRANK ROACH, - - Sussex, N. B.

Horses For Sale

Heavy Team Horses 1250 to 1550 in fine condition.

Apply to

F. L. GILLIS,
NORTON, R. M. D. No. 1

or

Chas T. White & Son,
SUSSEX, N. B.

EGGS EGGS EGGS!

I have cut the prices in two. Parks strain of heavy laying Barred Plymouth Rocks, are without doubt the greatest laying strain of this grand old breed. Bred for egg production for over twenty years. For balance of season I will supply eggs from my best pens for only $1.00 for 15, other pens 75c., $5.00 per hundred.

J. P. Prichard, Summerside. P. E. I.

Advertise in the Maritime Farmer

THE MARITIME FARMER

AND

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REGISTESED TRADE MARK

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, JULY 7, 1914. Number 19.

The Storage and Use of Soil Moisture

Compiled from a Series of Experiments

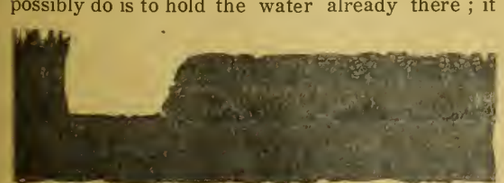
By W. W. Burr, Nebraska.

MUCH has been written the last few years in regard to the storage of moisture in the soil, which is correct and well-founded. Other statements have been made which were either incorrect or so stated that they allowed the wrong inference to be drawn. We have found that when the moisture comes in sufficient quantity and is properly distributed we can store this moisture in our soil in considerable amount. However, we have not succeeded in storing enough moisture

Was not disced before or after plowing

before seeding the crop to mature that crop. Whenever there is sufficient moisture present in the soil at seeding time it gives an effect which might be termed overstimulation; that is, it starts more growth than can be supported throughout the entire season, the plants stool out, giving a heavy growth of straw which makes rapid use of the moisture which falls. If, then, a dry season comes, such as high winds, high temperature and low relative humidity, the demand for water under such conditions is so great that the crops suffer. In the intermountain country, where hot winds and increased evaporation do not prevail, it is probably possible to produce a crop almost entirely on stored water. Our work has shown that where there is moisture stored in the soil to be used in addition to the rainfall which comes we are much more certain of a yield of grain. This has been especially true of winter wheat.

On the other hand, we have found that we cannot store water excepting it comes as rather heavy rains, or in frequent showers for a period if the rains are light. The isolated shower does very little good for storing water, and even a heavy shower falling on a soil surface which is already dry and hot will be lost before it can get deep enough into the soil to be held by any cultivation. Certain erroneous ideas in regard to the storage of soil water are still quite prevalent. The idea that continued cultivation will accumulate water in the soil has no foundation. The only thing that cultivation can possibly do is to hold the water already there ; it cannot create water. When there is sufficient water already in the soil to cause an upward movement of water to the surface, cultivation will check this movement, and there may be an accumulation of water just below the cultivated portion of the soil. The cultivation is, however, to prevent the escape of the water already there, and not by any mysterious means to create water. It is simply reducing the evaporation from the surface and killing the weeds to prevent their use of the water. The fact that this water, already present in the soil, has been held, while in an adjoining field, where no cultivation was done, it has been lost, has been the basis of certain misconceptions. Some men have been led to think that the stations and dry farming men are trying to teach that by continued cultivation we can accumulate water in the soil even though it does not rain. The fact is, if the soil is already dry and no precipitation comes, the moisture content of the soil cannot be increased by any amount of cultivation. We can, however, by stirring the surface and killing the weeds, conserve moisture after it has been soaked into the soil.



A poorly-made seed bed—Disced after plowing but not before —The large air spaces prevent capillary action

Disced before plowing, making the contact compact between the bottom of the furrow and tha furrow slice

Storing Water in the Soil

Storing water in the soil consists in getting the water into the soil and then preventing its escape. There are a number of factors and conditions which modify or control the storage of water. It seems best to divide these factors and to treat them under separate heads so that the importance of each may be better understood. Only those factors which are largely under the control of the farmer will be discussed.

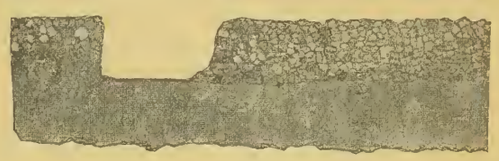
Getting the water into the soil depends upon—

The condition of the surface soil at the time of the rain.

The character and amount of the rain.

The amount of water already in the soil.

Water runs off more freely from a smooth, dry surface than that from a surface which has been loosened by cultivation. Where the surface has been cultivated, the water runs into the openings made by the implements used, and is held until it can soak into the soil. Where the surface has not been stirred there are no such open spaces to catch the water. As soon as the soil at the surface has been filled it can hold no more except as the water is removed from the surface by penetration to the lower depths. The water which falls in excess of the amount that can readily be absorbrd by the soil will be lost as run-off unless the surface is very level. Obviously the amount of the run-off from any rain is governed largely by the type of soil and character of the rain. A loose, sandy soil offers so little resistance to the penetration of water that there is very little run-off even during heavy rains. The resistance to the penetration of



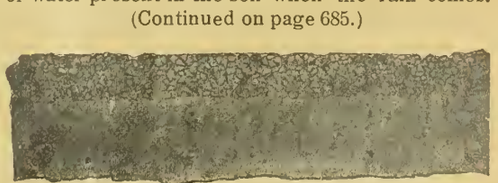
A perfect seed-bed—Disced before and after plowing—Seed bed to the left is too shallow. Note: Soil particles magnified 1,000 diameters.

water increases as the soil becomes heavier or more like clay. All graduations are found from the sand which offers so little resistance to the penetration of water, to the gumbo, where penetration is extremely slow. We have observed that water will stand for several days over a heavy gumbo spot, and be lost mainly by evaporation rather than conserved by penetration, often penetrating only a few inches into the soil.

All Rain Not Equally Good

The character of the rain has also an important influence on the amount of water which will be retained from any given rain. The more rapidly the water falls the greater the run-off. During heavy, torrential rains the water falls so rapidly that it does not have time to penetrate into the soil and is lost by run-off. The beating drops of water often puddle or clog the surface, making it more difficult for the water to enter. The more open and porous the surface is the more water it will admit from any rain. Thus a cultivated surface will retain more water from a heavy rain than an uncultivated surface. It is a matter of common observation that a heavy downpour of rain frequently does less good than a much lighter rain that falls more slowly. The type of rain that is really most beneficial is the rain of sufficent amount and falling slowly enough to be carried into the soil to a depth where it will not be exposed to the rapid surface evaporation of water present in the soil when the rain comes.

(Continued on page 685.)



Showing how effectively a surface mulch prevent the escape of moisture

What's Being Done to Put the Home on a Business Basis

IS the housewife facing a great revolution? Is the efficiency idea which has already revolutionized many industrial plants, now going to attack the last stronghold of tradition—the Home?

Signs point that way. The ideas of motion study, standarized conditions of work, scientific management of servants, had simply to be announced to strike a responsive chord among intelligent home-makers. Efficiency is in the air, and has penetrated to the kitchen no less than to the counting-room, and to general home-making—even to woman herself.

No one disputes that the home is the last of great industries remaining unrecognized. Every other great division of the work of the world has become more or less emancipated from personal drudgery, from the ancient apprentice system, from unstandardized work and pay.

For this reason those who formerly gladly entered the ranks of household workers [illegible] attracted to other professions. According to figures compiled by the Business Course, families employing servants number only 8 per cent. of the population,—which means that the average woman does the bulk of her own housework.

The Kitchen-Sink at Applecroft—Showing Dish-Washing Based on Motion Study and Scientifically Planned Heights and Arrangement.

Tendencies Working Against the Old-Time Home

The most serious evidences of the decay of the home such as it used to be are seen on every side. From scores of points the home has been, and is being attacked. The chief of these are:

1. Decided drift to large cities, where more and more of the original functions of the home, even to cooking, are being diminished.

2. Increasing demands of sanitation and modern ideas in home-making which compel progress upward with, or downward from, accepted standards.

3. Greatly increased cost of living, compelling either disastrous extravagances or lowered standards, or increased brain management on the part of housewives to meet the situation.

4. General broadening of woman's horizon and making the entire line of human endeavor her sphere, with the home becoming more incidental, as with man.

5. Gradually increasing economic loss in raising a family of children, due to child-labor laws, educational laws, cost of living, etc.

6. General heightening of intelligence and ingenuity, which is the case with woman's work, as with man's, results in the endeavor to apply labor-saving, time-saving, and energy-saving ideas to work. Only the intelligent and ambitious consider their time valuable enough to try to save it. Women have for centuries considered their time worth little or nothing.

The two great leveling forces—education and democracy—have been hard at work on the new generation, with the result that a terrific pull upward on standards of living have come about. The new generation wants the best of everything, no matter what its parents were and how they lived. It refuses to recognize any class distinction except lack of distinction.

Demand for "Efficiency" in the Home of To-day.

These facts have the deepest possible significance in the new movement for efficiency even in the home, even in the home-maker herself. It is not as if some sudden, new magi had sprung up in the word "efficiency"—like a fad of white-topped shoes. The causes have been gathering pace for years and efficiency principles are only the best expression of the need.

Women are not particularly attracted by the word "efficiency", and they do not excite themselves over "motion study" in the home. The greatest touchstone which the efficiency movement has for women and for their present situation is personal efficiency, or the scientific mental attitude.

This is but the reaction to be expected from woman, who has operated herself on her emotions for ages past. She finds not only that she cannot continue to do this and be happy (if she has any intelligence!', but also that feeling, slaving devotion, and mere manual work no longer entirely solve her problems. Civilization has become too complex and full of new difficulties and demands. Evolution is acting upon her—she feels the pressure of its compulsion if she thinks she finds that it is today a question of the "survival of the efficient."

The old home which manufactured for all its needs within its own walls, demanded chief labor and manual skill but vastly more mental and spiritual qualities. The old-fashioned woman—no matter how attractive in romance—cannot compete with the requirements of today. She is only a housekeeper and her housekeeping is far below modern standards!

The strong atraction which modern cults and mental systems such as "New Thought," "Christian Science," even Astrology and Hindu Philosophies have had for women, is explained by this new pressure upon the mental existance of woman—pressure on the one side by increased education, and on the other side by increased severity of economic necessity. She must grow mentally and readjust herself, or else slide backward and downward with alarming rapidity.

The efficiency idea is a solution. It has caught the need of man's world with genius and effectiveness; and because men and women are really close to each other in spirit (necessarily, since millions of women work side by side with men,- the efficiency idea is probably going to do for women exactly what it is doing for men. In fact, it is a splendid sign that the sexes are joining their spheres and making toward the real ideal of comradship, when the same ideal of efficiency takes hold of them both.

If the home is to survive it must do so on reorganized basis. No industry founded upon admittedly unwilling, uninterested millions can continue to operate. yet everybody admits the tremendous discontent among home women. As at present operated, house keeping is distasteful to admittedly the livest and most intelligent portion of housekeepers, and is only endured in a dull way by the masses of women. Its grave faults have been that it lacked in mental interest, that it was without the spur of competition, and that it did not possess the dignity of a serious position. Degradation has more nd more attached itself to housework as ambition has raised other standards of living. Every other members of the family hastened to rise from the drudgery state of his chosen work, but the woman who merely "kept house' has felt her wings clipped.

Applying Industrial Principles in Home Management.

One of the earliest attempts to apply industrial principles to the home was made ten years ago by Charles and Mary Barnard. For a number of years they mainttained a "Household Experiment Station," at Darien, Conn. Professor Barnard, himself a technical engineer. was the first to study tools and devices with the trained engineering point of view. Professor Barnard believed that there was too much experiment and guess work in housekeeping, and spent much time developing data, especially on the use of the newer fuels and labor-saving appliances. His idea was to give women the result of scientific experiment and serve them by stimulating the idea of progress in home development.

Mrs. Mary Patterson, under the auspices of the Federation of Women's Clubs, next caused widespread comment and interest by equipping an exhibition kitchen laundry, and dining-room with many of the most modern devices for saving labor—many of them electrically operated. It was her purpose to demonstrate the increased efficiency which is possible in a home where machinery—electric stoves, vacuum cleaners, incinerators, etc., are used to replace the time and labor for servants. Numbers of women and men visited her home before she dismantled the exhibition; and her inspiring personal message to these visitors on the art, as well as the science of home-making, did much to advance the rapidly growing welcome for more scientific management in the home.

Frank Gilbreth, the most famous of the pioneers in motion study (the man who revolutionized brick-laying) began to be interested in the application of motion-study to the home and wrote and made several addresses about it.

Martha Bensley Bruere, in a book which generalizes the efficiency idea mainly in its application to the family budget, co-operative laundries and marketing, etc., continued public interest in this newer scientific home-making.

My own book, "The New Housekeeping," was the result of several years of work and experiment, and was the first to emphasize methods, and the personal attitude of a woman toward her work, rather than mere tools and machinery. By this time the subject had come one of the most definite and decided interest—not only to women, but to men. Everywhere reference was made to it, and in a space of three months practically every newspaper of importance in the three big Eastern centres bad had interviews with either myself or others interested in the movement. Lectures. articles, and educational preparations along these lines are now common, and it is necessary now rather to prevent the sound ideas back of household efficiency from receiving the injury of mere faddism.

One Woman's Experience

The Applecroft Experiment Station, (Greenlawn, Long Island) is simply a concrete, actual home, in which—as far as possible—ideas of home efficiency, particularly in the country, might be developed and made known to other women.

It may be interesting to note the way in which the stattion came into existance.

One evening, several years ago. when without a servant, I counted the number of pans, pots and dishes I was washing. There were eighty-seven in all. I timed myself on this unpleasant old task which I hated from the bottom of my heart, and found it took forty-five minutes to wash, dry, and lay them away. When I was through I was so heated and tired that I didn't feel like doing anything else all the evening.

That evening, however, we were entertaining a friend who was prominent in the new science of industrial efficiency. He and my husband were discussing it, and I heard them say, "motion study" and such mysterious phases as "standardizing" and "standard practice." Although I was tired, I found myself interested in spite of myself. I asked our friend to explain what he meant, and he did, telling me how efficiency was revolutionizing the office and the factory.

"Do you mean to tell me," I asked skeptically, "that you think such things could be applied to the home?"

(Continued on page 699)

Dairying in the Maritime Provinces

Perhaps there is no other country in the world that is oftener referred to as an example of thrift and prosperity than is the little kingdom of Denmark. In bygone years it was not so. Her people fairly struggled for their existence but in recent years the scene has changed and the adverse conditions of poverty have given place to the conditions of thrift and prosperity to which we have already referred.

How came this change? The answer can be put in a very few words. The people of Denmark took stock of themselves, of their geographical position, and of their natural resources and found that of all the industries which were open for natural development dairying presented the brightest prospects. To the industry of dairying they turned their attention with a will and to it they applied the great principles of co-operation in its most important phases. The old yet ever new adage "In unity there is strength" coupled with business dairy methods have helped to place Denmark where she is today.

The example thus set by Denmark is emulated by the best agricultural experts the world over and efforts are being made by the agricultural departments of progressive governments to imitate Denmark in this respect and like her, strive to place on the market products of such quality that the world at large will take notice of them.

Hon. Sydney Fisher, when Minister of Agriculture, and his successor in office, Hon Martin Burrell concurs with him, during the course of an address at the Maritime Winter Fair said:—

Whenever I have visited the various parts of the world, I have found the most universal prosperity in dairying countries." This statement bears out the observations of the Maritime Farmer in this respect. If the leader were to glance over our subscription lists they would find a much more healthy circulation condition existing in the sections where dairying is carried on extensively than in sections where other industries are conducted. Our circulation manager tells us that collections are always promptly made in the dairying districts. There is a reason for this. The receipts from dairying do not come in fits and starts; they come in at frequent regular intervals and consequently the dairyman always has more or less cash at hand every day in the year. And notwithstanding the fact that dairying entails a lot of hard work the cow owner wears an honest smile in all kinds of seasons.

Hon. Sydney Fisher also said "Moreover, I have always regarded the Maritime Provinces essentially adapted to the dairying industry," and Prof. M. Cumming of Nova Scotia in his 1908 report states "we must say it is our honest conviction that dairying is the most important of all branches of animal industry in which Maritime farmers could engage and upon which the future prosperity of the province so greatly depends."

Visitors to our provinces, who have observed our succulent, well-watered pastures, our temperate climate, comparative freedom from troublesome flies, splendid crops of hay, roots and green feeds of all kinds, good crops of grain, and, withal, our splendid local markets, have frequently wondered why high-class dairying is not a more prominent feature of our rural economy. We ourselves have oft been at a loss to explain this condition, for we have failed to fully comprehend our remissness.

"Too much labor." This is the most frequent reason adduced by those whom we thought could, to better advantage pay attention to this remunative line of farming. And yet other flourishing industries involve the employment of much labor, their very profitableness varying, for the most part, with the number of hands employed.

The old way—wasting energy by stooping.

The modern plan—working without stooping.

Albeit, we are far from recognizing the difficulties incurred with hired help, and we fully recognize the desirability, if it were possible, of carrying on a line of profitable farming without employing labor. But as labor is essential to profitable manufacturing or commerce, so it is essential to profitable farming, and the problem is to select a line of farming in which necessary labor can be employed to the greatest profit. Dairying we believe to be that line, and we believe so not only because of the profits which can be made from careful dairying, but even more, because the dairy farmer is the farmer who can employ his labor to profit the year round, and hence does not have to depend upon what floating help is available at the rush of the year's work. We must remember, too that if we expect our sons to remain at home and build up our country, we must provide avenues of profitable employment for their labor. Dairying, more than any other line of farming offers this, and would prove the means of holding our families together in the land of their birth. And besides giving profitable employment to our sons and to our hired help, dairying helps to build up the fertility of our farms.

In concluding his 1908 report, Prof. Cumming said:

"As for ourselves, we have been so impressed with the importance of dairying in Nova Scotia that we have sought to put in comfprehensive form a tribute, which we herewith submit, to the cow that in the last analysis is

A Tribute to the Cow.

We have sung of man and his achievements—of the poet, the orator, the statesman, and those who, in their lot of life, have done their duty. We have sung of our country—its resources its beauties, its grandeur. We have written of the throngs of the city and have idolized the life midst green fields and by running waters. We have thrilled at the song of the bird and the speed of the swift limbed horse. We have wondered at the instinct of the beasts of the forest, the field, and the air. These things terrestrial have filled our minds. But who, that has pictured the brute creation, the noble horse, the mighty lion or the songful bird, has stopped to thing of her, who, of all man's animal friends, is the greatest—the cow.

Remove her from this globe and think we will take. Old England's roasts of beef, the food of her valor and solid acievement, those smoking steaks—we'll take them. That mug of milk by yonder high chair—we'll snatch it from the eager hands of that rosy cheeked child. That plate of yellow butter, that pot of cream, that cheese—we'll take them and leave you to give thanks over dry bread and tea and strawberries unmellowed by those toothsome products of the cow. Those boots and shoes that save you from the snow and rain—we'll take them. And more too, for stop to thing of whwat we owe the cow. From her head to her tail, there is not a thing but is used to minister to man's wants. Our milk our cream, our butter, our cheese, all come from the cow. Her flesh is the food of all nations. Her skin is on our feet and with it we guide our swiftest horse. We comb our hair with her horns. The very buttons that hold our clothes together are hers. We purify our sugar with her blood. We wash our hands with her fat. Her hair holds the plaster to our walls. Her hoofs are the source of our glue. Her bones and blood fertilize our land. Her sons have drawn our plows and have cleared the fields by our settler's cabins None other like the cow! From morn to night, and from night to morn, she gathers her food, and even while we sleep, changes it into the food as well of our babes as of our aged parents.

Thing of the commerce that would cease with her. Think of the long freight trains, the mighty ocean boats, the great stock yards, the creameries, and factories all over the globe. Let her cease and half the world's commerce is at an end. Think of a Denmark scarce two-thirds the size of Nova Scotia, exporting through the medium of the cow, one hundred million dollars worth of produce. Think of a Holland vieing this. Think of what she might do for this country of ours."

"Premier Matheson, his commissioner for Agriculture, Hon. Murdo McKinnon and the ever alert Secretary for Agriculture, Theodore Ross, and their staff of Prince Edward Island, are ever alive to the value of the needs of the dairying industry in Prince Edward Island.

In New Brunswick, Premier Fleming Hon. J. A. Murray, Minister of Agriculture and Secretary J. B. Daggett, together with as capable a staff of dairy experts as one can find anywhere are pushing the industry towards the high-water mark of proficiency.

In Nova Scotia, Premier and Minister of Agriculture, Hon. G. H. Murray, Prof. Cumming, who has done more for the young men of his province than any other mortal in leading them to see the greatness of their natural resources and consequent advantages and the various members of the agricultural department's staff are uniting their efforts in upbuilding an enviable reputation for their province in the dairying industry.

In a future issue of the Maritime Farmer we will give an account of what is being done along dairying lines in Prince Edward Island, New Brunswick and Nova Scotia.

The Better Farming Special

The better farming special touring I. C. R. points in New Brunswick under the auspices of the local department of agriculture was in Sussex on Dominion Day.

Sussex was a busy and gay spot on that day. The military manoeuvers of upwards of four thousand soldiers the Saint Francis Xavier Church's annual picnic and the Better Farming Special were attractions that brought holiday crowds from far and near. They came by train and they came by team and some on foot until Sussex had within its confines the largest population in its history. From one centre of attraction to another went the crowds and in the course of the day the Farming Special train was well inspected by many hundreds of men, women and children. Of course, some visited the cars through idle curiosity and simply walked in at one end of the train and streamed out at the other end and went on to some other centre of attraction. But all the visitors were not of this class. Many interested farmers visited the cars. They came early and stayed late. They were interested in the various exhibits placed in the cars for their benefit.

When the Maritime Farmer representative visited the Special each and every officer in conection with the movement were busily engaged answering questions and explaining the aims and objects of the various exhibits.

In one car, Mr. Ford, the Live Stock Expert for the Province and J. Frank Roach, of Sussex, had charge of several specimens of cattle, sheep and swine.

In the cattle line, a nice Ayrshire cow, an Ayrshire calf and a dual purpose Shorthorn were on exhibition.

A Shropshire and a Chevio represented the sheep industry and a Chester, a York and a Berkshire represented the swine industry. There were also some specimens of poultry and poultry appliances in charge of Mr. Jones, Poultry Superintendent.

Car number two had dariying apparatus, exhibits showing the results of field crops tests and samples of drainage tile, fertilizers and hives of bees.

C. W. McDougall, Dairy Superintendent for the Proviince, was in charge of the dairy section. Of particular interest to dairymen who visited this department were the feed and production records of several herds in the Sussex Record Centre, compiled under the care and mangaement of Mr. H. N. Flewelling. One herd of twenty cows had eleven star boarders and only nine cows were producing a margin of profit. A herd of seventeen cows had two

(Continued on page 706)

THE MARITIME FARMER.

And Co-operative Dairyman

Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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JULY 7, 1914.

DATES OF ISSUE.

July 7-21

August 4-25

DAIRY FEEDS AND RECORDS.

In these days of sharp competition it is necessary for the dairy farmer to make a close study of his business if he is to succeed. Like the manufacturer, he must know exactly what his products cost him and determine the source of his profits and losses. In fact he should make a business proposition of the whole farm. We can point to some here and there who have followed this plan with wonderful success, but the condition of the dairy industry as seen on many farms points to the need of better methods and a more definite knowledge of the business. In no department connected with the farm is there more need for absolute data than in the dairy. There is no business which shows a greater range of profit than that of dairy farming. There is need of more careful business methods in the selection and breeding of dairy cows; of keeping records of the yield of milk, the cost of rations, and the fertility elements added to and taken from the soil. Too much money is expended by the average farmer for commercial feeding stuffs. A larger percentage of the foods for our dairy herds should be grown on the farm. Many small farms would be capable of carrying a larger herd if a more intensive system of growing crops were practiced in these days. But after the dairy farmer has produced all he possibly can on his farm, he still has to go into the market for commercial feeds, especially protein, and it is absolutely necessary for him to study the different feeds on the market. The number of cattle feeds now available is very large and appear to be constantly increasing. We have now a great variety of waste products from the manufacture of oils, starch and breakfast foods. At one time farmers produced all that their cattle ate, but all this is changed, so that considerable knowledge is now needed regarding the composition and character of the numerous kinds of feeding stuffs on the market. The by-products in the manufacture of flour,—wheat, bran and middlings, are foods of standard excellency in composition and palatableness. The by-products from the breweries carry a high per cent of protein and are palatable and bulky. The gluten meals are by-products from corn in the manufacturing of starch and glucose. From the manufacturing of oils we have cottonseed meal and the oil meals, all palatable and rich in protein. Probably no more convenient and rational classification of grains and grain products can be suggested than the following, proposed by Lindsey:

Class I. Thirty to 45 per cent protein; 30 to 45 per cent carbohydrates. The oil meals and gluten meals.

Class II. Twenty to 30 per cent protein; 60 to 70 per cent carbohydrates. Gluten feeds, dried brewers' grains, malt sprouts, buckwheat middlings, peas and beans.

Class III. Fourteen to 20 per cent protein; 70 to 75 per cent carbohydrates. Wheat bran, middlings, rye bran, mixed feeds.

Class IV. Eight to 14 per cent protein; 75 to 85 per cent carbohydrates. Barley, corn, oats, rye, wheat, hominy, oat feeds, corn and oat chop. The hays and other fodders belong with this class.

A CREED FOR THE COUNTRY BOY

I believe that the country which God made is more beautiful than the city which man made; that life out of doors and in touch with the earth is the natural life of man. I believe that work with nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do, but how you do it; that opportunity comes to the boy on the farm as often as to the boy in the city; that life is larger and freer and happier on the farm than in the town; that my success depends not upon my location, but my self; not upon my dreams, but upon what I actually do; not upon luck, but upon pluck. I believe in working when you work and playing when you play, and in giving a square deal in every act of life.

ATTENTION YOUNG MAN.

We call the attention of our readers to the advertisement which appears elsewhere in this number of the Agricultural College at Truro. Nine years have elapsed since this institution was formally opened, and during that time great progress has been made. The attendance in the regular classes has gradually grown from 17 to over the centuary mark and in the Short Course from 68 to over 350.

The reasons for this growth have been three fold; First, the excellent work done at the College, and second, the recognition which the farmers of the Maritime Provinces are giving to the necessity of an agricultural education for those who propose spending their lives upon the farms of this country. Thirdly and what is more important, results can already be seen in the increased enthusiasm, in the more intelligent farming methods and in the larger percentage of young men who are seriously taking up the business of farming on a business basis.

The courses at Truro are planned to meet the needs of the average farmer's son who has only had the advantage of an ordinary school education and who wishes to increase his general education and at the same time to acquire a knowledge of the underlying principles of agriculture. In the past the ages of the students have varied from 15 to 35, the average being about 20. About 90% of those who have entered the College are now engaged in farming.

A small number have entered other pursuits of life, and about 5% have continued their courses at the Ontario Agricultural College, Guelph, and at Macdonald College, Quebec, with a view to completing their four years course and obtaining a B. S. A. degree. Eight students from the Nova Scotia Agricultural College entered the third year at Guelph last fall, joining a class numbering 67. In the final examinations held last spring, these Nova Scotia Agricultural College men all ranked the first twenty, which gives evidence of the thoroughness of the training which they received at their Alma Mater at Truro.

The advantages of a student desiring to obtain his B. S. A. degree taking his preliminary course at a Maritime Province institution are great. First of all, the instructors are familiar with local condition and, hence, the instruction is of a character more applicable to the needs of the students, than can be given at any institution not situated in the Maritime Provinces. Then no tuition is charged so that the total expenses are considerably less. When in addition it is considered that the students have always stood well in their classes at Guelph, Macdonald and other Canadian institutions, the advantage becomes still more apparent.

It is about time the young men in the Maritime Provinces were considering their program for next winter and we strongly recommend them to think seriously of the advantages with an education will give them in future life and follow up this consideration by writing to Truro for a calendar of the Agricultural College.

SURVEY YOUR OWN FARM.

Did you ever take an afternoon off and stroll over your own farm, viewing it in the impartial manner in which you would survey a neighbor's farm? Looking the farm in the face in this way is a wonderful educator, and all of us can afford to do it at least once a year.

Sticking too close to hard work makes us narrow in our vision. Obvious faults are apt to escape our notice. For instance, it is easy for one of us who has plowed for 40 years around a large boulder in the middle of an otherwise clean field, to come to regard that obstruction as a necessary evil; a few pounds of blasting powder and half an hour's work would remove the obstruction and improve the field immensely. The barnyard may be very unsightly and mussy to a stranger, but all right to us because we have become accustomed to seeing it that way. A gate that insists on sagging and dragging may lose us enough time and energy in a year to build half a dozen new ones to take its place, but we have become so accustomed to hauling that old gate around that it too is classed as a necessary evil.

It is wonderful how many small points in need of improvement we can find if we will only give our farm a square look in the face. Many of the most obvious faults may be remedied by half an hour of energetic work. There are few of us whose farms are so perfect that they would not be the better of an annual clean-up.

EDITORIAL NOTES

Put heart into your work for heart's sake.

Every man has a place to fill. Yours is as big as your farm.

Neglect is the thing that makes the weeds grow in your garden.

He who preaches thrift to others must make his own life count.

A man may be a child of circumstances, ruled by them or a parent of circumstances; ruling them.

There is a great future ahead for the man who goes ahead now and keeps well up with the present.

The man who is making his farm pay is a man who is making it his sole business to do that very thing.

Don't waste your time wishing you were like others. If you be like them they would then be so much like you that you would no longer like them.

The Storage and Use of Silo Moistures.

(Continued from page 681)

Of equal importance with the two factors above mentioned in governing the amount of water held in the soil from any given rain is the amount. A very dry soil offers much greater resistance to the downward movement of water than does a moist soil. In a very dry soil the movement is so retarded and the amount of water required to moisten is so great that the water from a single rain, coming alone, is generally held near the surface. From here it is soon lost through the rapid evaporation which takes place at the surface. On the other hand, where the soil is already moist when the rain comes, it is much more quickly carried away from the surface. It is also distributed to lower depths in the soil and thus protected from the rapid loss at the surface. On the other hand, where the soild is already moist when the rain comes, it is much more quickly carried away from the surface. It is also distributed to lower depths in the soil and thus protected from the rapid loss at the surface. Frequent observations have been made along this line on the native sod. This is usually hard and dry. It is seldom wet more than a few inches by the rains that come singly. The lower depths receive moisture only during "rainy" or "wet" spells when a second rain comes before the moisture from the preceding rain is lost.

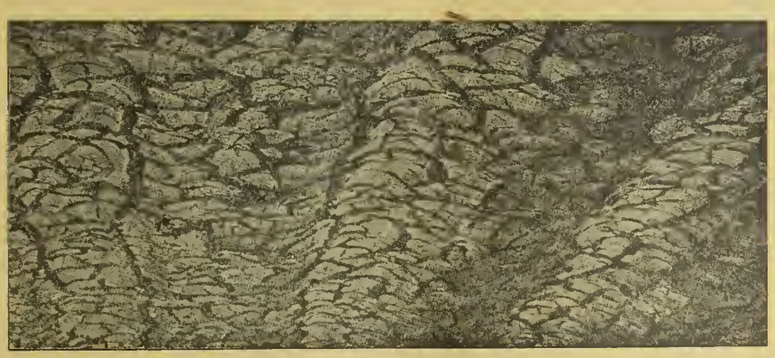
How Moisture is Lost.

It is seldom that we get enough water into the soil to allow percolation beyond the reach of the plant. Percolation does not take place to any considerable extent until a soil is filled beyond its carrying capacity. This point is very seldom reached, but when reached, the percolation is beyond our control. The second means of escape that is, evaporation from the surface, is to a certain extent under the control of the farmer. There will always be some loss even under the best system of cultivation, but it can be reduced to a minimum. The water that evaporates from the surface reaches the surface in much the same way that oil from the bowl of a lamp reaches the flame. The water passes from one soil particle to another until it reaches the surface and is lost in evaporation. This upward movement is quite rapid when the soils are wet and is retarded as they dry out. If the surface of the soil is cultivated it becomes loose and dry. Both the looseness and the dryness tend to retard the further movement of water to the surface. Water moves very slowly through a loose or dry soil. In this section a rain is usually followed by a hot sun and wind. These cause a more rapid loss of water from the surface than can be supplied by capillarity from adjoining soil particles. The result is that the soil surface soon dies. This is of itself a check to surface evaporation. The water from below moves slowly through the dry surface. If the rain is of sufficient amount to make the surface smooth and connect with the under moisture it should be stirred as soon as practicable. In order to reduce evaporation from the surface to a minimum, it is essential to have on the surface not only a dry soil but a loose soil. Cultivation will stir the surface soil, causing it to dry out more quickly and leave the soil kernels not so closely in contact. The fewer the points of contact between the small particles of soil and the drier they become the more effective is the mulch in reducing evaporation. Another reason for cultivation soon after a rain, especially where a field is bare, is that a smooth soil blows much more quickly than a rough soil. This, of course, applies to the soils that are light enough to blow and in regions of frequent high winds.

On this type of soil we feel that two or three inches is sufficiently deep to make an effective mulch. Where the mulch is too shallow there will be enough circulation of air through the mulch to cause considerable loss. On this soil almost any implement that stirs the surface can be used if it does not pulverize the soil too finely. Where the surface has become so dry that the draw-harrow pulverizes we prefer the disk. On still lighter soils the disk might pulverize too much and make some other implement preferable. The objections to a very fine or dust mulch are that it will blow and that it offers too great resistance to the penetration of rain water.

The third means of escape of water from the soil, that of being drawn out by growing vegetation, is much more effective on this type of soil than surface evaporation. Considering only the moisture content of the soil, the water used by any plant is lost. From the standpoint of the farmer only the water which is used by weeds is lost. This is, of course, a real loss, since the weeds have but little practical value. The little value they have is furnishing organic matter to the soil. The water that is taken up by the roots of the crops, passed through the plant and exhaled by the leaves, has served its purpose. It is for this purpose that we strive to store the moisture in the soil.

As much water is required to grow a pound of dry matter of weeds as is required to produce the same amount of dry matter of some of the farm crops. From the standpoint of crop production weeds are the worst enemy of the farmer who is farming under a limited rainfall. Any water used by weeds is lost to the crop. It is hardly practical to keep all weeds down, but the crop is usually cut short to the extent that is has been robbed of the water by weeds. From a large number of tests that have been made it is found that where weeds are allowed to grow throughout the season they dry the soil as thoroughly as does a crop of small grain.



A Dry, Baked Soil t hat is Losing Moisture.

Cuts by courtesy Farm and Ranch Review, Calgary.

Cultivation to Conserve Moisture

Cultivation is the one practical means that the farmer has for conserving moisture over any considerable area of land. It is by cultivation that the surface is put in condition to catch and hold the water until it can soak into the soil. Weeds are killed by cultivation and thus prevented from using the water which falls.

Cultivation also checks the loss of water from soils by direct evaporation. Stirring the soil loosens the surface, hastens the process of drying the soil particles, so that the water from below cannot so readily reach the surface by capillary action. In other words, we purposely sacrifice the moisture in the cultivated layer in order to conserve that in the deeper levels.

Summer Tillage

From the standpoint of storing moisture in the soil we have found summer tilling, which is clean cultivation without any crop for a season, the most ideal way in which to store moisture. When the rainfall of a season is insufficient to produce a profitable crop it may be better to summer till than to crop every year, and thereby store a small portion of one season's rainfall to store with the rainfall of the following season for the production of a single crop. In other words, to use not "two years' rainfall for one crop," but rather a small portion of the first year's rainfall for the crop. Our investigation shows that it is only under favorable conditions that as much as 33 per cent. oft the rainfall of one season can be carried over to the next, and that during the most unfavorable season only 10 per cent. of the second year's rainfall is utilized for crop production under the best system of summer tillage.

Summer tillage is a system that has been practiced for a long time in the drier sections of the country. Although this method of utilizing moisture is seemingly an exceedingly wasteful one, it is probably the best one yet devised for some crops, soils and climatic conditions. It is obvious that it will hardly be profitable to summer till a shallow soil, for in such soils the effect of cultivation is of little value in storing water. Where there is a layer of hard-pan, gravel, rock or sheet water close to the surface the amount of water which the shallow layer of soil above this stratum will hold is so limited that probably one good rain will fill. It is possible under normal weather conditions to store a considerable amount of moisture as a safeguard to the crop against drouth. It must be borne in mind, however, that the bad effect of overstimulation, already mentioned, will sometimes more than offset the benefits of this stored moisture and that in some seasons the increased yields due to summer tillage may not be sufficient to pay for the extra expense.

In 1911 the total amount of rainfall was greater than in 1910, but this distribution of the rain was not as good. Only about 10 per cent. of the total rainfall was held. The trouble was that either the rain would fall in such light showers that it was not sufficient in amount to soak into the ground deeper than the first few inches of the surface, or else the showers would come singly, and falling on the hot, dry surface would be lost through the rapid evaporation. The best distribution of rain for storing water is when the showers are so frequent that the surface does not dry out thoroughly between them. One such rainy season with several inches of water falling during a period of several days will do more good from the standpoint of storing water than a much heavier rainfall falling as simple showers. It takes an inch of water to wet the surface six inches. If, then, only an inch of water falls the most of it will be lost in creating a mulch. If another rain comes while the surface is still moist it can be carried into the lower soil.

Disking After the Binder

It is frequently not desired to summer till in the preparation of the seed-bed for a crop. The same principles, however, should be applied as are applied in summer tillage; that is, keeping the surface in shape to catch the water and keeping the weeds from using the water. The preparation of the seed-bed should commence as soon as practicable after the preceding crop is off the ground. Usually the longer the seed-bed is prepared and kept in proper condition the greater the amount of water that will be stored. A firm seed-bed is essential for all crops. After a crop of small grain has been taken from the ground it usually becomes weedy unless it is cultivated in some way, or unless it is so dry that weeds will not grow. The weeds that grow on the grain stubble field, after the previous crop has been taken off, use the water and plant food, which should be saved for the succeeding crop.

Considerable work has been done to determine the effect of disking after the binder on the conserving of soil moisture. Wherever there was sufficient moisture in the soil to produce a crop of weeds and these were killed by disking, we found a saving of moisture on disked land over land not disked. In some cases where heavy rains came during the test some benefit was found by the disked land catching more of the water than was caught by the unstirred soil. We have not made actual test to determine the financial profit in disking, but from the moisture standpoint it will prove beneficial to stir the surface so that it can catch more of the rains that may come, and kill the weeds that are on the ground. The soil is frequently so dry and hard after harvest that it is necessary to weight the disk in order to make it do the work thoroughly.

Plowing Versus Disking

From tests that have been made at the station, plowing has been better for storing moisture than disking. The difference in some cases has been very little. It is dependent on the amount of rain that comes while the test is being made and the rate at which the water falls. If heavy rains fall the increase in moisture content of plowed land over disked land is greater. This is to be expected, since the plowing stirs the surface of the soil more thoroughly, and puts it in better condition to catch any rain that comes. The plowing will also kill all of the weeds. The disk does not in all cases do this. It may be preferable—if a soil does not blow when it is fall plowed—to plow the stubble fields instead of disking them. This, however, is frequently impracticable due to the dryness of the soil.

Artificial Mulches

It is a common practice to use artificial mulches among shrubs, small fruit and in some cases vegetables. The station has done some work to determine the value of artificial mulches from the standpoint of catching and holding the water that falls. These mulches are usually composed of old hay, straw or manure. From the standpoint from which they are applied, that of retaining water, they are most efficient and have a practical application. Wherever it is desired to grow shrubs, ornamentals or small fruit the mulch can be used for retaining water. Against its efficiency in holding water is sometimes advanced the opinion that it forms a harboring place for injurious insects. We have no data on the latter point. For storing water a mulch of straw or hay has been found more effective than a soil mulch. The hay mulch is so open and porous that water falling as rain will readily penetrate into it without runoff. A hay or straw mulch is also more effective in reducing evaporation. The mulch itself quickly dries after a rain, but protects the water in the soil underneath from loss through evaporation. The particles composing the artificial mulch are so coarse and have such large spaces between them that water from below cannot move upward by capillarity.

Depths to Which Crops Use Moisture.

The depth to which a crop will use moisture depends upon the root development of the crop, the length of its growing season, its normal development, the type of soil on which it is being grown and the location of the mois-

(Continued on page 704)

HORTICULTURE.

Thinning.

Thinning apples pays at least 100 per cent. Of course, it seems small potatoes to take one tree with say five barrels of apples and spend twelve and a half cents worth of labor on it, thinning of apparently good apples (and, inadvertently, some which you do not intend to take off,) all to gain a miserable extra price of 25 cents on the crop of five barrels. By what crop planted in Nova Scotia—save the Lime Sulphur plant—will produce more than 100 per cent. profit? It comes at a time of the year when most people "have their crop in" and if some bloated millionaires who believe in growing hay for the good of the community, are still busy at its cutting, then all the better for the apple men.

Thinning pays for other reasons which it is hard to estimate in cash. For instance, thinned fruit has a much better chance to be run over to fill orders for the South Africa trade. This will be especially true this year when the Wagners have set so well. Thinned Kings will also share this advantage.

There is another reason which would make thinning a profitable practice; suppose the cash paid out to thin the apples was only equalled by the extra profit received for the apples instead of being repaid twice over. Our Nova Scotian apples are about the lowest class apples sent to England, with the exception of the jam apples sent to Holland, etc., used in preserving.

Now I know you people are like us Scotch. You think you are the big IT in the apple world, but if you could see the Winesaps, Yorks and Grimes as I have seen them, you might, sack some of your political gas bags at your fruit meetings and obtain samples of your competitors' goods to see what you are up against.

However, whether you believe it or not, you need to look out and gain a better name for quality and less for spots. The Tysons in Pennsylvania, where I was staying last winter, only packed apples of 2¼ inches and over and sent the smaller to the cider mill (commonly called vinegar factory.) Where would you be with your small threes, by threes, mixed threes and 29 per cent. No. 1 tree run, which was all mine packed? Their fruit was thinned and was 80 per cent. free from worm or spot with 8,000 barrels and 300 acres. Perhaps Nova Scotian apples won't need thinning everywhere in the Valley but Wagners, Kings and most especially Spys are setting full and will certainly pay for the labor.

The apples stay on so much better through gales that it is hard to estimate the profit in that respect. In 1911 I had 1433 barrels of all sorts and, out of that, 61 barrels were drops. In 1912 I had 2211 barrels of sorts, and only 87 barrels for the evaporator. In 1913 I got 913 barrels and of them only eight went to the evaporator and the rest made $2.02 tree run for the Berwick Fruit Company.

The last objection I want to dismiss from your minds is the great loss of bulk due to thinning. It does seem queer that apples act so contrary (especially Spy.) It sometimes looks to me on my very thick trees that one apple to every cubic foot of space would just be the ideal. Of course, you would not have enough leaves on most of your trees to make so few apples big enough. As your trees are so rambling you would probably be tempted to annex a good part of the heavens in your estimate and so might come out not so far astray after all.

Take this loss of bulk and here is what I found. 1st Spy tree cropped in 1907, 4 barrels; 1908, one half barrel; 1909, 5½ barrels; 1910, off; 1911, 6½ barrels; 1912, off; 1913, 7½ barrels.

This is a rather small tree and had over 1,000 good sized apples taken off in thinning besides many little nubbins which were not counted.

Tree 2, also Spy; Crop; in 1907, 6½ barrels; 1908, ¼ barrel; 1909, 6¾ barrels; 1910, 1-3 barrels; 1911, 7½ barrels; 1912, off; 1913, 7 barrels.

This also had 1,000 apples or more besides nubbins removed. It is also an undersized 27 year old tree on indifferent poor soil.

To end up with I wish you would can one remark you are so fond of, and that is "Our apples are the finest flavored in the world". If this remark were duly evaporated to one hundredth part of its bulk, it might then be used by even

Yours truly
JOHN BUCHANAN
in Berwick Register.

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PAID-UP CAPITAL $ 6,000,000
RESERVE FUND - 11,000,000
TOTAL ASSETS - - 80,000,000

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

Crop Report.

We are not in a position to estimate with more certainty as to the amount of Competition we shall have to contend with this year.

As far as our own crop is concerned we can safely reckon on 1,500,000 barrels of shipping apples.

Reports are more encouraging now than at first and orchards that had the appearance of being burned after the frosts of June 3rd and 4th are now showing a very fair set.

Gravensteins, Wagners and Bishop Pippins are in abundance.

We are preparing to market 900,000 to 1,000,000 barels which will be our percentage of the total crop.

Naturally we are therefore gathering all data possible as to what competition we shall have to contend with and on which markets this competition will be met.

Starting with the West we find that Washington's latest estimate is 5950 cars, roughly 3½ million cases, nearly 50 per cent. more than last year.

Oregon expresses some doubt as to what their crop will be but think that possibly it will be as large as their record crop of 1912.

The apples of these two states are of a different class to our own and supply a different trade so far as Europe is concerned, consequently, unless they have a tremendous surplus to market in England, we have little to fear from that direction.

These states do, however, affect to a certain extent our trade in the Canadian North West and for this reason the early operations of the Co-operative selling agencies of both states will have to be carefully watched.

Our principal competitor on our great market (England) is western New York.

The grower of this State made a splendid impression last year by the quality of their pack and have therefore become a factor to be dealt with Reports indicate a larger crop of apples from this district, also from the State of Maine. As in Nova Scotia, there is no sign of spot although should there be any material changes in the weather this could easily develop between now and harvest.

In Ontario, there will be a large crop.

Where spraying has been satisfactorily carried on the crop will be a heavy one but where orchards have been neglected the trees are overrun with tent caterpillars and the quality of the fruit will be greatly reduced through the lowered vitality of the trees.

Prospects in Quebec are that Wealthy trees promise a heavy crop and Fameuse and McIntosh Reds a good crop.

In Okanagan Valley the outlook for Jonathans and Yellow Newtons is fair; Wealthy and Spitz fair.

The English crop, which much affects the price of our fall apples, is reported light.

Adverse weather conditions, cold and wet with severe frost, have reduced the crop to 50 per cent. below average.

With our large crop it will be necessary to extend our markets.

The North American Fruit Exchange have a large staff on their permanent Sales organization.

These men are expert salesmen, the best men that can be obtained and any market giving the slightest promise is thoroughly looked after.

We must adopt a similar agressive campaign if we would market our big crop to the best advavntage.

There are several promising markets that must be looked after, this means that more men must be employed, but it must be done.—A. E .Adams, Sec'y United Fruit Companies, Ltd.

Fruit Men Meet Commission Johnson.

Mr. Daniel Johnson, the newly appointed Fruit Commissioner at Ottawa paid his first visit to the Annapilis Valley last week, to overlook the fruit interests in order that he may become acquainted with the conditions in Nova Scotia jointly with those of Ontario and British Columbia, over all of he is solely at the head, according to the late changes made by the minister of Agriculture in separating the Fruit Division from the Cold Storage Department.

Mr. Johnson was met at Windsor accompanied by Prof. Cumming on Saturday the 27th inst. by Mr. Tremaine the member for Hants and taken by auto through some of the most important orchards for Hants and Eastern Kings. On the drive throug to Wolfville, there he was met by an auto party consisting of Messrs. Prof. Blair, Prof. Brittain, S. B. Chute, Fruit Inspectors G. H. Vroom and F. B. Westcott, J. M. Robinson, A. H. Westcott, H. A. Welton and Capt. Allen.

The party then visitied a number of orchards on the drive through Starr's Point, Canard, Sheffield Mills, Centreville, Northville, and Woodville, there they looked over the Father of all the Gravensteins, the big tree of J. A. Kinsman which has produced as high as 32 bbls. apples in one year and by all appearances it will repeat this season.

After calling at Mr. Howard Bligh's big orchard from which he expects to pick 7,000 bbls. apples this year, the party then returned through Brooklyn Street to Kentville.

Judging by the questions asked and remarks passed by Mr. Johnson the Government made no mistake in the man they placed at the head of the Fruit Division. Mr. Johnson was very agreeably surprised at the prospect of such a large crop of apples in the Valley which was contrary to the reports he had received at Ottawa of damage by frost. Although the frost in some sections may have reduced the apple crop a few hundred thousand barrels, still it will be comparatively a small proportion of the whole estimated crop of the Valley, which will be from present prospects be as great as ever produced in Nova Scotia any previous year.

Mr. Johnson visited the Fruit Growers of Annapolis Co., on Monday and then returned to Berwick to attend the 2nd. Annual Meeting of the United Fruit Co., of N. S.

Mr. Johnson interviewed at St. John on his return reported that the outlook for the apple crop this fall is very promising. It is estimated that more than 1,250,000 barels will be harvested. The trees on the highlands are in much better condition than those on the flatland in the centre of the valley. These latter suffered somewhat severely from the late frosts in June which nipped the tender buds and blossoms. In the whole province it is estimated that about 750,000 barrels were lost through these late frosts.

Mr. Johnson was met in St. John by S. L. Peters, Dominion Fruit Inspector for New Brunswick, and with him he will make a tour of inspection of the fruit growing districts of New Brunswick.

Directions for Sending Specimens.

Orchardists are urged to examine their trees and plantations very closely for injurious insects and fungous diseases.

Specimens of insects, if dead, should be wrapped in paper or cotton and enclosed in a strong pasteboard, tin or wooden box. If the specimen is particularly soft, it should be packed in cotton saturated in alcohol. Wherever possible, grubs, caterpillars and so forth should be packed alive in a box together with a supply of their food; air-holes are not necessary. Particulars as to where the insect was found and the nature of the damage which it is doing, whether to leaves, buds or stem, are frequently of great importance.

In the case of bacterial or fungous diseases, choose specimens representing every stage of the disease. Most material or material likely to decay, should be packed as dry as possible. Press small plants or parts of larger ones carefully between layers of newspapers, protecting this if necessary with stiff cardboard. Fruits, each separately wrapped, should be packed in strong cardboard boxes.

All such packages should contain the name and address of the sender, and are carried postage free.

Send specimens of insects to: Dr. C. Gordon Hewitt, Dominion Entomologist, Central Experimental Farm, Ottawa; and

Specimens of bacterial or fungous diseases to: H. T. Gussow, Dominion Botanist, Central Experimental Farm, Ottawa.

Apple Industry in Good Shape.

Progress in every phase of the apple industry was the tenor of the convention of the United Fruit Co., Ltd., which closed at Berwick on July 1st. Co-operation was putting new life into the industry, the orchardists were giving scientific attention to the problems confronting them, their product was becoming more popular in the great markets abroad, and the methods of packing were steadily improving. As an index to the proposed expansion of the company, a resolution was passed at one of the sessions authorizing an increase of capital from $50,000 to $200,000. In the afternoon session officers were elected for the ensuing year, as follows:—President, John Donaldson, Port Williams; Secretary, A. E. Adams, Berwick.

The two days' convention was an unqualified success, bringing together

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nearly the entire roll call of the organization. The programmes at the largely attended public meeting held Tuesday night, and the regular meetings of the convention provided a grist of instructive lectures, every one of them dealing effectively with some phase of the industry.

On July 1st, the first item was the report of the London office, which was given by John N. Chute, the European representative. He said that Liverpool was the greatest centre of distribution for fruit in the world. London Manchester and Hull followed in succession. Ribstons, handled at the proper seasons, were very welcome in London, and Blenheims were very much liked in the north of England. Wealthys are getting to be more appreciated. There has been a great improvement in the packing of last year, and a uniform method was increasing.

A. E. McMahon, the company's inspector and organizer said that the most important thing about packing was facing, and being careful about packing Number Threes.

Prof. Haycock then gave his report on evaporators and their needs.

A full report will appear in our next issue.

Irish Apples for English Market.

Although the Irish Fruit trade does not attain to any very considerable proportions, yet the export to great Britain is worth approximately $790,000 per year, apples being the largest item. The area under fruit in Ireland has been extended considerably in recent years and this is especially true of orchards, the acreage of which for the year 1912 was more than 40 per cent greater than that for the year 1908. The largest fruit-growing areas are to be found in county Armagh.

A marked improvement has been effected in the marketing of Irish fruit. In conjunction with the Ulster Fruit Growers' Association, rules for the grading and packing of fruit have been drawn up and standard packages have been approved; a very distinct improvement has been effceted in the packing of apples in stanrard barrels on Canadian lines. The association's label on a barrel or box of apples is a guarantee as to the variety and grade of the contents and also that the package is a standard package. The label bears the packer's registered number so that if the contents are found to be other than what they should be, he can be communicated with.

Cost of Apple Production.

We are apt to be led away with the stories of $3 to $5 a box for apples secured now and then by certain individuals and think that they thereby have a much greater return on the capital invested than when we sell the fruit at $3 a barrel. It costs $1 a box to put the finest Oregon fruit into Chicago and its costs more by the time it gets to New York or Philadelphia. If we can get 50 cents a bushel for our fruit in the orchard we can live in years of normal crops. I venture to say that the man who can secure the sale of his apples at $2 a barrel in the orchard one year with another will make good money; whereas, the poor westerner could not pay for his packages, pack the fruit and send it to New York for $2 a barrel.—Samuel Fraser, Livingston County, N. Y., in N. E. Homestead.

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THE UNIVERSAL CAR

Ten million miles of advertising. A half-million Fords, averaging twenty miles a day, circle the world four hundred times every twenty-four hours. If the car wasn't right this tremendous publicity would put the Company out of business. The Ford is its own best salesman. A demonstration is a revelation—take yours today.

Six hundred dollars is the price of the Ford runabout; the touring car is six fifty; the town car nine hundred—f. o. b. Ford, Ont., complete with equipment. Get catalog and particulars from any branch Manager or from Ford Motor Company of Canada, Limited, Ford, Ont.

P. E. I. Fruit Crop Report.

..Apples—There is an abundance of bloom on early and fall varieties. With the exception of a few districts winter varieties also show a fair amount of bloom. The trees were later coming into bloom than usual. Frosts in a few sections have done some damage, more Counties. One correspondent from Alberton reports canker worms and bud moth very bad in that district. At Malpeque, the prospects for apples are not good. Bud Moth and Oyster Shell Bark Louse are doing some injury in unsprayed orchards.

Strawberries—Indications point to a fair crop, notwithstanding some damage by frost. There was also some winter injury.

Plums—Prospects for plums are unfavourable. Black Knot has killed many trees and impaired the vitality of others.

Cherries—The indications for cherries are good. Damage from frost has been slight.

Bush Fruits—There will be about an average crop of bush fruits. The frost possibly will effect the yield slightly.

A Word to the Wise.

Fruit growers who are thinking of economizing by not using poison in then ext spraying should see the ravages of the green fruit worm in some of the less thoroughly sprayed orchards where in a great many cases the apples have holes eaten right in the seeds. This green worm has at least a fortnight yet to work.

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SPLENDID DISPLAY OF INDUSTRIES
INCREASED SCOPE IN WOMEN'S WORK
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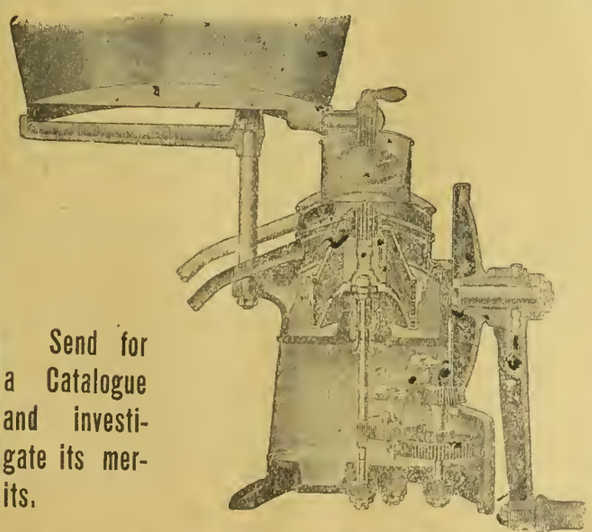

Send for a Catalogue and investigate its merits.

Self-balancing Bowl, easily and quickly cleaned.

Rustless Aluminium Discs, few in number, yet providing ample skimming surface.

Automatically Oiled Neck-bearing.

Machine-cut Square Gears.

Revolving Spindles, all enclosed, and running on ball bearings and in oil.

Working parts easily accessible.

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DAIRYING.

Raising of Ayrshire Calves.

At birth the calf is allowed to remain with and nurse the dam until the milk is fit for use. When the calf has nursed the first milk, the dam is milked out and the milk giver her to drink; both calf and dam get a good laxative. We like to feed the calf whole milk the first month or three weeks, then gradually change to skimmed milk. By the time it is on skimmed milk the calf usually is eating hay and grain. We feed about what hay and grain the calf will clean up twice per day. Should the milk be scarce, we use one part linseed meal and two parts bran. Make a gruel, adding sufficient water to make a drink twice per day. Fall calves are given warm drink all winter, changing to water in the warm spring weather. The grain fed dry to calves consists of bran, two parts, ground oats and corn, or Schumacher Stock feed, two parts, and linseed meal, one part.

Up to producing milk the heifers are fed while in the barn, hay, ensilage and grain, the latter of the above mixture. Feed for results; see to it that the heifers are thrifty and growing all the while. When carrying the first calf, of course grain is increased as is necessary.

For roughage for our dairy cows, we raise hay, as much clover as possible, ensilage for the silo, and green feed for summer, usually having ensilage until the first of June or later, and as much later as possible. The grain ration consists of as near the natural food as possible. Price has considerable to do with the kinds of grain used.

At present we are feeding a mixture of bran, linseed meal (old process), gluten, hominy, Schumacher Stock feed and Ajax Flakes, 100 lbs. of each with salt sufficient. We feed one pound of grain to three or four pounds of milk given, dependent upon the condition of the cow. Our cows must be in good condition and we look to that rather than follow any fast rule of feeding.

For green feed we have winter rye, then oats, peas and barley sown as early as possible; later we have millett and still later, barley, sown usually on the ground where the oats, peas and barley were cut, getting two crops off the same land. We also get a second cut of millet. The later crop, barley, is not hurt with early frost.

Our method or system of feeding is practically the following: After milking, feed ensilage (average about 30 lbs. per day) with grain on top, then a liberal feed of hay; cows are watered, then given a second or continuation feed of hay—what they will clean up. This represents the morning feed. In the afternoon hay is fed at 2.30, then cows are watered; a second feed of hay to those that need it; then prepare for milking. After milking, give ensilage as in the morning.

This is what the average cow gets. Of course we all have a few individuals in the herd that either need or are worthy of special attention.—John A. Ness.

Cause of Difference of Income in two Pure-Bred Dairy Cattle Farms.

The writer compares carefully with the aid of tables two dairy cattle farms situated in favorable positions as to means of communication. They are respectively 400 and 160 acres in extent and the smaller of the two yields a managerial income $3,380.62 higher than that of the other.

The following table shows the principal data of the inner economy of the two farms:

	Farm I	Farm II
Total area	400 acres	160 acres
Arable land	101 acres	103 acres
Total capital	$56,289.50	$49,190.10
Fixed capital (amount and percentage of total)	$41,600 73.9 p.c.	$22,800 46.4 pc..
Working capital (amount and percentage of total)	$14,689 26.1 p.c.	$26,390 53.4 p.c.
Investment in cattle	$ 4,990	$21.555
Number of head	61	67
Total receipts	$ 8,750.90	$13,811.74
Live stock products sold	3,030.00	3,337.99
Live stock sold and increased inventory of live stock	3,476.50	7,390.25
Sale and increased inventory per cattle unit	18.22	126.08
Total running expenses	4,234.77	4,196.90
Expenses for labour	2,270.40	1,639.60
Printing and advertising	11.00	245.00
Interest, 5 per cent. on capital	2,814.47	2,459.50
Total expenses	7,899.24	9,579.46
Net results (managerial income)	851.66	4,232.28

The extent of arable land is very nearly equal in two farms, while the running expenses are nearly the same.

The total expenses are even greater by $1,680.22 on the smaller than on the larger farm. Consequently the great difference in the net results can only be used by the difference in the receipts; it comes chiefly from the sale of cattle and from the difference in the increase of inventory. The writer is of opinion that the higher managerial income of the smaller farm is almost entirely due to more judicious breeding, selecting, testing and advertising. —D. H. Otis, in Hoard's Dairyman.

The Work of Fifty Guernsey Cows.

The last fifty Advanced Register records of Guernsey cows approved and ready for certificates show some interesting figures relative to the records being made by this breed.

Thirty-six out of fifty gave an average of over 505 lbs. butter-fat, showing the standard that many Guernsey breeders are setting for their herds. Four of the number averaged 622 lbs. and two were 713 lbs. each.

To the dairyman who does not aspire to making world records, but wish to know what he may reasonably expect from Guernsey cows, the foregoing figures are worthy of note. He is prpoud to know that a Guernsey cow, May Rilma, 22761, holds the world's record for butter-fat production, with a yield of 1073.41 lbs. butter-fat in one year, and perhaps equally pleased to know that he has selected a breed the rank and file of whose cows show such averages.

When he considers further the cost of production and sees that he has received greater returns from his feed and the care given than he could have obtained with any other breed, he has renewed cause for satisfaction.

In this group of cows, four records are for the second year, and three are for their third yearly records, demonstrating that they "come back" repeatedly and improve their previous year's work. As illustrating this, we cite the case of Anton's Patience 24474, whose three years' records are as follows:

First year—7618.80 lbs. milk; 430.15 lbs. butter-fat.

Second year—10358.80 lbs. milk; 572.82 lbs. butter-fat.

Third year—11934.00 lbs. milk; 643.-16 lbs. butter-fat.

While these are not phenominal records, they show the great value of A. R. work to the dairyman in following just what his cows are, or should be doing. The number of breeders who are taking advantage of this work is steadily increasing.

Cost of Rearing a Calf.

Mr. Clausen, the writer of a Danish Bulletin, gives a summary of the cost of rearing a calf on the basis of the quantities of food administered and corresponding in nutritive content to Kellner's rules for feeding. The cost of attendance, rent of tsable, insurance and interest of working capital on the one hand and the value of the manure on the other hand, are not included in the account. The whole milk is valued at 13 cents per gal., and the skimmed milk at 3 cents per gal. Concentrated foods and hay are taken at the market price.

The weekly costs of food rise at first on account of the increasing quantity of whole milk given. In the fifth week a part of the whole milk is replaced by skimmed milk, in the seventh week whole milk is completely stopped, and in its place meal, crushed linseed and oats are fed.

The cost of rearing a six-months-old calf amounts to $32.80 inclusive of initial cost. With a live weight of 385 lbs., the cost per cwt. works out to $9.50.

Maritime Holstein Records.

In the list of seven day official records of Holstein-Freisian cows accepted between the dates of June 1st and 15th, we find the following:

Senior four-year-old class—Ruby Nig, 14213, owned by Lea & Clark, Victoria, P. E. I., with 560.25 lbs. milk, yielding 20.54 lbs. fat, the equivalent of 25.67 lbs. butter, 80 per cent. fat.

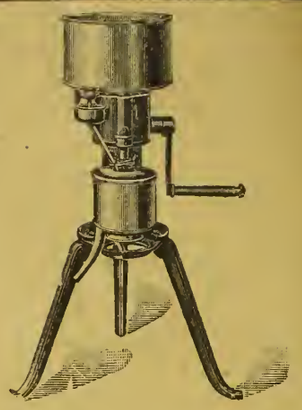
Junior four-year-old class—Segis Korndyke Calamity, 145.41 owned by Logan Bros., Amherst, N. S., with a record of 502.4 lbs. milk yielding 18.22 lbs. fat, the equivalent of 22.78 lbs. butter, 80 per cent. fat.

Senior three-year-old class—Miss Cornelia Vale, 177,79, owned by Lea & Clark, Victoria, P. E. I., record, 316.-

The butter makers who win the first prizes use Windsor Dairy Salt

114

"Melotte" CREAM SEPARATORS



The "Melotte" will increase your butter yield 25% besides improving the quality.

Saves time and labour, space and utensils.

Owing to its Suspended Bowl the "Melotte" is the simplest, most easy running and consequently the most durable cream separator made.

Write for Catalogue F.

R. A. LISTER & Co., Ltd.

82 Water St., ST. JOHN, N. B.

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If You Only Knew

——how much more easily it runs,
——how much time and labor it will save you,
——how closely it skims,
——how quietly it runs,
——how simple it is,
——how long it will last——

you would surely choose the

EMPIRE Disc Separator

Better this year than ever—years in advance in every mechanical feature.

If you have only 2 or 3 cows, look into the Baltic Separators, the smallest of which sell at $15.

Selling Agents for Sta-Rite Gasoline Engines

Send the Coupon for Booklet.

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Toronto and Winnipeg 10

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Empire Disc Separators ☐
Baltic Separators ☐
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"FOR THE MAN WHO WORKS"

Hard work is no excuse for an untidy appearance. A Challenge Waterproof Collar with its dull linen-like finish will keep you neat and well-dressed. Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

The Arlington Company of Canada Limited TORONTO

4

Too Much Indoors Causes HEADACHE

THAT miserable feeling is due to impure blood resulting from winter's indoor living.

Dyspepsia, Liver Complaint, Jaundice and Constipation come from impurities in the blood. There's one remedy—tried, tested, and found efficacious for the last fifty years—and that is

Dr. WILSON'S HERBINE BITTER'S

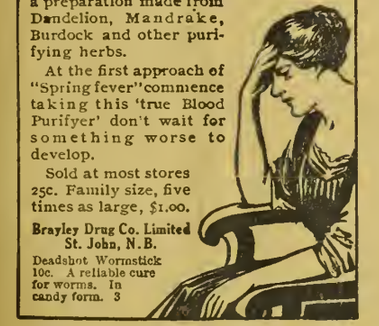
a preparation made from Dandelion, Mandrake, Burdock and other purifying herbs.

At the first approach of "Spring fever" commence taking this 'true Blood Purifyer' don't wait for something worse to develop.

Sold at most stores 25c. Family size, five times as large, $1.00.

Brayley Drug Co. Limited St. John, N.B.

Deadshot Wormstick 10c. A reliable cure for worms. In candy form. 3



Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't imitate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists, 41 Church Street, Toronto, Ont.

Advertise in the Maritime Farmer

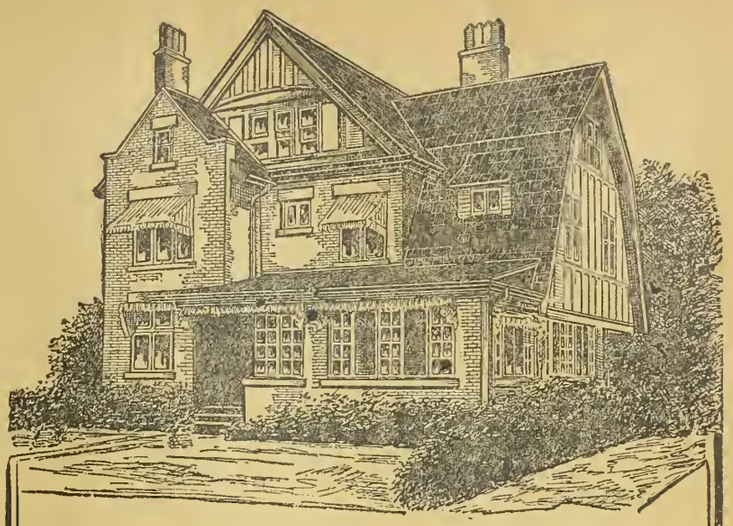
75 lbs. milk yielding 12.60 lbs. fat, the equivalent of 15.75 lbs. butter, 80 per cent. fat.

Milk, Milk Men and Milk Pails.

Of all food products, milk is the most perishable. There are two reasons why this is so. First, because it is in itself an excellent feeding ground for bacteria of all kinds and therefore, for the bacteria of fermentation and decomposition, second, in its production it is more exposed to contaminating influences than is any other food product. There are two great fields within which bacteria exist in unthinkable numbers. These are the earth and the alimentary tract of all animals. So when soil or manure come in contact with milk it becomes at once thoroughly charged with bacterial life. In Wisconsin most milk is made into butter and cheese. If the raw product comes to the factory laden with bacteria, the finished product cannot rank with that made from clean milk. The result is a lessened price for the butter or the cheese and that means a lower price for the milk.

Both butter and cheese are fermentation products, and require the action of bacteria in the process of manufacture. But the necessary fermentation requires a specific bacteria, not those introduced in filth. The latter may actually retard the action of the proper bacteria while at the same time setting up a series of harmful fermentations which defeat the ends of even the most expert operator, by creating bad odors and flavors and inferior physical character. This is a matter that means dollars and cents to the creamery or cheese factory patron and it is therefore worth his time to study well the methods by which bacterial infection of the wrong kind may be prevented. This matter of cleanliness in milk is one that is coming to be recognized more and more as a factor to be considered in setting the price upon milk. It is right that this should be so. The man who supplies a filthy milk to a factory and in the doing of it lowers the price of the finished product for all the other patrons should not be paid a premium because of the inferior quality of his product; but he should be the man to make feel the effect of his own carelessness. It is just as fair to grade milk on the basis of cleanliness as on that of fat content, as both have a direct bearing on the value of the finished product.

From a bacteriological standpoint, the question of clean milk is largely a question of proper stall construction. A farmer cannot spare the time to wash the cow's udder every time he sits down to milk her, but he can build a stall with a proper drop back of it so that the cow will keep clean automatically. Then too, the yards can be kept free from accumulation of manure through which the cows will have to walk in going to and from the stable. The sanitray milk pail may wisely be adopted as a means of promoting cleanliness. There are a number of different forms of this pail on the market, but they all follow the general principle of having a small opening through which the milk enters the pail and this opening is protected by a screen of cloth or wire gauze. Careful determinations show that milk drawn directly into a sanitary pail contains only from three to fifteen per cent. of the number of bacteria that is found in milk drawn under similar conditions into the ordinary form of pail. Other aids to cleanliness are: clipping the hair from the flanks, udder and tail; wiping the parts from which filth might fall into the pail with a wet cloth before beginning to milk; avoiding the use of battered utensils or those with soldered seams; cooling the milk immediately after drawing.



Modern Roofing for Modern Homes

Brantford Asphalt Shingles are a twentieth-century product—the ultimate in house-roofing material.

They are uniform in thickness—can be laid quicker and cheaper than any other shingle made. Use them wherever wood, slate or tile shingles can be used. Brantford Asphalt Shingles are pliable—they can be laid to better advantage than any other, and will fit any corner, curve or angle. Made in three absolutely fadeless colors: green, red and black.

Brantford Asphalt Shingles

improve the appearance of any house. Tasteful effects can be secured without extra expense by combining two or more colors. They never become weatherbeaten or unsightly. They are fire-resisting, unwarpable, and attractive. They need no painting, make a warmer house, reduce insurance charges, are next to indestructible, and the cost is little more than that of wood shingles.

With Brantford Asphalt Shingles there is no splitting, no curling, no decay, no variation in quality, no need for replacement every few years. Once laid, roofing cares are ended.

Booklet FREE on request Write for it

Brantford Roofing Co., Limited

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"ROSS" Cadet Rifle

TEACH THE BOYS HOW TO SHOOT

There is no better sport than shooting at a mark, and general knowledge of shooting is our country's strongest protection.

The "Ross" Cadet Rifle has been adopted by the Government for Cadet Corps—a sufficient endorsation of its quality, and it is now offered also for general sale.

It is the best all round gun for boys.

Shoots .22 shorts or long or .22 long rifle cartridge; is accurate and has perfected adjustable sights for which no extra charge is made.

This rifle is suitable for any game except the largest, and, while a single shot, its action is remarkably quick.

Price only $12.00. Send for full illustrated catalogue.

THE ROSS RIFLE CO., QUEBEC

Farmer Ads Bring Results----Try One Today

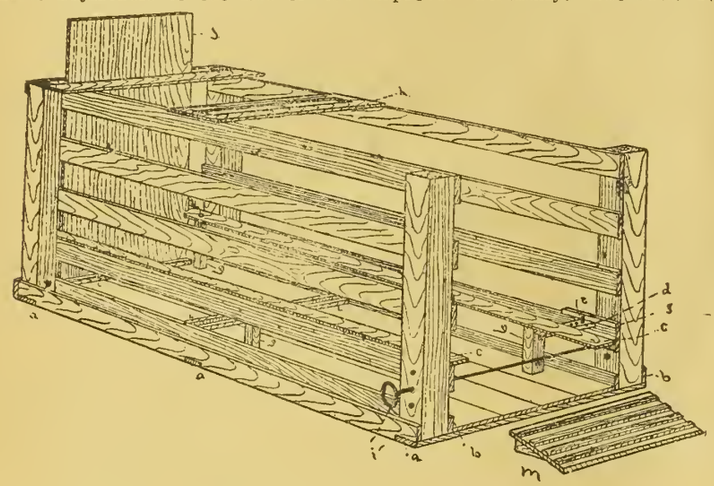
LIVE STOCK.

Breeding Crate for Swine.

Amateur, Cumberland Co., N. S.—I have some young sows that I wish to breed to an old boar that does not carry his weight very well. I am told that a breeding crate can be made whereby this difficulty can be overcome. Will you please explain how such a crate is made, giving dimensions. If you have a cut of a crate of this kind I would be pleased if you would publish it in your valuable Maritime Farmer.

Ans. A crate like the one shown on this page will answer your purpose admirably. It can also be used where large sows are being bred to small boars.

The dimensions of the box are: Length, 5½ feet; width, 2 feet; height 3feet. The length of the short box which may be made by moving the end board J into the slot K is 3½ feet. The corner posts are 2 feet 4 inches, scantling and the sides 1x4 strips; a a a are joists for nailing the floor to; b b extra boards to which the joists are nailed to stiffen the sides of the box; c c are boar supports which hold the boar's weight during service. The one on the right side is adjustable to the size of the



Swine Breeding Crate.

sow and should fit up tight against her side; d is a piece used to adjust the right hand support; e is a pin which holds the support in place; f is a strip to hold in the groove or mortise; the g's, of which there are six, are pieces which hold the supports solid and are thirteen inches in length; h is a wooden screw to hold the front end of the adjustable support in place; i is a seven-eighth inch rod which is placed behind the sow to keep her from backing out of the box; j is a movable end board which is used to adjust the box to different length sows.

When long sows are to be bred the board is placed at the end of the box as shown in the diagram, and when short sows are to be bred the board is removed and placed in the slotted board k. L l are cleats which hold the bottom end of the board j in place; m is the platform used to raise a small boar high enough to serve a large sow.

The Future of the Shorthorn.

A topic of never-failing interest among Shorthorn breeders the world over is "What to do next?" In the discussion started on this subject by a very prominent American live stock paper and taken up in Britain by the "Farmer and Stock Breeder," many valuable opinions have been offered. Subjoined are the views of three very well-known breeders, as quoted from the columns of our progressive contemporary just named.

A SCOTCHMAN'S VIEWS.

Naturally after the many different views aired recently on this subject, I feel somewhat reluctant to add further to those already given; but as you make the request, here goes: Personally, I am entirely in favor of the Scotch type; but I am, and have always been, anxious to improve it and am willing to admit, as in most things, improvement is possible.That the Scotch blood is still the 'best is indisputable. Take, for instance, the male and female champions at the Royal for the last five years. In 1912 there was, owing to the foot-and-mouth trouble, no show; so for the sake of statistics, I include the Tredegar show of that year instead, as the show took place after the trouble was over. What is the result? Out of these ten honors five have been awarded to animals of pure Scotch breeding, four to animals either whose sire or dam are Scotch, and the remaining one comes from Bates origin with a good dash of Scotch thereto. Therefore, I must cordially recommend a "drop o' Scotch" as the best we know of.

But the question of the "next step" opens up a new field. Can we improve? Certainly! But how? That is the question. For some years now I have been endeavoring to introduce the lines and style of the English cattle, and am so far more than satisfied with the result; but experience teaches that the cross must not be too drastic. There lies the danger. Introduce the cross mildly, possibly only a quarter cross, and that only once in three generations, and I venture to think there will be no reason to regret it. To the strong-minded breeder, who can resist the ridiculous tendency to rush to extremes, whether for pedigree, color, or anything else, there remains a great field. He needs must remember that history repeats itself, and that the past gives us good proof, in the wonderful success of Amos Cruickshank, that the strong, resourceful man, with the tenacity of purpose necessary to carry out his fixed intention to breed and produce animals of a type best suited to the markets of today, will meet with the reward he deserves.

I am afraid that very few, far too few, breeders have the necessary self reliance to enable them to back their own judgement, and without that, well, unless it is there, I should be very dubious of success to any extent. I have many times regretted taking advice which, although apparently sound at the moment, proved subsequently that "two heads are not always better than one." I have a great belief in the man who can show such courage as to back his judgment through thick and thin.

It is the man who can overcome all prejudices, etc., and who can produce the best who will eventually score, and more power to him!! for he will have much to contend with before he reaches his goal, which he will have to do by the road of many disappointments. These, however, should help to sweeten the fruits of success, richly deserved, for they will not be easily obtained.—I am, etc.,

ALEX. T. GORDON.

Newton, Insch.

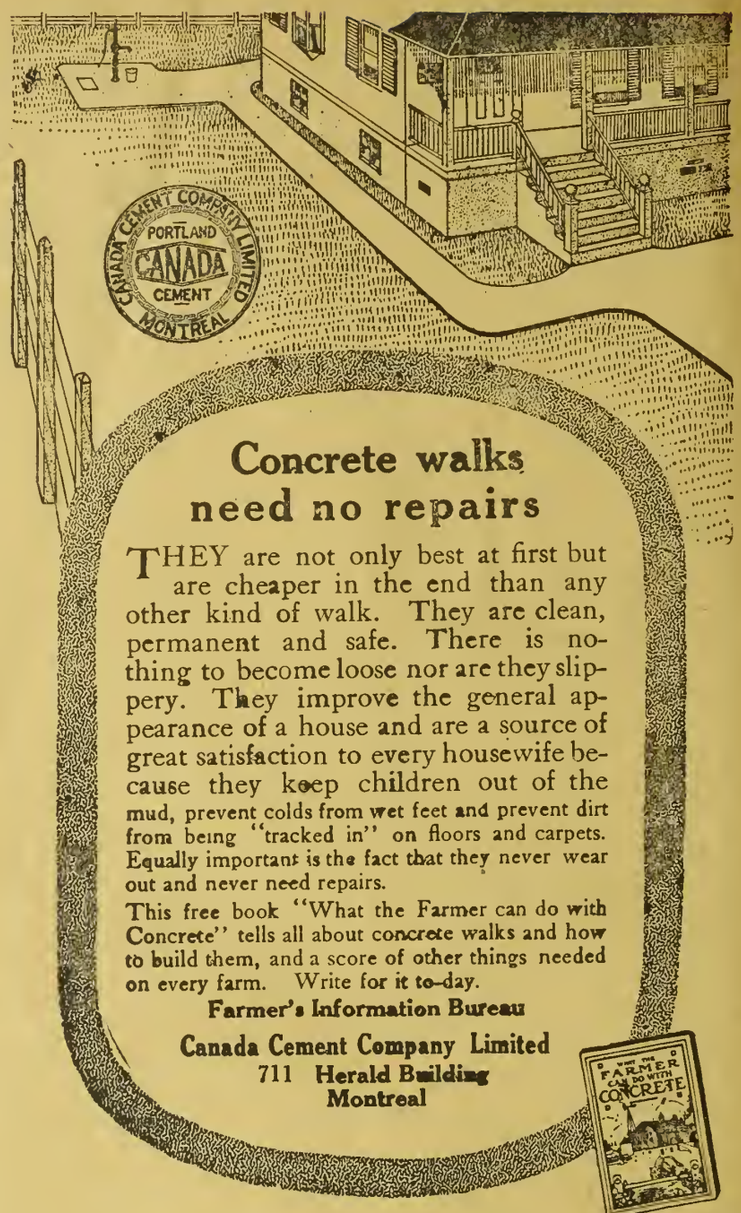
Prefers Home-Bred Bulls.

In breeding Shorthorns I have never confined myself to any particular one of the three main lines of blood, but in choosing my breeding stock whether the foundation of their pedigree was Booth, Bates, or Cruick shank. I quite recognize that a certain amount of close breeding is necessary, both to fix a type and maintain it, and prefer to use home-bred bulls as much as possible. In my ouinion the merit of the immediate ancestors of an animal on both sides is a more important question in relation to its breeding value than whether (half a century ago) the original dam was bred at Kirklevington or Sittyton.

Speaking from my own experience, I think I have obtained better results from Cruickshank bulls that I have from either Booth or Bates bulls, and for producing beef animals I certainly believe in a large proportion of Cruickshank blood. There seems to be an idea in some quarters that too much Scotch blood does away with the milking capacity of the Shorthorn. I do not suppose the average Cruickshank cow is as deep a milker as the average Bates cow, but I have Cruickshank cows very good milkers, and I think a Scotch cross can be beneficial in every herd.

The successful breeder of the future, in my idea, will be the happy man who, having collected in one herd all the three main types, has the skill so to successfully blend them as to eliminate the worst faults of each and combine in one animal the best features in all three.

I often think that we lose some of the best sires by rejecting the short pedigreed bulls. Everyone admits that some of these are very good animals, and though, of course, they are perfectly eligible to be used here, they are often rejected for a bull not quite so good in himself and whose pedigree is longer. When buying a bull it is always a pleasing thought, even if it never materializes, that after you have used him for a year or two it may be possible to


CANADA CEMENT COMPANY LIMITED
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Concrete walks need no repairs
THEY are not only best at first but are cheaper in the end than any other kind of walk. They are clean, permanent and safe. There is nothing to become loose nor are they slippery. They improve the general appearance of a house and are a source of great satisfaction to every housewife because they keep children out of the mud, prevent colds from wet feet and prevent dirt from being "tracked in" on floors and carpets. Equally important is the fact that they never wear out and never need repairs.
This free book "What the Farmer can do with Concrete" tells all about concrete walks and how to build them, and a score of other things needed on every farm. Write for it to-day.
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AMATITE has a mineral surface that is waterproof and fire-retardant and needs no painting.

Before you tackle that roofing question send for free sample and our booklet.

THE CARRITTE-PATERSON MFG CO., Limited

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sell him to an Argentine buyer for a substantial profit. The Argentine restrictions as to pedigree seem unnecessarily stringent, but as Argentina is generally prepared to pay liberally for her views, we are most of us inclined to fall in with then and thus neglect the short pedigree bull. More particularly in Cumberland and Westmorland, I think, there are strains only just eligible for our Herd Book which might be valuable in breeding the dual purpose Shorthorn, an animal so much in fashion at the present day. I am etc.,

J. A. WILLIAMS.

EVERY farmer knows that his cows yield more milk and better milk when they are contented. Are your cows contented? Are they profitable? If not, make them so by doing away with your old-time wooden stalls. They gather dirt, harbour disease germs, and prevent the free circulation of life-giving air and sunlight.

LOUDEN
Perfect Barn Equipments

The LOUDEN Tubular Steel Stable Equipment is easily and quickly installed and insures cleanliness and ventilation. Its use means comfort for your cows and profits for you.

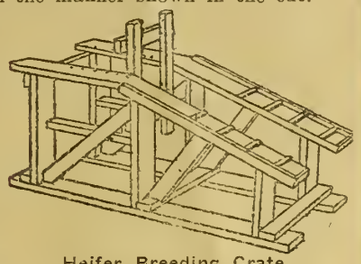
GET INTERESTED. WRITE TO-DAY. Our book, "Perfect Barn Equipment," and the service of our architectural department, are free.

The LOUDEN MACHINERY CO.
Dept. 8 - GUELPH, Ont.

Buy it now. Chamberlain's Colic, Cholera and Diarrhoea Remedy is al most certain to be needed before the summer is over. Buy it now and be prepared for such an emergency. For sale by all dealers.

Breeding Crate for Heifers.

When a heavy bull is used on a small cow or heifer it is safest to use a breeding crate. This is more satisfactory even with a mature cow. A good breeding crate may be made in the manner shown in the cut.



Heifer Breeding Crate.

It is made entirely of 2x4 and 2x12 pieces. The bottom pieces are nine feet long. The width between the plank is two feet. The height at the front is 20 to 24 inches, and at the centre post three to 3½ feet. The length from rear to centre post is 4½ feet.

Best Dairy Shorthorns.

It is to be hoped that the olh rivalry which formerly existed as to the merits of the different lines of Shorthorns is not to be revived. We acquire the best that we can get, and to limit the field of selection would be a mistake.

The only experience that I have had has been with what is known as the dairy Shorthorn. Our purpose is whilst maintaining the characteristics of the breed, to restore to it those milking qualities for which it was once so famous. This is no easy matter, and it will take years to accomplish. For years Shorthorns have been bred for beef at the expense of the milking side. It is extremely difficult to find a good milking strain amongst long pedigreed cattle. The chief use of pedigree is to fix type. "Like breeds live" is only true of those animals which can trace back to an ancestry possessing the same qualities for a number of years. Pedigree breeding, however, can be over done and become a fad.

When animals can be traced back a few generations to forbears which have consistently exhibited good milk ing qualities, it is sufficient. They may be expected to breed true provided that an equal care is taken in the seleltion of the bull. I do not think it is possible to lay down any absolute rule.

Some animals have strong characteristics and leave their stamp on their descendants, others can hardly be traced. A milking herd can easily be severely damaged by the use of a bull which has not been carefully bred for milk. So in breeding stock one can acquire and lose. It is the same with all the different qualities of an animal. Undoubtedly from the short pedigreed Shorthorn a fine milk strain will be evolved, and personally I am in favor of a wide field of selection, so long as great care is taken to ascertain that the qualities required have been transmitted for a reasonable time.

I am not a believer in too close breeding, although no doubt that is the quickest way to fix a type.—I am etc.,

C. ADEANE.

Babraham.

Advertise Your Cattle.

Kimballs' Dairy Farmer says:—

No phase of agriculture has so bright a future as the breeding of high class, pure bred dairy cattle. There is not a pure bred dairy cow east of Chicago today that is not demanded west of Chicago. Furthermore, all through the east and south farmers and dairymen are trying to locate good, well bred, productive dairy cattle, and all are willing and anxious to pay remunerative prices for them.

It has been said that if a man will build a better article than his neighbor—even though it be only a mousetrap—the world will beat a track to his doorway, though he may live in the depths of the woods. This is true yet, except that because of the largeness of the present-day world it is absolutely necessary to advertise in order that the world may know the value of that which you have for sale.

There is not a breeder of the dairy cattle in America today who advertises persistently who is not entirely sold out of both females and serviceable age bulls. The bull calf is a bugbear to the breeder who, "penny wise and pound foolish," keeps his light hid under a bushel. Bull calves represent money to him who breeds good dairy cattle, and by judicious advertising paints his name in the skies and becomes generally known as a breeder. But he who depends upon selling to his neighbors and recognizes not the largeness of the world and cheapness of shipping crates and express rates has but one outlet for his surplus calves, the veal block.

The only breader of dairy cattle who is justified in advertising and profiting himself and his customers thereby is he whose cattle are not sufficiently good to be serviceable to those who desire to buy. All others not only place themselves in the path results from advertising, they make of making sales profitable to themselves, but by making the sale which themselves benefactors to those to whom they sell.

It is true that advertising incurs some expense. Everything in this world worth while does. But the thinking man realizes that he had better spend a few dollars advertising to rid himself of his surplus stock at a good price than to spend 10 times as much money for feed and labor to keep the animals he does not need and finally sell them for less than they are really worth.

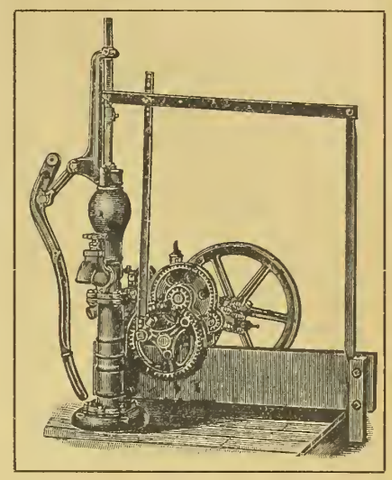
It is not only your opportunity as a breeder, but your duty, to let it be known through the Farm Papers, read by the prospective customers, that you breed and have for sale good, well bred, thrifty, rugged, heal thy bull calves, cows and heifers.

Flaxseed Jelly for Calves.

The best substitute for butterfat, to be fed along with skim milk, is flaxseed jelly, prepared by boiling flaxseed in water until a thick jelly-like consistency has been attained. Stir this into the skim milk. Commence with a very little, and as the separator milk is substituted for whole milk, gradually increase the amount of flaxseed jelly until each calf receives about a cupful to each feed. Continue this as long as the skim milk is fed, or for six months at any rate. Meantime, a mixture of bran, oat chop and corn meal may also be allowed in increasing quantities, commencing with a pinch thrown in the pail after the milk has been drunk. Meals, especially coarse and starchy ones, should not be mixed with the milk, but flaxseed jelly may be safely fed in this way, and with very satisfactory results, although for calves under a month or two, a small proportion of whole milk should be added.

THIS LITTLE ENGINE

is designed to take the place of the man at the pump and anyone who watches this outfit pump water for ten minutes will never again be willing to work the pump handle. The operating cost is very small and a splendid feature is that this engine can be easily connected to "any old pump." The ladies often start it to pump a single pail of water. They rest while it works.



The Outfit Complete as shown sells for $70.00. The engine alone $55.00. Immediate shipment from stock.

The A. R. Williams Machinery Co., of St. John, N. B., Limited,

15 Dock St. ST. JOHN, N. B. 34 Nelson St.

THE HORSE.

Keep Close Watch on Colt's Foot.

Left to itself the foot of the colt does not always grow according to the most approved fashion. There is need for the careful horseman to keep close watch on the colts' hoofs. In stony or gravelly soil the horn usually wears off at the rate sufficient to maintain the proper proportions; but in black loamy soils the hoofs are little worn and growing fast they may become unshapely. This may even result in a malformation in extreme cases.

The usual remedy in case of such unshapely hoofs on the youngsters is to shorten the toes with a rasp. The walls of the foot may also be rounded a bit. A rasp and a knife in the hands of an enthusiastic novice, however, are likely to be weilded so as to do more harm than good. The good horseman is always a careful horseman. A toe too long is likely to make a pastern too steep. When the colt's feet need attention it should be given, else the eventual sale price is liable to be cut down considerably. One should also remember that hoof horn, like all other parts of the colt's anattomy, must be made out of the feed which goes in at the youngster's mouth.

Management of the Horse.

The best assets the farmer has, under average conditions, are his horses. Without horses, little could be done on the farm, and the most fertile land and tireless energy would avail little if the horses were not at hand to do the heavy work. It is evident, then, that the farmer cannot give too much attention to the care and comfort of his horses. It is a notable and noticeable fact that the thrifty, prosperous farmer always has good, thrifty horses, while the careless, unsuccessful farmer is the shamed owner of the ill-kept, underfed, unprofitable horses that we sometimes see. Whichever be the cause and whichever the effect, this fact alone is sufficient to point out the advantage of keeping the farm horse comfortable and in the best working condition.

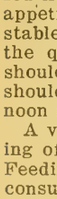
One of the main points in the care of the horse is regularity in feeding. He knows when his feed is due, and if he does not get it then he is sure to fret and worry until the tardy stableman presents it, when he will bolt it down in the quickest possible time, losing half its benefit. The horse which is fed irregularly does not thrive and its appetite is never satisfied, while many stable vices are liable to appear. Only the quantity that the horse will eat should be placed before him, and he should be fed early in the morning, at noon and at night.

A very common mistake in the feeding of horses is to overfeed with hay. Feeding a horse more hay than he will consume in a couple of hours is almost sure to lead to bad results in several ways. The horse will generally gorge himself under such circumstances, and when more provender is eaten than is required for maintenance, the digestive system is exhausted and its influence upon the other nutriments of the ration is weakened. Overfeeding with hay may also become the source of several ills, such as a pot bellied condition, quick tiring if put to work, labored breathing and staring coats. It also predisposes an animal to heaves, and eminent veterinarians have assigned this as a direct cause of the disease. Give the horse all he will readily eat in a reasonable period, and do not let the period between the evening and morning meals be too long.

Only the best and soundest food should be given. Oats is the staple food with hay, but a few roots, carrots and swede turnips may be given, not much at a time. Variety is as necessary to the horse as to the man. A horse may seem to dwell on a constant ration of hay and oats, but if this be varied with other ingredients the difference will soon be noted. Care in watering is always very necessary. Have it slightly warmed in winter and refreshingly cool in summer. Four times a day is few enough to offer the drink. When the horse is hot from use, only give a few mouthfuls: after he is cool, allow all he will drink. Use pure water and keep all receptacles clean.

Another great factor—one of the most important—in the proper management of the horse is grooming. It is said a thorough grooming is as good as a feed of oats." This point must be all the more emphasized as it is so often neglected or only started in the farm stable. The horse should have a thorough grooming twice a day—not simply a "brush off," but a thorough cleaning of the coat and skin. Dirt should never be permitted to dry on him, but when brought in he should be at once washed, scraped and dried. Wash the feet and legs regularly to avoid "mud fever," taking care that the hair is perfectly dry before leaving. To keep the coat glossy and in good condition cover the animal with a thin sheet in summer and a blanket in winter as soon as the grooming is done.

Cleanliness and ventilation are other necessities in the well-regulated stable. Open the windows as soon as the stable is entered and always during the process of grooming. Discard all soiled bedding and sweep the stall out clean, once a week sprinkling a very little lime on the floor. In bedding at



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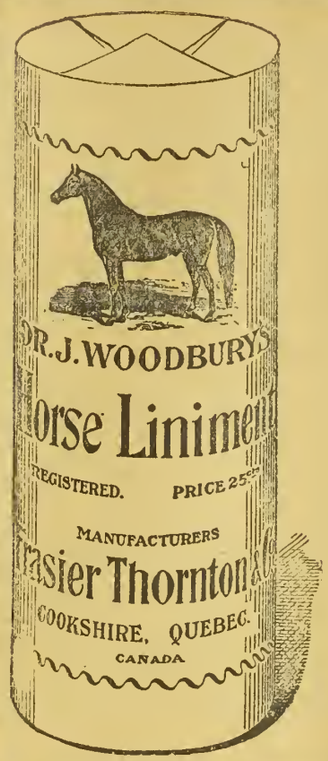

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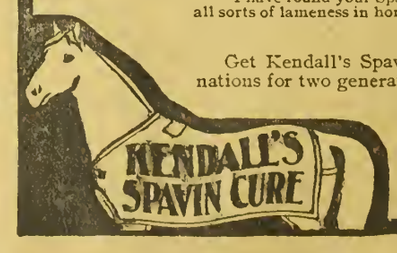
Get Kendall's Spavin Cure—the remedy used by two nations for two generations. $1. a bottle—6 for $5. Our book—"Treatise On The Horse"—will save you many a dollar if carefully read and acted upon. Write today for a free copy.



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GOLD WATCH FREE.

A straightforward generous offer from an established firm. We are giving away Watches to thousands of people all over the world as a huge advertisement. Now is your chance to obtain one. Write now, enclosing 25 cents for one of our fashionable Ladies' Long Guarde, or Gents' Alberta, sent carriage paid to wear with the watch, which will be given Free (these watches are guaranteed five years), should you take advantage of our marvellous offer. We expect you to tell your friends about us and show them the beautiful watch. Don't think this offer too good to be true, but send 25 cents to-day and gain a Free Watch. You will be amazed.—WILLIAMS & LLOYD, Wholesale Jewellers (Dept. 59), 89, Cornwallis Road, London, N., England.

Minard's Liniment Co., Ltd.

Dear Sirs,—This fall I got thrown on a fence and hurt my chest very badly, so I could not work and it hurt me to breathe. I tried all kinds of Liniments and they did me no good.

One bottle of MINARD'S LINIMENT warmed on flannels and applied on my breast, cured me completely.

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Heaves CURED

—by removing the cause—and cured to stay cured—If 3 boxes of

Fleming's
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fail to effect a cure of any case—old or new, we will refund the full amount paid.

Per Box 1.00, 3 for 2.50
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Scratches Disappeared

Gentlemen:—I gave a course of your Tonic Powders, which has put a horse and his mate in fine shape, and a touch of scratches has quite disappeared

Fuller information in

FLEMING'S VEST POCKET VETERINARY ADVISER

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Dysentery is often serious and often a dangerous disease, but it can be cured. Chamberain's Colic, Cholera and Diarrhoea Remedy has cured it even when malignant and epidemic. For sale by all dealers.

night bank the sides deeper than the middle, placing plenty directly in front of the knees. All stable utensils, harness, etc., should be hung up out of the way. There should be a place for everything with everything in its place. Five minutes cleaning up the harness every time it is put away will save years of usefulness.

A little time spent now in giving attention to the shoulders and necks of the work horses will save a lot of time later in the season. See that the collars fit properly, and that the draft comes on the shoulder as it should. Cool off the shoulders several times each day by lifting the collars forward and permitting thet eam to rest a few moments. Wash the shoulders thoroughly every night. Also clean the collar and keep it free from dirt and dry sweat. If these simple suggestions are followed there will be little trouble with sore shoulders.

A horse handled on the above lines will need very little medicine, but in fever, slight cold or when not eating well, give in the feed a tablespoonful of powder, consisting of four ounces each of sulphur, saltpeter and black antimony, two ounces of powdered rosin, and one ounce of powdered Barbadoes aloes, with a dash of oil of juniper. One tablespoonful for the dose.

Indigestion.

The term indigestion when applied to the horse may mean acute, subacute, or chronic indigestion, and the symptoms vary to a considerable extent in each. For example, there is a disorder known as "stomach staggers", "grass staggers," "sleepy staggers," and "mad staggers," according to the stage of manifestation, and this is acute indigestion, in which the stomach is the organ principally involved. Colic or gripes is another form of indigestion, in which the intestines are mainly concerned. It is a great mistake to suppose that equine digestion is completed in the stomach. Many important changes take place in the food material after it passes from this organ, and the majority of cases of indigestion in the horse are of the intestinal variety. Chronic indigestion is variously manifested. There may be little or no pain in some cases; in others there may be slight colicky pains indicated by restlessness, or getting down and up, and sometimes the pain continues in this way for two or three days, but there is an absence of sweating, or of violent abdominal pain and distension characteristic of spasmodic or flatulent colic.

In the majority of cases, however, the most marked symptoms are general unthriftness, including irregular or depraved appetite, loss of condition, lassitude, flatulence, hidebound, rough staring coat, etc. These are very seldom attributed to anything but the right cause, and thus many cases of chronic indigestion pass undetected. Very often they are put down to "worms." As to cure, the chief thing is the removal of the cause. The food should be of the best, and judiciously selected as to nutriment and ease of digestion; it should be fed frequently in small quantities, and mastication should be compelled by mixing chaff with the corn. Attention should be paid to the state of the molar teeth, and if necessary they should be rasped. Water should always be given before feeding. As to medicine, a course of stomachsics and tonics is generally useful. Example:—Bi-carbonate of potash, powdered calumba root, gentian, and ginger, of each equal parts. Give a tablespoonful two or three times a day in the food. In some cases I have found a course of arsenic beneficial for chronic indigestion, and have given ½ oz. doses of Fower's solution twice a day with success, but owing to the cumulative action of arsenic its use must not be continued for more than ten or fourteen days, and it should be intermitted with other remedies. Put a lump of rock salt in the manger.—Veteran.

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11B

BAD HABIT—J. T D has a horse that hangs his tongue out when on the road. This is a habit which some horses get into either from nervousness or from a bit that is uncomfortable. The only remedy is to change bits until you find one that suits. A spoon bi'f or one with a large plate fastened in the middle is frequently effective, but sometimes the habit cannot be broken.

SORE TENDONS—S. N. P., N,. S., wants a remedy for a horse that has sore tendons. The best remedy for this trouble is to mix two drams of cantharides with one ounce of lard and rub it on the tendons and let it remain on for 24 hours, then wash it off, and turn the animal out to pasture for several months.

LUMP ON STIFLE JOINT—H. L. D. P. E. I., has a colt that has a soft lump on its stifle joint. Mix two drams biniodide of mercury with three ounces of lar dand rub a little on the lump with the fingers once a week and continue it ofr several months.

Broken wind is the enemy of the horse . . . .

VIGORA Is the enemy of broken wind

Mr. J. B. Morin,

I had a horse which suffered from broken wind. Having read in the newspapers the good qualities of your VIGORA I decided to try it, and am pleased to say that my horse is completely cured.

HENRI TURCOTTE, Carpenter,
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Sold by all good Druggists and Grocers.

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Good Roads Require Permanent Culverts of Concrete.

We manufacture and stock culvert pipe of the following diameters, 12", 20", 24" and 30". For particulars and prices write

S. J. GOODLIFFE,

Sussex Concrete Products Plant, - Sussex, N. B.

POULTRY

Tainted and Disease-Laden Soil

It is necessary to differentiate between tainted and disease-laden soil, since there is a great difference in the forms of contamination. As a general rule the first expression is employed for both, but this is a mistake. I quite realize, however, that the latter is made more possible by the former, but it does not of necessity imply that the tainted form is impossible without the other.

To realize the importance of the subject fully it is necessary to refer to the question of plant formation. It is a common exprpession to say that nature works in cycle form, and this is true. What is good for one section of the natural world may be poisonous to another. More than this, the waste material from the animal kingdom is the food supply of the vegetable. The plant is built up from the various constiuents of the animal body, including the excreta, and the finished plant forms the food of the animal world. In some instances it may be many years before the animal body is returned to the soil as plant food, but there is no doubt but that this will happen at some time. Thus the various elements, such as nitrogen, carbon, oxygen, hydrogen, iron, calcium, magnesium, potassium, phosphorus, chorine,

Interest the Children in Poultry.

and sulphur work round in a circle from the bird or animal body to the plant, and thence back to the animal or bird.

In view of the above it will readily be understood that there is a balane between the two worlds which must always be maintained; otherwise serious results will accrue. By tainted soil is meant ground that has received a large amount of plant food, but which has been given no opportunity of making use of this plant food by the taking off of a crop. An excess of manure in the ground makes it tainted, or, to use an equally common expression, fowl sick.

One would expect that it was only in the case of those with a very limited area of ground at their disposal that there was trouble to any extent with tainted soil, but unfortunately this is not the case. Farmers, as well as others, are affected by this condition of affairs, although they have many acres over which it would be possible to run their birds. People do not seem to realize that the same laws apply to poultry as to the rest of the natural world, but until they do birds are likely to suffer from this terrible complaint. If grass land is used constantly for poultry it should only be stocked with that number which will produce sufficient manure for the grass that will be grown and taken off the land. If birds are given their liberty, twenty-five to the acre is quite enough; if kept in runs, not more than fifty to one hundred and fifty, according to the conditions, should be run together. The latter figure applies to those cases in which the scratching-shed system is employed. It is possible to keep many more birds to the acre than the figure stated if the arrangements are such that two runs are provided for each pen. In this case one run is used for six months of the year whilst the other run is resting, or, in other words, producing a crop. In the case of backyard poultry keeping, where a few birds are crowded on to a very small area of land, it is necessary to renew the upper soil at frequent intervals, so that there will be no accumulation of excreta.

This state is rendered more possible when thes oil is already overharged with manure. By this term I mean that soil on which fowls have been kept that have suffered from some form of contagious disease. All forms of disease germs increase more rapidly on soil that is tainted, since this forms a good medium for their breeding. There are many diseases that may be included in this category. With young chicken we may mention gaps. When chicken have been kept on the land and have been suffering from this complaint it will take at least four years before it is possible to say that the ground is free from infection. This is true with clean ground—it is more so with land that has been contaminated with fowl droppings. The diseases that are common to adults and which are likely to remain in the ground are many. Roup, diptheric roup, tuberculosis in one form or another, and many others might be cited as instances. In each case infecteion is rendered more effective if the soil in the first place has been overcharged with manure. To overcome these two great difficulties it is only necessary to see that the land is not overstocked with birds, and to remove all infected fowls before they can contaminate the land. If these two points are remembered it may save much loss in the future.—E. T. Brown.

The Worst Enemies of Little Turkeys

The three worst enemies of little turkeys are lice, overfeeding and damp. Successfully combat these and a fine flock is almost sure to result. If the brooding turkey and nest can be kept free from lice before hatching time the battle is half won. Dust the nest material well when eggs are put in, and dust the turkey each week, sifting the powder well through the feathers.

The third day after taking the baby poults from the nest dust them in the following manner. Prepare a box large enough to hold a brood of twenty to twenty-five, with a cover not entirely tight. Sit on the ground in front of the coop, spread an old cloth over your lap and catch the poults, one at a time. Grasp him firmly by the legs, lay him on the cloth and straighten out the wings. Dust thoroughly all over, especially the underside of wings and body and on the head. The dust will not hurt the eyes except to make them blink for a while. Put poult in the box and close the cover. The first thing he does is to shake himself, thus sifting the powder again all through the down. Each one as you put him in will do the same, requesting them al each time. The box will be full of fine dust all the time you are working, and few lice will survive such treatment. When all have been treated turn over the box and let them out. Repeat every week, or better yet, every three days if poults show signs of being lousy, until too large to catch easily. Always dust the mother, taking the hands to sift the powded through her feathers. The lice will be found on the underside of legs, wings and at the base of quills.

Where the lice are very troublesome whitewash the coops every week, putting kerosene in the whitewash, and being careful to fill all corners and crevices. Many use lard or oil on the poults; perhaps it is all right, but I find the insect powder effective and harmless. I only used lard once, and then I mixed it with sulphur making a salve. I applied it to the heads and underside of wings. In two days my little poults began to droop and die. I investigated and found each little wing blistered and the skin all off. Every last one of them turned his little pink toes to the sun. Vinegar was recommended to me as an excellent louse killer but I never have tried it. Most of the insect powders put up in tight boxes are good, but that purchased in bulk is doubtful. If not taken good care of it becomes too old and loses its strength. There is the Cornell powder, which can be made at home, and sulphur alone is good. I believe more depends on a thorough and persistent application than on the kind of powder.

Many turkey raisers ask the guestion: "Why do my young turkeys die when about the size of pigeons? They grow and seem fine until then, but I lose sometimes half my flock at that time." In some cases it may be black head, and that is a bad disease to combat. Bulletins on the treatment of blackheads can be obtained from experiment stations. But there are other enemies to young turkeys, and many are sacrificed to causes less hard to fight. Overfeeding is one, bringing on indigestion, diarrhoea, liver trouble, gry and moving about; exercise is very essential, and they will not exercise if overfed and pampered. They need plenty of sharp grit, and plenty of fresh water in clean dishes. A disinfectant may be added, carbolic acid is good for the bowels and is used in the proportions of one teaspoonful carbolic to one gallon of water.

The first food must be something easily digested, and a hard-boiled egg is not. A raw egg is food for an invalid. Wheat bran is light and will not pack in the bowels. Sour milk is excellent for all fowls, the acid acting on the digestive organs. Mix the bran rather dry with what they will clean up quickly. Continue this food for a month, giving only a little grain such as oat flake or fine chick feed. Change very gradually to a grain diet; first cracked wheat and a little corn, and later whole wheat, oats and buckwheat. Rye and millet seed can also be given, or a mixture of good grains.

When the turkeys are in range they must be fed but once a day. Keep poults out of green grain. If allowed the run of a field or unripe grain they will gorge themselves and die. All grain fed to young turkeys should be a year old. Be sure they are well supplied with sharp grit and fine oyster shells. Keep sour milk before them if possible, but never cook it. Green food must be supplied to young turkeys; they will not, at first, pick it themselves. Cut fine with an old pair of shears kept for the purpose, and mix it with the bran, sour milk and raw egg Green dandelions, narrow dock, onion tops and mustard are all relished by turkeys. After a little it will become quite a task to cut enough for a flock of 50 or more. They are very fond of it.

Place the coops on new ground every year, away from chickens, and feed them separately. Keep the coops dry and clean. If without floors move to clean ground every day and in case of a continued rain sprinkle coal ashes underneath the coop. The little poults must have good care, but never be pampered. Givet hem all the liberty possible. Study turkey nature and use common sense.—Mrs. Niles Grover.

To Break Up Broody Hens

What is more vexatious than the fussy, pale-combed hen that persists in sitting on a door knob, lumps of coal, etc., in an otherwise bare nest, when you are extremely anxious for her to be laying eggs? A number of ways for breaking the habit are in evidence among raisers, the most practiced of which seems to be a coop into which the clucking, fluttering biddy is roughly tossed with the comforting remark: "I'll put you in a jail, you old hussy!" I have found many times that such con-

Peerless
Guaranteed Fencing
Strongly made and closely spaced—making it a complete barrier against large animals as well as small poultry. Top and bottom wires No. 9—intermediates No. 12 wire—made by the Open Hearth process which time and other tests have proven to be the best material made for the manufacture of wire fencing. Send for literature. Ask about our farm and ornamental fencing.
Agencies nearly everywhere. Live agents wanted in unassigned territory.
The Banwell-Hoxie Wire Fence Co., Ltd., Winnipeg, Man., Hamilton, Ont.

Pure Seeds for Farm or Garden

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Dunlap Bros. & Company, Limited

Direct Importers of Shelf and Heavy Hardware, Bar Iron and Steel, Carriage Woodwork, &c.

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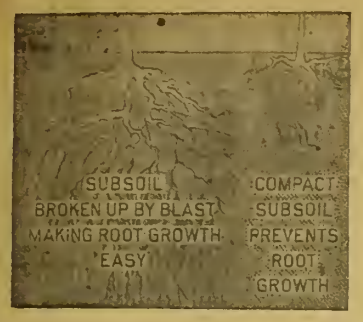

The above cut clearly demonstrates the advantages to be gained by planting trees in holes exploded with C. X. L. STUMPING POWDER. The ground is so pulverized that the roots can immediately expand in search of nourishment.

Also used for clearing land of stumps and boulders, ditching and subsoiling.

Write for Booklet.

BLASTERS WANTED

Many farmers prefer to hire blasters. Demand exceeds supply.

Write for information.

Canadian Explosives, Limited,

Montreal, P. Q.; Victoria, B. C.

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Land Agency or Sub-Agency for the District. Entry hy proxy may he made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A hahitahle house is required in every case, except when residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price $3.00 per acre.

Duties—Six months residence in each of six years from date of homestead entry (including the time required to earn homestead patent) and 50 acres extra cultivation.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price $3.00 per acre.

Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land.

W. W. COREY,
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—58783.

finement in "jail" does not break the hen of her desire to sit, and on her release after several weeks she went directly back to the nest. The custom of shutting the broody hens in close coops is inhumane, because the practice invites neglect to provide food and water as often as needed. A hen that has been sitting for weeks hatching out chicks which may later be taken from her and given to another hen, is usually weak and pale enough without adding affliction in the way of confinement in a close coop. I remember that a coop containing one or more broody hens was once shoved under a barn driveway and forgotten. Several weeks later their dead bodies were found; an instance of starvation.

The most humane way is to provide a pen in the open where roosts can be put up but no nests. In such a place the hen can be kept for several days without inconvenience, and there is certainly a nearer probability that they will receive better care during confinemnet on acount of being in view every day. Broody hens cooped behind buildings and similar places are sure to be neglected. A cockerel might be put with them in the pens if there is an extra one at hand and he will assist in breaking the habit and her desire to sit. In such a place as the open pen she finds the absence of a nest and the partial range rather diverting, and also has the benefit of sunlight and air to restore her to a healthy condition.

CHICKENS AND DUCKS TOGETHER

A great mistake made by many farmers is in keeping waterfowls and chickens in the same yard, or permitting them to have access to the same drinking water. Ducks and geese should be kept in separate yards, or given the range of a field where they can have access to a stream of water or a pond. If kept with the chickens they will so befoul the drinking water that in a few minutes is becomes unfit for the chickens to drink.

Chickens contract disease, especially bowel trouble, through the drinking of foul water, and if the health of the flock is to be maintained, an abundance of pure drinking water should be kept before them all the time, which is not possible if the ducks and geese are given the privilege of the same yard.

Shade in Hot Weather

Lack of shade and hot weather cut down the egg yield in summer and cause much loss and discomfort to the hens. The low flat shades only two feet high, draw the heat fearfully, and as the yards are bare of green feed and moisture there is no place for the hens to scratch.

I built my hen yards around a lot of pomegranate bushes and kept the bushes well watered. One would be surprised to see how the hens enjoy themselves. They also have a small patch of clover which I cut for them. In the yard also are mulberry trees which afford high shade that makes the suroundings cool. Result: my hens lay summer and winter.

Douglas Mixture for Poultry

This preparation, simple as it is, is one of the best tonics for poultry that I know of. Oil is alterative as well as a tonic, and possesses, besides, antiseptic properties which make it a remedy as wtll as a tonic. It is prepared as follows: Take sulphate of iron (common copperas), eight ounces; sulphuris acid, one-half fluid ounce. Put into a bottle or earthen jug one gallon of water; into this put the sulphate of iron; as soon as the iron is dissolved, add the acid, and when it is clear, the mixture is ready for use.

In hot weather or when the flock is small, less may be prepared at once, but the above proportions should be observed. The "mixture" or tonic should be given every other day in the drinking water. A gill for every 25 hens is about the right amount to give. When there is an infection, it should be given every day, but where there is no disease, not so often, or in smaller quantities if it be used every day.—A. E. Vandervort.

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See that the next pr. of Shoes you buy thav e the name TAYLOR stamped on the Sole.

Mr. Retailer

If you want to increase your Trade keep a stock of the TAYLOR solid leather Shoes.

The Red T Brand of Boots and Shoes that we have put on the market are made of **Solid Leather** and on the **latest style** of **Lasts.** Ask your dealer for the

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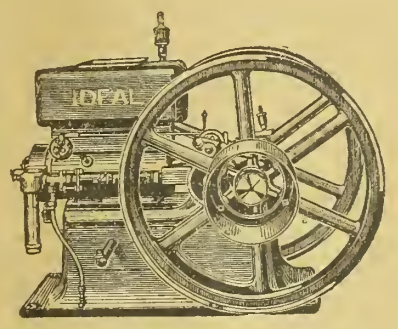

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FOR HOME AND COUNTY

This Department is devoted to the best interests of the Homes of the Maritime Provinces. Contributors to these columns are leaders in the "For Home and County" movement. This Department is yours. Use it to the best advantage by sending us timely suggestions, short articles dealing with your experiences, and reports of your Institute meetings.

From the Old World to the New.

"A very nice letter," exclaimed Mrs. McKenzie, when her husband finished reading, "and how kind of him to get so much information for us. What do you thing about it, Malcolm?"

"Every thing looks very favorable, I think, but I shall write at once to this Mr. Richardson enquiring more into the Canadian way of living, what capital one must have to start, etc., and what things we must have first."

So, accordingly, a letter was sent to Mr. Richardson who replied briefly, giving all the facts in regard to pioneer life, and urging them to come in April in preference to any other month of the year. "We are anxious for you to come," he wrote, "and if you want me I shall meet you at B—our nearest town, so you can write me before you sail. All I can say against this life, it is lonely but if we get more settlers in we can soon have a pleasant little settlement here."

It must be borne in mind that the McKenzies had been prospering for the past eighteen months and they had all hoarded their eahnings with the sole object of going to Canada, consequently they were able to plan on taking passage for New Brunswick, and to have a few dollars after getting there. So on receipt of Mr. Richardson's letter preparations were made at once to sail on April 17th, for the "new world," which would be less than three weeks.

Mr and Mrs. Davidson were very sorry to learn that they were really going. They had learned in the last few months the real worth of the McKenzie family, and not only were they much valued friends, but Mrs. McKenzie. Ellen and George were doing extra well in the laundry, being smart and trusty, but the work did not agree very well with Mrs. McKenzie. However, when Mr. and Mrs. Davidson found they were really determined to go, they were ready to assist them in many ways.

"You better stay with us another year until your folks get thoroughly settled out there," said Mr. Davidson to Ellen one day "I will raise your wages and board you at my house, and you could help your parents until they get settled.

"Thank you, sir," she replied, "but I am afraid I could not stay behind, and besides I could not live so long without them."

Nevertheless, as the time of their departure drew near, and their money began to disappear for little necessary expenses they had never dreamed of, they found they would have only a few dollars, after paying their passage to Canada. Ellen bravevly came to the rescue and told them of Mr. Davidson wanting her to remain another year, until they got settled. "He says he will raise my wages and board me at his home," she continued. "I'll stay if you wish for I can help you more here." At first they would not agree to have her remamin, but a few days later after talking with Mr. and Mrs. Davidson, and listening to their argumentst hey at last decided to let her remain a year, though with many tears from her mother and the children and her father was deeply touched at the thoughtful self-denial of his eldest child. Mrs. Davidson assured them she should live with her, and she would have a care over her as over her own daughter if she had one. So Ellen was at once promoted from the hard work in the laundry to the position of checking parcels, and in a manner assisting Mr. Davidson in over-seeing the work.

CHAPTER III

On an afternoon in April 1863 many people were gathered at the wharf at Queensferry, Scotland, to bid farewell to relatives and friends who were taking passage on one of the large Empress steamers for Canada. Among those who were to sail were Mr. and Mrs. Malcolm McKenzie and their six children. Ellen, who was to remain at home was at the wharf with Mr. and Mrs. William Davidson and Harry Gordon, a handsome young fellow of seventeen years and who was a favorite with the McKenzie family as well as with Mr. and Mrs. Davidson, and who was also an employee in Mr. Davidson's laundry. It was very sad, the parting between Ellen and her parents and brothers and sisters.

"I could never leave you at all," said her mother," only I feel it is for the best, and I know that Mrs. Davidson will be a mother to you, and Harry here will be a brother to you" she said, turning to the young fellow by her side. "I certainly will," answered Harry Gordon.

Ellen put twenty-five dollors into her father's hand on bidding him good-bye. "Take it, father," she said, "you may need it. I drew that much of my wages in advance." Harry Gordon, too, in bidding them good-bye gave Mr. McKenzie twenty-five dollars. "No Harry returned that gentleman firmly. "I thank you very much, but I can't take it. We are not paupers, and you have no right to give me money you've worked hard to earn. I've no doubt we'll get along all right."

"Yes sir" replied Harry, I believe you will, but please take it, you may need more than you think and I've nobody to work for but my-self. Take it," he urged, "and if you don't need it keep it for me until I come out, you know I intend to follow you in two years, all being well, and take up a farm my-self." So Mr. McKenzie took the money, hastily thanked the generous young fellow and with another hand shake hurried on board after the rest of the family, and in a very short time the majestic steamer could only be seen as a distant speck on the bosom of the mighty ocean.

Ellen returned to her new home very lonely and sad, Having never been parted from her family longer than a few hours at a time. she now missed them sadly, when thinking of the miles of raging waters that divided them and the weary weeks and months that must elapse before she would see them all again. However, Mr. and Mrs. Davidson were very kind to her and in the days that followed she learned to look to them and Harry Gordon for love and sympathy. She devoted her energies more thoroughly to her work and succeeded in discharging her new duties in the laundry very creditably.

Mr. and Mrs. Davidson missed the McKenzies very much. They had assisted them in many ways in getting ready for their voyage, and only George the eldest son knew of the plump package he now had in his possession given him by Mrs. Davidson in parting. "Take this, George," she had said. "It is a little present for you from Mr. Davidson and myself. Don't open it until you reach Canada or tell any of the family about it until you open it. I trust it will be a help to you all."

"But will papa and mamma like me to take it," George had asked. "Why, of course, they will, you silly boy," she replied, "and I shall be offended if you don't. And mind," she continued, as she kissed the handsome boy fondly, " you are not to open it or to let them know about it until you land in Canada."

So Malcolm McKenzie and his wife did not realize for many a day how much their kind friends in Scotland had really done for them. As for George, he concealed the package and did not think of it again for several days, and when he did it was with a burning curiosity to know what it contained, that was to be of value to them all, but he would not open it until he reached Canada as the giver had requested.

They had a very rough voyage out and were all very sick the first two days. Mrs. MceKnzie missed her eldest daughter very much, she had always taken so much care of the younger children, thus relieving her mother. But Fanny, the second daughter, and next to George in age, realized that it was her duty to try to fill her elder sister's place, so she helped her mother to look after the children, and but for the leaving of Ellen behind, they rather enjoyed their first sea voyage, though it proved to be a stormy one. They had felt the parting from Ellen and their other good friends in Scotland very keenly.

"It's one thing to talk about leaving one's own country and another thing to do so," Mr. McKenzie had remarked to his wife as they were taking their last look at the fast receding hills of Scotland, with tear dimmed eyes. But they were blest with hopeful, sunny dispositions, and they resolutely cast their sad thoughts from their minds and thought bravely of their future prospects. They made many acquaintances on board who proved to be chiefly Canadians, and they learned from them all they could of Canada, and pioneer life. Mostly the information was of an encouraging nature, then again, one would talk very discouragingly, but the brave Scotsman and his wife never wavered in their resolve to take up a farm in pioneer style in the back woods of Carleton County, New Brunswick.

CHAPTER IV

It would take too much space to relate all the incidents in connection with the Scotch family's arrival in New Brunswick and their long tiresome journey after arriving in port at the north of the Province, where they took the train for B—a small village in Carleton county, where they were so kindly met by Mr. and Mrs. Thomas Richardson and taken to their comfortable though humble home, thirteen miles back over the rough, muddy post-road. Two weeks later Malcolm McKenzie anr his family moved into iheir own home on the block recommended by his friend Richardson. Several lonely settlers within ten miles came, and helped Mr. McKenzie to cut down trees and erect a comfortable log shanty and a barn. These settlers were delighted with the prospects of having such a nice addition to their settlement or "colony" as they termed it. And how was it with the McKen ie family coming from an over-crowded town and settling, one might say, in the depths of the forest? They were happy in their own home and the novelty of raising their provisions and the care of their little live stock which was all delightfully new to them all, together with the happy prospect of the future, made them happy indeed.

It will be remembered that Mrs. Davidson, the kind friend of the pioneer family, who gave George McKenzie a package on bidding him goodbye with the request that he would not open it or tell his parents about it until they reached Canada. The boy had concealed it in the pocket of an old coat that was among their luggage, and though, boy-like, he wondered what it contained, however, he would not tell his parents until he reached Canada," he said to himself So the days passed and in the excitement of their arrival and getting settled in New Brunswick, he never thought about the package for several days or until one evening while they were talking about their friends in Scotland, and while they were staying with their kind friends, the Richardson's, he happened to think of it and quickly bringing it to light told them of the gift and handed it to his mother who hastily broke the seal and read: For George to buy a horse and harness. From your friends, Sarah and William Davidson, and the bills enclosed amounted to something over one hundred and fifty dollars, a sum sufficient for the purpose in those days.

Mrs. McKenzie wept tears of joy and the children, especially George, was in high glee at the prospect of having a horse of "his very own." Malcolm McKenzie was deeply moved by the generosity of his noble friends in Scotland,

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

WOMAN SUFFERED TEN YEARS

From Female Ills—Restored to Health by Lydia E. Pinkham's Vegetable Compound.

Belleville, N.S., Canada.—"I doctored for ten years for female troubles and did not get well. I read in the paper about Lydia E. Pinkham's Vegetable Compound and decided to try it. I write now to tell you that I am cured. You can publish my letter as a testimonial." — Mrs. SUVRINE BABINE, Belleville, Nova Scotia, Canada.

Another Woman Recovers.

Auburn, N. Y.—"I suffered from nervousness for ten years, and had such organic pains that sometimes I would lie in bed four days at a time, could not eat or sleep and did not want anyone to talk to me or bother me at all. Sometimes I would suffer for seven hours at a time. Different doctors did the best they could for me until four months ago I began giving Lydia E. Pinkham's Vegetable Compound a trial and now I am in good health."—Mrs. WILLIAM H. GILL, No. 15 Pleasant Street, Auburn, New York.

The above are only two of the thousands of grateful letters which are constantly being received by the Pinkham Medicine Company of Lynn, Mass., which show clearly what great things Lydia E. Pinkham's Vegetable Compound does for those who suffer from woman's ills.

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.

WILSON'S FLY PAD. POISON

KILLS THEM ALL!

Sold by all Druggists and Grocers all over Canada.

and related to Mr. and Mrs. Richardson many acts of kindness they had done for them.

So as we see these new pioneers settled in their new home, two weeks after their arrival, among their possessions is George's horse, a noble, large animal, five years old, that his father and Mr. Richardson had bought for him, with the money given him in Scotland, from a farmer nearly thirty-five miles above them, who for the exact sum included a harness, nearly new. My! what a happy family they were when this beautiful large horse a bright bay in colour, with a white stripe in his face and two white feet, was brought home.

"Just what you need, my friends," Mr. Richardson remarked. "You can do nothing at farming without a horse."

So that first summer these new settlers raised their vegetables and fodder enough to winter their horse, two cows and three sheep. That first winter Mr. McKenzie and George cut lumber in partnership with their good friend, Richardson; hauled some to the mill in at the railroad and had it sawed into boards, and out of thin cedars they shaved shingles by hand and sold them which was considered a paying business in those days. Mrs. McKenzie and Mrs. Richardson taught their children as best they could as there was no school within reach, and thus the long gloomy winter in that wooded, forsaken colony passed away.

CHAPTER V

Three years later, September 1866. Malcolm McKenzie has just erected a frame for his new house, and one can see that he is prospering generally. He has quite a large clearing now, and the level fields, though as yet covered by stumps of trees in places, is looking unusually well. His hay is all cut and stored for the third time in the old log barn, and the fields of grain and vegetables now growing looks most luxuriant.

"I tell you what it is," Thomas Richardson remarked to him one day, "you were a lucky man McKenzie when you took up this hundred acres of land, it is the most easily worked claim and the most productive land in Carleton county,"

"Well, I am glad it is," replied Malcolm McKenzie with a laugh, "but I have you to thank for it, you know, for it was you who advised me to settle here, and I must own I have never been sorry I did. The growth of lumber on it is very dense, and I can get all I need for my buildings, I guess, and meet the other two payments on the farm."

The above conversation between the two friends explains the mode of life and the prosperity following Malcolm McKen ie. He cleared land in the fall and winter selling lumber enough to meet his payments regularly and to feed and clothe the family, besides getting a little each year for building a new house and barn. Each spring he burned the debris from the fallen timber, and got it into crops of various kinds, and by the bountiful harvests, it just seemed as if this rich, loamy soil was just waiting to be tilled.

Povidence had been kind, indeed, to Malcolm McKenzie and his family during these few years in New Brunswick, the land of their adoption. No serious illness had been their lot, and though his crops as yet had not been large they had yielded well and as his neighbors used to say, when talking of him, "McKenzie, the Scotchman, is prospering."

And what of Ellen, the eldest, who had remained in Scotand for a year behind the family and now three had passed and yet she had not followed them? Regularly they had heard from her and occasionally she had sent them small sums of money.

It was on the 27th of October, the third year after they came out as they were all nicely settled in the new house though as yet unfinished, that Mrs. McKenzie on looking down the road espied a strange team on an express coming slowly over the rough road, seemingly loaded. "It's Watson's livery team from the station," remarked Mr. McKenzie as it came nearer. "Perhaps it is new settlers going to the upper end of the colony. If so, they likely will stop here to feed their horses and supper."

As they drew near the house the driver halted and asked if they could stop and rest.

"Certainly, certainly," exclaimed the kind-hearted Scotchman, as he went out to assist them, and to take the lady and gentleman passengers into the house.

"Ellen, Ellen, is it really you," cried Mrs. McKenzie, after looking at the lady a moment and then kissing her warmly. "Yes, mother it is," she answered through tears of joy. "And this is Harry, Harry Gordon you know,

We Start You in the Well Drilling Business

You can make easy monthly payments.
Earn big money and be your own boss.
You can be independent in a few years.
Write at once for illustrated catalog & specifications.

The Star Drilling Machine Co.
482 Washington Street
Akron, Ohio

SENT ON TEN DAYS TEST TRIAL

Gasoline or Steam Power

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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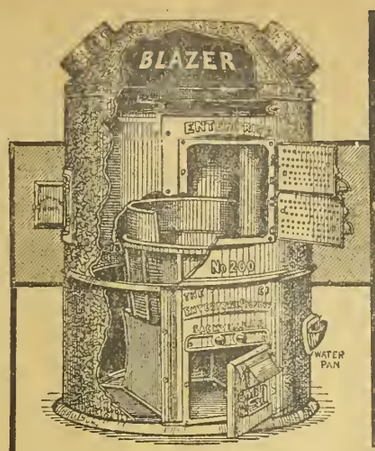
It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.



REASONS

SCIENTIFICALLY correct *principle* — supplying warmed *fresh* air, and ventilating the house as well as heating it.

PROPER PROPORTIONS — strength where strength is required, generous dimensions, but not too high for low cellars.

BEST MATERIALS—steel where steel is best, charcoal iron where it is better.

LARGE ASH-PIT, anti-clinker grates; large feed door; direct damper, worked from the front; easily-reached water-pan; heavy, two piece flanged fire-pot (patented by us); gas-proof steel radiator. Easy to clean out.

MOST ECONOMICAL—costs less to install than hot-water radiator systems; gives generous heat; low coal consumption; requires little attention, no repairs, and will last a lifetime.

Made in Four Sizes.

The ENTERPRISE Hot Air Blazer Furnace

is correct in principle, durably constructed of the best materials and economical and convenient in operation. It supplies a generous quantity of warm, fresh air to every part of the house, with less coal than is burned by many furnaces greatly inferior in heating capacity.

Patented and exclusive features are responsible for this economy, and also for its great durability.

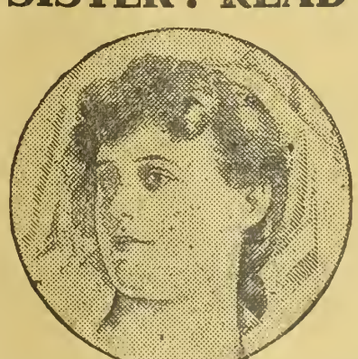
Health as well as comfort, demands pure air in the house. Ordinary heating systems warm the same air over and over again, until it is dry, dead, and unwholesome. The Blazer Furnace ventilates the house, and heats all parts of it eveuly, protecting occupants from headaches and colds.

Write for this book. It is free.

There is a Blazer representative in your vicinity who will be glad to explain its features fully and to estimate the cost of installation in your home. If you do not know him, write us for his name.

Enterprise FOUNDRY CO. SACKVILLE, N.B.

SISTER: READ MY FREE OFFER.



I am a woman.
I know a woman's trials.
I know her need of sympathy and help.

If you, my sister, are unhappy because of ill-health, and feel unfit for household duties, social pleasures, or daily employment, write and tell me just how you suffer, and ask for my **free** ten days' trial of a **home treatment** suited to your needs; with references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by its use. I want to tell you all about this successful method of home treatment for yourself, my reader, for your daughter, your sister, or your mother. I want to tell you how to cure yourselves at home at trifling cost, and without aid from anyone. Men **cannot** understand women's sufferings; what we women know **from experience**, we know better than any doctor; and thousands have proved there is **hope** even **for the hopeless** in my method of home treatment. If you suffer from **pain in the head, back, or bowels, feeling of weight** and **dragging down sensations, failing or displacement of internal organs, bladder irritation with frequent urination, obstinate constipation or piles, pain in the sides regularly or irregularly, bloating or unnatural enlargements, catarrhal conditions, dyspepsia, extreme nervousness, depressed spirits, melancholy, desire to cry, fear of something evil about to happen, creeping feeling up the spine, palpitation, hot flashes, weariness, sallow complexion, with dark circles under the eyes, pain in the left breast or a general feeling that life is not worth living, I invite you** to send to-day for my complete **ten days' treatment** entirely **free and postpaid,** to prove to yourself that these ailments can be easily and surely conquered at your own home, without the expense of hospital treatment, or the dangers of an operation. Women everywhere are escaping the surgeon's knife by knowing of my simple method of home treatment, and **when you are cured,** my sister, I shall only ask you to pass the good word along to some other sufferer. My home treatment is for all,—**young or old.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures green-sickness (chlorosis), irregularities, headaches, and lassitude in young women, and restores them to plumpness and health. Tell me if you are worried about your daughter. Remember **it costs you nothing** to give my method of home treatment a complete ten day's trial, and if you wish to continue, it costs only a few cents a week to do so, and it does not interfere with one's daily work. **Is health worth asking for?** Then accept my generous offer, **write for the free treatment** suited to your needs, and I will send it in plain wrapper by return mail. To save time you can cut out this offer, mark the places that tell your feelings, and return to me. **Write and ask for the free treatment to-day,** as you may not see this offer again. Address:

MRS. M. SUMMERS, Box 309, WINDSOR, ONTARIO

and," she continued with a blush," I am Mrs. Gordon. We were married in Scotland two weeks ago or more and have come out here to live."

Oh! Who can picture the joy in the McKenzie home that night as greetings were exchanged and old times recalled? We will not attempt to describe it.

CHAPTER VI

As it will take up too much space to record all the incidents of the life and prosperity of the Scotch pioneer, I will just speak of the items of most importance.

Twenty-five years from the time this sturdy Scotchman and his family arrived in New Brunswick and took up their abode in the dense woods of Carleton County, we find he has a farm almost up-to-date. His large commodious house is one of the most beautiful rural homes in New Brunswick and now accommodates two families, his eldest son, George, being married some few years before to their district school teacher, a lady of culture and refinement. Walter, a younger son, married a daughter of their old friend, Thomas Richardson, and resides with him and assists in running his large and productive farm. Two daughters of Malcolm McKenzie were school teachers but later married farmers, one in Carleton County and one in Sunbury County, New Brunswick. Harry Gordon and his wife, who located on a farm seven miles further up the colony are progressing well to the present day.

It has not always been fine sailing for Malcolm McKenzie, this making a home in the woods in a strange land and with scarcely money enough to provide the necessities of life for his family, nevertheless, he did it through hardships and discouragements. Often in speaking of the pioneer days he says the greatest blessing he had was his good health. Two of his children died in the summer of 1873 and three years later his large new barn erected the summer before was burned with its contents of hay, grain and farm implements one stormy winter's night, thus leaving him again only the old barn, now dilapitated, of pioneer days. No one will realize the serious draw-back of such ill-luck as those who have met with similar losses. A new barn was again built the following year and our Scotsman continued to prosper until his death. His buildings were all up-to-date, and his farm, which consisted of one hundred and sixty acres, sixty were now under a state of cultivation and well equipped with all modern improvements and a well-kept stock, Mr. McKenzie having made a specialty of raising horses, latterly purebred Clydesdales from imported stock.

In the year 1899 Mrs. McKenzie died and two years later, our brave pioneer at the advanced age of 79 years. He was assisting his son in getting fire wood, he driving the team to haul it while George was cutting. After leaving his son in the woods the load of wood became disarranged and the old gentlemean who had dismounted to fix it, while reaching under the sled, the team which was young and fiery started and caught him between the sleds dragging him for considerable distance inflicting serious injuries and he died two days later, thus ending the life of one of Carleton County's most respected citizens.

Now just a word regarding the settlement where this brave man carved out a home for himself and family. It is now one of the most thickly settled districts in Carleton County. The rough road, which years before went out from the village into the woods and terminated, now goes on many miles through that fertile country coming into the main road at the St. John river in Victoria county and passing through the best agricultural sections in the province. In the settlement where the Malcolm McKenzie homestead lies and where his son now resides, has for many years, had an up-to-date school, post office and telephone lines, and the road which was, years ago, almost impassable, is now well kept and picturesque, being lined with beautiful trees from the village through that thriving farming locality. A large Presbyterian Church stands a short half mile only from the McKenzie home and of which the McKenzies have been members since those pioneer times. The noble Malcolm McKenzie and his good wife now sleep their last long sleep in the beautiful cemetery at the rear of the church.

Are there not more Scotsmen or others who are willing to come out to Canada,, "the land of promise" and make homes. If good fortune so abundantly awarded the Scotch pioneer of fifty years ago, should success not attend the industrious immigrant in these progressive times.—B. I. W.

Farmers and the High Cost of Living.

Editor The Maritime Farmer:

Much has been and is still being said regarding the high cost of living, and so momentous a question has it become that the Government has sent out a Royal Commission to investigate and locate, if possible, the cause for such an alarming increase in the prices of the necessaries of life.

Now I believe that Royal Commissions are all right and are admirably adapted for the purpose .or which the most of them are intended: viz.: to give some dissatisfied politician a job and in that way apply a balm to his wounded feelings and incidentally increase the cost of living as the people must pay for all this. Surely this Commission need not travel farther than the first school house they come to for any boy who has advanced as far as the fifth grade can tell them that the prices are always governed by the law of supply and demand and that as long as the demand exceeds the supply prices will soar higher.

Any one at all observing can see that conditions have changed very materially in the last quarter of a century. The class of people who are trying to get a living without working have doubled and trebled in that time in proportion to the population and of course the proportion of workers or producers has correspondingly decreased.

As a rule it is the "do nothings" rather than the producers that are everlastingly howling about the high cost of living and the reason is obvious. If costs them more to live than it does the working man inasmuch as they must dress better and they must have more luxuries in order to keep up appearances. They sweep over the country in their autos laughing at the farmer, who in the sweltering heat is spraying his potatoes to keep blight and bugs off or his cattle to keep the flies away, and thank their fortunes that they don't have to do it.

But what does the farmer do? He simply smiles and says, "When those people eat my beef and potatoes they have got to pay me for keeping the flies and bugs off." It must be evident to any observer that what the country needs today is more men and women who are willing and satisfied to engage in farming and thus increase the supply of food and other necessaries of life.

These are certainly encouraging times for the farmer. Who ever knew the products of the farm to be in such demand or to being such remunerating prices as they do today? Surely the farmer is just coming into his own, and when I say farmer I do not mean the sluggard but the man who is willing to roll up his sleeves and grasp the plow handles for I believe the old adage

"He who by the plow would thrive
Himself must either hold or drive"

still holds good.

I remember some years ago a man who was farming by proxy as he

Book for Men, Free

8,000 Words, 30 Illustrations

TO MY READERS:

Of the little illustrated advice book described below, which I gladly send free to all men who fill in the coupon. I beg to say that it represents the very BEST information of a private nature which I am able to offer you as a result of over 30 years' observation and study of my subject, during which time I have personally interviewed many thousands of men, young and elderly, single and married, rich and poor alike, who came to me in confidence with their confessions of debility, lost nerve force and failing strength.

It is, reader, this vast and unusual opportunity which has enabled me to compile this very popular and valuable little free book (over a million of which have been sent everywhere to men who wrote me for them), and in a manner to reflect the exact living, breathing experiences and needs of real men who sought information as to the newer ways of self treatment without the use of drugs.

Remember, this book of over 8000 words and 30 illustrations will come to you by return mail in reply to your request, and in a perfectly plain, sealed envelope, for it is no one's business but your own what the envelope contains. There is absolutely no obligation on your part to buy anything or pay anything, and merely the receipt of this book which does not mean in any way that you are to use one of my VITALIZERS (see description below) and, in fact, only a portion of the book has any reference to the VITALIZER at all. Primarily it is a compendium of useful information for private reference, which you and all other men may easily profit by through life.

Therefore, please use the coupon, or if nearby, I should be very glad to have you call.

SANDEN, AUTHOR.

MANLY MEN MOVE THE WHOLE WORLD

It is a fact, reader, which you and I must recognize and admit, that the whole world admires and is fascinated by strong, vigorous, husky, manly manhood, and we must also admit that it is this same manhood and this alone which is back of the real leaders and producers in every walk of life. No matter where we go, we find it to be the manly, vigorous, vital fellow who forges to the front, who fascinates men and women of his community, who does the really great things. An unmanly man merely means nature's laws gone wrong, for it is he who halts and hesitates, who takes the back seat, who does not fit into the picture in a way that a manly, vital nature should. And yet, reader, it is my firm believe that any man, no matter what his past, no matter what dissipations or follies may have left their mark upon his physical and mental being, I say to you that such a man, unless there be some unusual reason, may hope for a complete return of his strength, vigor and self confidence, if he but go about his self restoration in a natural commonsense way.

I make a little appliance which we will call a VITALIZER, because I think that is the best word to describe its strange power. I don't want you to think of getting one of these VITALIZERS just now, but I would like you to investigate my claims as to what I believe can be accomplished by almost any weakened man who uses this VITALIZER faithfully for a few weeks. I speak, of course, of him who is willing to give up dissipation and lead a decent, conservative life, not only while using the VITALIZER, but for the future. The other kind of man, the dissipated, can hope for nothing from any treatment, no matter what it may be, hence such a man is eliminated from my consideration.

This little VITALIZER is made to wear upon the body all night. It weighs only several ounces and is no more unhandy than any ordinary belt, yet it generates a great FORCE that I call VIGOR, which flows into your blood organs and nerves while you sleep. Men say it often takes any pain or weakness out of the back in one application, and that 60 to 90 days' use has been sufficient to restore manly strength and to put men in the "never felt better in my life" class. Special attachments carry the FORCE of the VITALIZER to any part of the body, for the use of women as well as men in cases of rheumatism, kidney, liver, stomach, bladder, disorders, etc.

Over two hundred thousand of these VITALIZERS have been used or are now being used by men all over the world.

You had better learn more of this VITALIZER. It is fully described in my free book. If you live near me, why not call and test the VITALIZER yourself.

WHAT THE FREE BOOK TELLS

The free illustrated advice booklet mentioned above is meant to be a single declaration of certain important truths that every man in the world should know. The day has gone by when men are kept in ignorance of the real problems pertaining to the e private subjects, and this illustrated advice booklet, which I send to men sealed, by mail, gives certain important facts relating to sex, just as these facts are. The booklet also fully describes my VITALIZER and you are told how you may get one for your own use if you decide that you want one. Please use coupon below, or call. Hours 9 to 6.

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FARMER ADS. BRING RESULTS.

termed it, telling me that I was belittling the business of farming by working with my sleeves rolled up and my pant legs inside my boot tops and when the gentry drove by they laughed at me and called me old hayseed. I simply told him that I always dressed accordingly to my work and if the "gentry" didn't want to see me in that garb they could look the other way. That man now would be glad to have my old boots to put his pants into.

A farmer must also strive to keep abreast of the times, and instead of thinking that he knows it all, be willing to benefit by the experience of others as he finds it in Government bulletins, Agricultural books and papers, attendance at Farmers' Institutes or in whatever way he can add to his stock of information. Such a farmer with the advantages of today should make a success of farming and thereby help to cut down the cost of living.

B. C. SIMS
Argyle, N. S.

June 30, 1914.

What's Being Done to Put the Home on a Business Basis.

(Continued from page 682)

"They are universally applicable to any work anywhere," he replied seriously.

Still half skeptical, I decided to experiment. That was three years ago and I can say that it has relolutionized my entire thought and practice about my home, and convinced me that a new era for woman's work—traditionally "never done"—is coming.

Emerson's Twelve Principles

Harrison Emerson, "the apostle of efficiency," has expounded twelve now famous principles of efficiency. I have proved that it is just as possible to apply each one of these twelve in running my home as it is to apply them with success in any factory or office. These twelve principles are:

1. Ideals.
2. Common sense.
3. Competent counsel.
4. Standardized operations.
5. Standardized conditions.
6. Standard practice.
7. Dispatching.
8. Scheduling.
9. Reliable, immediate, and accurate methods.
10. Discipline.
11. Fair deal.
12. Efficiency reward.

No woman can make a success of her business unless she knows why she is running it, and what are the ideals she wishes to follow. The clearer the woman's ideals, the better home-maker she will be.

Tall Women and Short Women and "Sinks"

Then this matter of common sense. It is certainly common sense to hang a pot close to hand instead of stooping for it. We have heard much of "motion study" and "standard practice," and how can these points be applied in the home? There is my old hated task of dish-washing. I used wrong methods. I cramped my back over a sink twenty-eight inches high, when I am a taller woman than the average and need to work on a surface at least thirty-one inches high. I was using the wrong tools, and I wasted time running about for things I needed. Since then I have "standardized" not only dish-washing, but many tasks involving the hands, or the head and hands, working in co-operation. I have examined a great many sinks and tested women of all heights, and have been able to work out a table of the relative height of the worker and the working surface.

(Continued on page 702)

Dominion Ammunition
TRADE MARK
Metallics and Shot Shells

A Healthy Out-door Sport for Men and Women

AT country clubs, summer resorts, city gun clubs, everywhere—men and women of all ages are taking up the fascinating games of trap and target shooting.

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Milburn's Laxa-Liver Pills are a specific for all these troubles, and have been used for close on to twenty years by many people for these complaints.

Mr. Thomas Duesling, Waterford, Ont., writes:—"I was troubled with my stomach for twenty-five years. I doctored with doctors in Canada and Michigan, but got no relief. There was a friend in Michigan who advised me to try your Milburn's Laxa-Liver Pills, and I did so. I now feel like a new man, and I can't praise them enough to my fellow men."

Milburn's Laxa-Liver Pills are 25 cents per vial or 5 vials for $1.00. They are for sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Making Country Life Attractive for the Boys.

Only last month Miss E. G. Boyd read her paper at a meeting of the Newtown and Smith's Creek Women's Institute.

Miss Boyd points out the necessity of parents shouldering more responsibility; making home life of the boys on the farms more attractive; dividing up their hours of work and recreation; giving the boys an allowance; bringing the right kind of literature into the homes; and last but by no means least, teaching the boys to be manly fellows and contented with their lot, by giving them as many pleasures in the country as possible so that they won't be lured to the city to seek employment.

The Boy's Place in the Home.

Boys make the men of the future and on them rests the future greatness of the Empire or State or even our little community.

It has been said that the mother rocks the cradle of the world, and rightly so, as in the homes are sown the seeds that will mature in later life.

A right thought impressed upon a young mind, a wrong tendency checked, and who can tell the far-reaching effect. Too long the idea existed that boys had their wild oats to sow and must sow them. If they sow the wind they must reap the whirlwind, and why should any young man be better after practically wrecking his strength or poisoning his mind by even a few years of wild living?

The training rests largely with the Mother, and if she fails in the trust imposed upon her, the chances are against the boy. But the father's place must not be underestimated. He must see that the boy gets enough of the sterner things of life to prevent him from being a papered pet or to use a boy's own words, a "milk sop."

But there is little danger of the average country boy being spoiled and it is the country boy I have in mind. We will divide his time when awake into two periods; the hours of work and the hours of recreation.

Hours of Work.

Every boy, even a small one, should have some work to do; bringing in the kindling, feeding the hens or some such task. Make him responsible for it and see that he does it faithfully and promptly. Do not be harsh with him but firmly insist on him performing the appointed task. If little Willie hasn't his kindling in at bed-time, it is better to send him after it in the dark than to go yourself or send his brother.

Hours of Recreation

Take the boy into your confidence. Look at things from his point of view. When all the other boys are going fishing don't plan a big day's work for him better let the work go than spoil the day for the boys. This is one of the reasons why one reads so much about the boys leaving the farm. They get all work and no play.

Give the Boy an Alowance.

Provide the boy with a small amount of spending money, but it is better to let him earn it all or part anyway It may be derived from the poultry and the sale of eggs or the strawberry bed, and sell what he raises. I know such a garden, and while not known for its pecuniary value, was an endless source of amusement for grown-ups as well as children and had the additional value of keeping the boys near the home.

Provide the boys with tools, such as jack-knives, hammers, and even a saw, and they will not destroy the tools belonging to their elders, but as they grow older they should be allowed to use the tools.

Encourage the constructive ability of the boy. The kite he makes or the fleet of boats he owns may be his proudest possession. Let him treasure them, time will bring its changes and its own rude awakening.

"Oh that thou could'st know thy joy
Ere it passes, bare-foot boy."

He will look back on thet lme spent in his canoe or on horse-back, or the breaking in of his colt, as the happiest of boyhood days.

Manly Boys.

Train a boy to be on time; on time for breakfast, at school, or even to meet his chums; on time when they gather in the back pasture to go nut-hunting.

Teach him to respect his elders; giving up his chair to an old man, holding the door open for his mother. These are only "hall marks" but they will be of great value to him in later life.

The Right Kind of Books.

Care should be exercised in the selection of literature for the boys. Too often sensational novels fall into their hands and poison their minds. They feel after reading them, as one has expressed it, "Like fighting a boy, stealing a banana, or sassing a policeman." Let the boy have access to good books and encourage him to read them.

And above all, help the boy to find his life's work. As he grows and develops, his plans will change.

As a small boy he may want to be a carpenter, next a surveyor and finally he may decide on a college course. But whatever his plans, help him to find his work and then work at it like a Hercules. In idleness alone there is a perpetual despair. And remember that the boys make men and through the years to come the boys we thing of now as children will grow to manhood, carrying with them the lessons learned in childhood.

A Small Corner of Prince Edward Island and What the Women's Institutes are Doing for it.

In discussing this subject perhaps it would be more appropriate to say what they are going to do for it, for as yet to the outward eye there does not seem to be much done, but you will see it some day. In the meantime we are getting ready to do things. In all improvements there has to be a preparing of different forces to make them useful. We. ourselves, are the principal forces in this work, which we have undertaken. We have to be moulded and made pliable, as it were, to work together harmoniously, which the men probably think is one of the hardest things for women to do. Another thing that women are accused of is that they talk too much at their meetings. Well, perhaps some of us do, but that is partly what makes our meetings so pleasant, as each one feels that they are a part, or have a part in the social betterment of the district in which they live. Well then, you ask "What has

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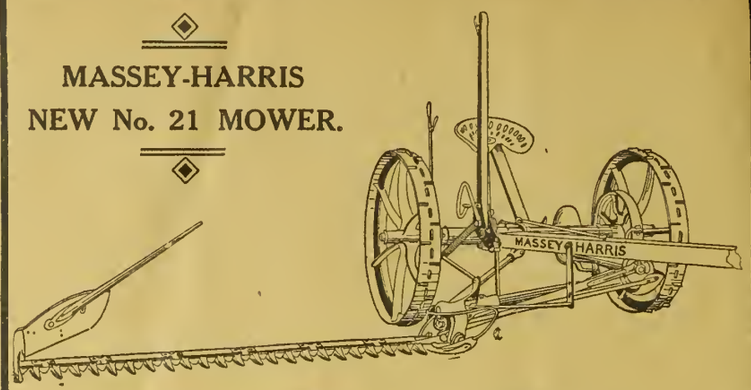
NEW No. 21 MOWER.



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Improved Clutch and Throw-out Device.

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Can be inexpensively operated by hand, motor or small oil engine.

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the Institute done for us?" I say, for one thing, that it has brought us together, and brightened our lives a good deal. Then again, we know each other better, like each other better and that makes us better neighbors, or it should do so thus enabling us to have more things in common bringing our aims and interests by the interchange of thoughts and ideas closer together. Even the material comforts with which we are supplied at the close of these meetings bring us nearer. What woman can resist the cheery influence of a cheery cup of tea? And who can refuse the delicious lunches prepared for these occasions? I, for one, won't refuse them, but I do think that they should be less elaborate, or we might restrict them to such occasions as when we are entertaining the many who always want something for their money" and who lend a helping hand financially and favour us with their company. What else is the Institute doing for us. It is making our lives broader and enlarging our views in more ways than one. Of course we are interested in our own immediate Institute, but through this we are naturally brought in touch with the other Institutes on the Island and so on to whole body of organizations of kindred work throughout the Dominion.

Through the medium of good literature bearing on the subjects which deal with those questions of home making, our members are putting forth their efforts with a view of establishing a library in our community. This is an excellent idea and will fill a long felt want. Some people argue that they have no time for reading, but there are very few, if they endeavour to do so, who cannot get a few minutes each day to read something. Cultivate the habit and you will soon want to read more and more. One has to rest some time during the day and I can assure you that a ittle reading goes well with resting, even if you go to sleep over it some of it will remain with you.

Mothers! you who are blessed with little ones when you rock the cradle by having something to read at the same time can improve on the old saying "the hand that rocks the cradle rules the world," for she can rule so much better by having the mind stored with useful knowledge to impart to the child as he grows up. You will be refreshed by having something new to think over instead of merely dwelling on your work all the time and you will also be able to install ideas in the mind of your child which will enoble and make its life seem worth while to itself and others.

The Institute has also given us the chance to indulge in a form of social amusement that can harm no one. I mean our winter evening meetings. We all enjoy them, both old and young. Men and women are social beings. People who live much by themselves get moody and what we call odd. Even some think this habit tends toward insanity. This may or may not be. I think, myself, that as long as a person has enough work to keep him out of mischief as we say with a fair amount of pleasure mixed in, there would be less danger of moodiness or other ills.

In a sermon I read lately I saw the following quotation: "the true pursuit of life is not culture of self, but culture of self for the service of others" so you see the Women's Institute has given us the opportunity of sharing a great many things. Most of us excel in some things in particular such as cake, bread, butter, preserves and many other things as well, some reap much pleasure from reading, others have fine ideas. Let us share all these things and then tell me if the Institute is not doing something for us.

P. E. I. Notes.

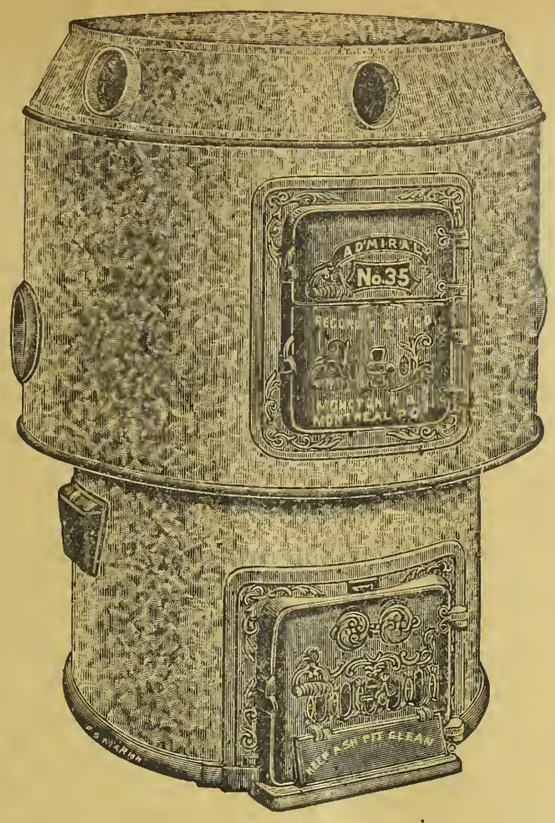
During the past two months Mrs. Dunbrack and Mrs. McDonald have paid official visits to twenty-two Institutes and report good work being done in every section represented.

Stirling Institute: About forty members and friends of the Stirling Institute met at the home of Mrs Theodore Pickering, Stanley, on Tuesday afternoon, June 9th. Mrs. Dunbrack and her assistant were present for the first time at this Institute. After Mrs. Dunbrack spoke of the work of the Institute and other matters pertaining to the general work of the movement, Miss McDonald gave a very practical demonstration in millinery, particularly the renovating of hats and trimmings. These hints are of much benefit, especially to those living far from town. The serving of refreshments by the hostess brought to a close one of the best meetings ever held by this Institute. The next meeting which will be the annual meeting will be held at the home of Mrs. H. Bulman on July 16th at 2.30.

York Institute. An Institute was organized at York on the 15th of June with the following officers: Pres. Miss Eliza Vesey; Vice-Pres, Miss Ruby West; Secy., Mrs. P. Brodie; Treas., Mrs. Amos West. This Institute will be known as the York Institute and will hold its regular meetings on the third Wednesday in each month.

Traveller's Rest Institute. Another successful meeting was held at the home of Mrs. J. T. Waite, Sherbrooke on the 12th of June, when six new members were added to the list. At this meeting those present enjoyed the practical demonstration on millinery given by Miss Helena C. McDonald and also listened with interest to a discussion led by Mrs. Dunbrack on Institute work. After enjoying dainty refreshments served by the hostess the meet- adjourned. The next meeting of this Institute will be held on the grounds of Mrs. Hubert McNeil, on July 16th, and will be in the form of a picnic. If the weather is unfavorable the meeting will be held on the first fine day following.

Norboro Women's Institute. The regular monthly meeting of the Norboro Institute was held in the schoolhouse on Tuesday June 2nd at 3.30. Those present listened with great interest to helpful papers on gardening read by Mrs. J. R. Bowness and Miss Hazel Woodside. After which an interesting discussion followed which brought out many valuable points. The next meeting of the Norboro Womeu's Institute will be held in the schoolhouse on July 7th at three-thirty p. m. when anyone interested in the work is invited to attend and take part in the programme. An invitation has been extended to Mrs. A. E. Dunbrack for a Puff Pastry demonstration on that day if she can be with the Institute on that occasion.—Mrs. J. S. Burns, Sherbrooke, P. E. I.



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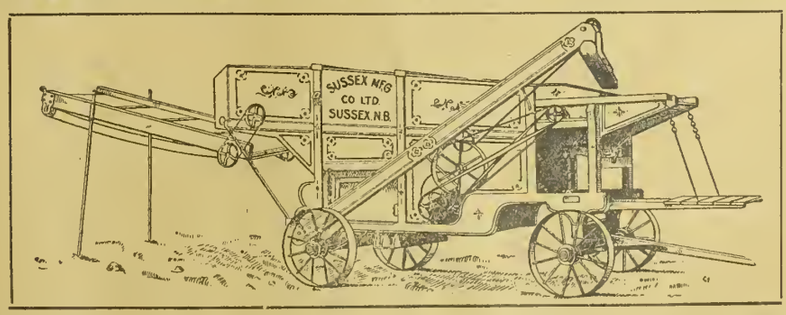

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What's Being Done to Put the Home on a Business Basis.

(Continued from page 699)

Height of Woman	Proper Height of Working Surface
4 feet 10 inches	27 inches
4 feet 11 inches	27½ inches
5 feet inches	28 inches
5 feet 1 inches	28½ inches
5 feet 2 inches	29 inches
5 feet 3 inches	29½ inches
5 feet 4 inches	30 inches
5 feet 5 inches	30½ inches
5 feet 6 inches	31 inches
5 feet 7 inches	31½ inches
5 feet 8 inches	32 inches
5 feet 9 inches	32½ inches
5 feet 10 inches	33 inches
5 feet 11 inches	33½ inches

WHY IS HOUSEWORK INEFFICIENT.

Next to he considered are the causes of present-day household inefficiency. By watching myself and others at work I have been able to group the causes of 80 per cent. of the inefficiency of modern housework.

1. The worker does not have all the needful tools or utensils at hand before her when she hegins to work: therefore,

2. She wasts time and effort walking to, hunting for, or fetching ingredients, tools or materials she neglected to have at hand when she hegan the task.

3 She stops in the middle of one task to do something else quite unrelated.

4 She lowers the efficiency of good work hy losing time and putting tools or work away generally due to poor arrangement of kitchen, pantry and closets.

5. She uses a poor tool, or a wrong one; or works at a tahle, sink ironing-hoard or molding-hoard of the wrong height from the floor.

5. She loses time because she does not keep sufficient supplies on hand, and because she does not keep her tools and utensils in good condition.

ARRANGEMENT OF KITCHEN EQUIPMENT.

When I came to study the conditions under which I worked in my kitchen at cook and serving meals, I found that it was impossible to do standardized work under unstandardized conditions. Not only were my sink, tables, and stove too low for efficient work, hut they were in the wrong relation to one another. In fact, I found almost innumerable factors in the average home and kitchen making for inefficiency—actually preventing efficiency—factors which I do not have space even to list properly here.

But let me take this one matter of the proper relation and arrangement of larger equipment in the kitchen.

In (tudying all my kitchen work, I found that there were just two separate processes under which all tasks could be grouped:

Preparing Meals.
Group I.
Work.

1. Preparing all foods.
2. Cooking all foods.

Equipment.

Ice hox, pantry, storage, table, kitchen cahinet, stove, utensils, table trays.

Clearing Away Meal.
Group II.
Work.

1. Removing all foods.
2. Washing utensils.
3. Laying away dishes.

Equipment.

Trays, tables, sink, closets, pantry, ice-hox.

Every task done—from peeling potatoes to washing a skillet—can be placed clearly under one or the other group. One group is those processes which prepare the meal; the second group is those processes which clear away the meal. Each of these processes cover distinct equipment. The reason for so much inefficiency n kitchen work is due almost solely to the facts that these two processes are not kept sepasate and particularly that the equipment of each process it not kept together.

Suppose, for instance, we wish to make an omelet. We take eggs and milk from the ice-box or pantry, beat them at a table, cook on a stove, serve on platter and take to dining-room. This is the preparing process of this dish, and is the simplest method we can follow. On the return trip, kr the process of clearing away I take the empty platter from the dining-room to the kitchen sink, wash it, and lay it away.

Now, if the kitchen tahle, stove and sink are in the right relation to one another, we can "route" our work like a factory; we can make our omelet or any other dish, with the least possible numher of steps, motion, time and fatigue. But if the stove, sink and tables are not in the right relation to one another, it will require twice as much energy to cook and serve the food.

The definite equipment of processes of group No. I. come in this order:

1. Storage. lb
2. Preparing surface.
3. Stove.
4. Serving table.

The definite equipment of processes of group No. 2 come in this order:

1. Stack table to right of sink.
2. Sink.
3. Drain to left of sink.
4. China closet.

In my small kitchen, therefore I have arranged my equipment as follows—First, at the south, an ice-box then a kitchen cabinet, then the stove and at last a small serving-tahle. At the other side of the room come to the right, stack-table, then sink, the drain to left of sink, then china shelves. To make an omelet, I

Look Here Sir!

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If you don't want to cut this paper, write a postal or letter, and we'll send the patterns anyway, but to get them **you must mention the Maritime Farmer.**

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119 West Wellington St., Toronto

The "Burlington" $12.50

This shows the most popular style of suit worn by well-dressed men in Canada. The materials used are especially selected for this style of suit, including a fine range of tweeds, worsteds and serges.

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Please send me your new season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit—overcoat.*

Full Name .....

Full Address .....

*If you only want overcoat patterns, cross out the word "suit". If you only want suitings, cross out "overcoat."

Maritime Farmer. Coupon No. 1.

take materials from the ice-box, turn a step to the right, where I beat the egg on the surface of the cabinet, turn one step to right, for stove, and a last step to the right lays it on the serving table, from which I carry it to dining-room. On the return trip I take the soiled platter from dining-room directly to stack-table, wheel left to sink, let to drain and set left to china shelves.

HOUHOLD RECORDS.

Much as there is in addition to what I have space to say here of kitchen efficiency, I must go on to the application of business principles to other elements of home-making. I am not a "system" fiend, but I found, after wasting much time and energy on searching, pulling and hunting for all my household data, that I simply could not waste this time and energy. In keeping a home I have rent and gas receipts, butcher's and milk bills, addresses of friends and tradespeople, and many other kinds of data.

So, after much experiment, I worked out a filing drawer with cards, in which I keep cards of all the important things I want to know. In this fifteen-inch box, which stands on my desk are parctically all the days concerned in the entire running of my home. I have called it my "Time and Worry-Saving Family Cabinet," and any woman can get such a box or drawer filled with 3x5 cards and make her own sub-heads for her own needs. Here is the complete list of subjects as I have worked them out:

(1) Household Accounts—Sub-divided by months and with a yearly "recapitulation." Separate cards for personals, etc., and for each of the children.

Under every months' sub-division of household accounts there is a set of plain, ruled 3x5 inch cards. In my system they number fourteen. They are as follows:

(1)(Groceries.
(2) Meats.
(3) Vegetables and fruit.
(4) Bread, milk.
(5) Ice, cleaosers.
(6) Service.
(7) Laundry, soap, starch, bluing.
(8.) Fuel, gas, electricity.
(9) Furnishing and repairing.
(10) Medical and drugs.
(11) Church, charity.
(12). Amusement, carfares.
(13) Cash record.
(14) Recapitulation.

(2) Household Records:
a—Family-sizes, record, (shoes, hosiery, gloves, etc.)
b—Clothes-storage record.
c—Linen record (number, cost price and date of purchase.)
d—Preserve record.
c—Pantry record.
f—Anniversary record.
g—Gift record.

(3) Library Records:
a—Poetry.
b—Fiction.
c—History.
d—Reference.
e—Books to read or to buy.
f—Music, repertoire, lyric, humorous, sacred.

(4) Family Medical Records:
a—Physician.
b—Dentist.
c—Oculist.

(5)—Record of Addresses.
a—Social.
b—Professional.
c—Special.

(6) House Hints Division:
a—Toilet and laundry hints.
b—Baby hygiene.
c—Garden and flower hints.
e—Jokes, quotations, etc.
d—Entertainment suggestions.

(7) Home Financial Records:
a—Taxes, real estate.
b—Document record.
c—Bank records.
d—Bills receivable.
e—Bills payable.
f—Personal, financial records, club dues, etc.

(8) General Inventory.
Sub-divided for clothes, furniture, silver, miscellaneous, etc.

EACH WOMAN'S PERSONAL APPLICATION.

Something has been said about methods and systems, plans and schedules, in the household. Now comes the most vital, the most difficult point of all, and yet the keystone of the whole matter—the personal attitude of the woman toward her own work.

Without properly applying the modern ideas of efficiency to her own mind (which is in itself a complete and separate organization) the whole plan of the "new housekeeping" falls to pieces. No stream can rise higher than its source and no household efficiency can be greater than the personal efficiency of the woman who directs it.

Some women regard housework as an orge which has them in its grasp, and from which they cannot escape. Others have a mania for all housework, so that they elaborate, repeat, and prolong work. Still others mistake the physical work of housekeeping for the real ends of home-making; a large group assume a merely tolerant attitude towards houseworkers prefer business, and other careers as more "interesting."

Every one of these attitudes of mind is really poisonous and antagonistic to either efficiency or the highest personal happiness and character. These seven typical attitudes of mind have hung like millstons around the neck of the real emancipation and development of women from household drudgery, is to exchange any or all of these attitudes for the efficient attitude, my interpretation of which I write down here in italics so as to give it every possible emphasis:—Christine Frederick, in Everywoman's World.

(Continued next issue.)

SUMMER SHOES FOR MEN WHO WORK

Here is something new in footwear specially suitable for farmers, woodsmen, millmen, trackmen, laborers—all those needing strong yet light, cool, easy shoes. These are made on good-fitting right and left lasts from our famous oil-tanned Skowhegan waterproof leather with waterproofed sole leather outsoles and solid insoles.

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are light weight, comfortable, durable working shoes for spring, summer and fall wear. Sold by leading dealers everywhere. If your merchant does not carry them write us, giving his name and address, and we will see that they are placed within your reach. Made 4, 6 and 9 inches high. 19

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Water pan is filled without removing.

See the McClary dealer or write for booklet.

The famous prize-winning Clydesdale Stallion, Baron Balgreddan, has recently been purchased from R. A. Snowball, Meadowbrook Farm, Chatham, N. B., by Mr. John Sharp, of Woodstock, N. B. Baron Bglgreddan is by Baron Primrose. He combines size, quality and action, and if he give as good an account of himself as a sire in Carleton County, as he did in Northumberland County, nothing further need be said. At the Halifax exhibition in 1913 Baron Balgreddan with three of his daughters and another filly won the challenge cup for the best five horses out of one stable. The farmers of Carleton County will do well to patronize this horse.

THIS BARREL

Contains flour guaranteed to give satisfaction or you get your money back. Regal Flour is always preferred by careful cooks because it insures good bread *always*—and palatable as bread can be made.

REGAL FLOUR

MAKE NO MISTAKE. Always insist upon Regal Flour and you can be sure of the quality.

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MONTREAL

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When the kidneys begin to "act up" and fail to filter the blood through them, there passes into the system uric acid and other virulent poisons, which will cause some of the severest and most deadly diseases known to mankind.

On the first evidence of the approach of kidney trouble Doan's Kidney Pills should be used, and serious trouble avoided. Mr. Israel Drost, Bath, N.B., writes:—"I am sending you this testimonial telling you what a wonderful cure Doan's Kidney Pills made for me. My kidneys were so bad I was helpless for about two months. I used several kinds of pills, but none of them seemed to be doing me any good. At last I was advised to try a box of Doan's Kidney Pills. When I had taken the first box I found relief, and then I got another, and by the time I had taken it, I was completely cured."

Doan's Kidney Pills are 50 cents per box or 3 for $1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont. When ordering direct specify "Doan's."

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Dates to Remember.

St. John Exhibition, St. John, N. B., Sept. 5 to 12, 1914.

Haliax Exhibition, Halifax, N. S., Sept. 12 to 19, 1914.

St. Stephen Exhibition, St. Stephen, N. B., Sept. 15 to 18, 1914.

Charlottetown Exhibition, Charlottetown, P. E. I., September 22 to 25, 1914.

Sydney Exhibition, Sydney, N. S., Sept. 29 to Oct. 3, 1914.

Advertise in the Maritime Farmer

The Storage and Use of Silo Moisture.

(Continued from page 685)

ture in the soil.

Some crops make more root development than others and naturally send their roots deeper into the soil to obtain water and plant food. An extreme example of deep feeding is seen in alfalfa. Other crops feed to a lesser depth. The length of the growing season also affects the depth to which water is used. A perennial crop, such as grass, will dry the soil to a considerably greater depth in a series of years than it will in one year. It may be that there is some continued growth of the roots and that they keep growing so long as they can find water, or the drying of the lower soil may be due to the water being brought to the roots by capillarity during the greatly extended time. Winter wheat due to its longer growing season develops a deeper root system than does spring wheat, and consequently uses the water from a lower depth than does spring wheat.

Averaging all of the results obtained on depth of feeding, we have found that oats, spring wheat, barley and corn feed to a depth of 4 feet; winter wheat feeds to a depth of six or seven feet; perennial grasses dry the soil out to a greater depth. Alfalfa will send its roots to greater depths for water than with any other common farm crop if water is available in all intervening portions of the soil to supply the roots while making this greater growth. In this manner alfalfa on the second bottom lands usually obtains permanent water supply. The roots frequently go down to the sheet water where it is within 20 or 30 feet of the surface.

Effect of Weeds

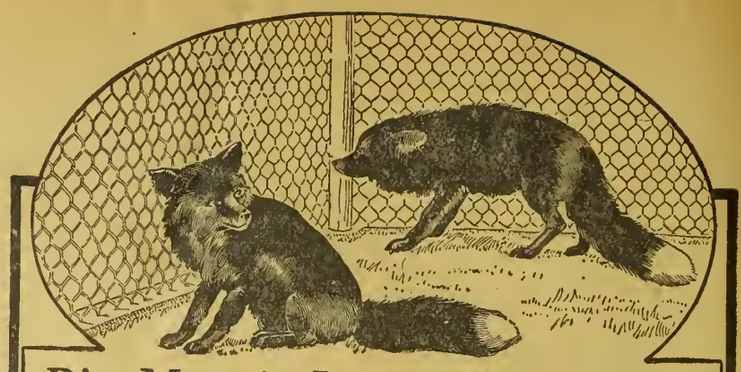
As above stated, weeds are the worst enemy of the farmer who is farming under limited rainfall. All of our trials have pointed to the fact that from the standpoint of storing moisture, the killing of the weeds is even more important than cultivating the soil. Cultivation, however, is the means of killing the weeds and serves to keep the surface soil in condition so that it will catch the water that falls, and not blow.

In 1913 moisture determinations were made in two plots of land being summer tilled. One was being worked acording to the usual method of clean fallow. The other was not plowed until after weeds had started, in order to save labor in the summer tilling process. On June 23, the date of plowing the latter plat, a considerable growth of weeds had started and it was found that the soil was practically dry all the way down, while the other plat had already two feet of moist soil. There was a difference of two and one-half inches of water in the two plats, representing the amount of water which had been lost by all owing the weeds to grow. From the standpoint of storing water, keeping the weeds down is very important.

Summary

This paper is meant to discuss the principles involved in storing water, rather than to teach any actual farm practices. The applicattion of principles to farm practices must be left to the farmer. Our work has added proof that a cultivated surface is more effective than one not cultivated in catching water from rains. We have found than on this soil weeds are the greatest agency or the loss of soil water. Not only before the crop is planted, wherever weeds are growing they are using moisture.

It is left to the farmer to determine the most economical way for him to put the principles into practice. The problems differ from the type of farming, but the principles do not change. One man wants to store water to grow grain for the market; another desires to grow more feed for stock. The returns from either will probably be in pproportion to the water supplied to the crop, unless unusual conditions, such as hail, come during the season.



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Always a good stock on hand ready for shipment and every foot of it **guaranteed.** Buy MARITIME NETTING for your poultry farm—there's none better at any price, none more strongly guaranteed.

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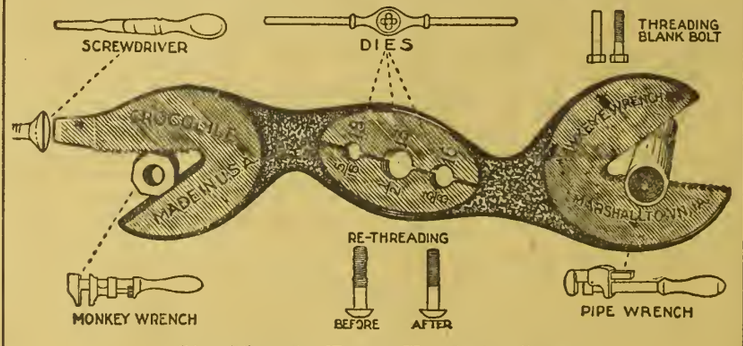
An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wreuch, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

The amouut of water available to the op is the important factor. It is more portant than particular method of lage. We have found that though me methods of tillage give hetter avage returns than some other method, t the method of tillage is overshadwd by the importance of the total iount of water supplied the crop. ater stored in the soil before seeding ids to insure the crop, but it is not fficient to insure a profitable yield. e yield is influenced not only by the iount and distrihution of the seasonrainfall, but hy other climatic condins. Under the same rainfall the ored water tends to insure a nigher ld from any crop. Moisture is the iiting factor of production under our nditions. The soils are still fertile d the replenishing of their fertility a question more for the future than the present.

The application of the principles of ring water may be summed up in a v sentences. The surface should be pt in condition to catch the rains. It ould be cultivated to keep it loose d rough, thus reducing evaporation d preventing blowing. The weeds ould he kept down as far as practiole, hoth before and after seeding, to event their use of the water.

n order to bring farm practices up the point of greatest efficiency it is sential that the farmer understand e conditions under which he is farmg and the principles affecting the actices. A thorough knowledge of e prevailing weather conditions, soil nditions and nature and requirents of crops are all essential. He n then work out the practices.

gulations Pertaining to Organization of Seed Centres.

n order that regularly authorized dies of persons as well as indivials may enjoy the right of memship in the Canadian Seed Grow Association, the following is thorized:

1) That Clause 13 of the Constition which reads as follows: "The sociation may admit as members y persons resident in Canada," to id "The Association may admit as mhers any person or regularly oranized hody of persons resident in nada, etc."

2) That these organized hodies or rsons he admitted as members en the following regulations tother with such others as the Extive Council may deem necessary, e complied with.

(a) That these hodies shall be own as Seed Centres with such pre es as may indicate their location d kind of seed grown.

(h) That the aim and ohject of ese Centres shall be the production d sale of Registered Seed of uniim quality.

(c) That the officers shall consist a president, a secretary-treasurer, d three or more directors to be cted by vote of the memhers.

(d) That the officers and directors all constitute the Board of Direcrs who shall have entire control of e local affairs of the centre suhject ways to the general rules and the ecial directions of the Association.

(e) Members may be elected hy o-thirds vote of any regular meetg of the centre and must pay into e funds of the centre an initial fee $1.00 and such annual fee as the ntre may consider necessary.

(f) The majority of the members all constitute a quorum for any eeting.

(g) The area included in any cene shall not he of greater extent an will enable every member to ve easy and frequent access to a ed plot. The Association may de e limitations hased on the report the Inspector.

(h) The Centre shall supply every ember each year or as often as is necessary, with the same stock of 'Elite Stock' or first generation 'Registered Seed.' With all crops except wheat, oats and harley, the production of 'Elite Stock Seed shall be made hy one member in order to maintain uniformity, hut it is recommended that Elite Srock Seed be sown on two or more farms in order to guard against the possibility of any one seed plot being destroyed. With the approval of the Centre more than one grower, in the case of wheat, oats and barley or other self-fertilizing class of crop may produce Elite Stock Seed provided that all such growers start with the same foundation stock.

(i.) The member or memhers producing Elite Stock Seed shall supply the other members with either Elite Stock or first generation Registered Seed at a price agree upon hy the Centre subject to the seed being accepted for registration by the Association.

(j.) A centre may operate with only one variety of any kind of crop.

(k) All Registered Seed grown by members of the Centre must be offered for sale under the name of the Centre and the registration tag to he attached to the sack by the Inspector must be signed by the Secretary of the Centre.

An Overfeed of Grain.

Some one left the oat hin door open, the horses were loose; and we all know the rest. The thing to do if the accident is detected an hour or so after the grain has been eaten is to get a veterinarian as soon as possihle, says C. L. Barnes, of the Colorado Agricultural College, and pump as much out of the stomach hy the aid of a stomach tuhe as possihle. Then administer a purgative and antiferments. It sometimes happens that exper help is not availahle. If such is the case, then the matured horses should receive from one and one-half to two quarts of raw linseed oil and two ounces of turpentine. Many neglect a horse that has over eaten until the symptoms of colic appears and then call a veterinarian who may have difficulty in saving the horse.

The same precautions should be

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IF YOU
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THE BIGGEST VALUES
YOUR MONEY CAN BUY
The biggest bargains in just the class of merchandise you are looking for now in pretty neat Summer Dresses, accessories, charming lingerie, things for the home, you will want a copy of
"SCROGGIE'S MIDSUMMER SALE CATALOGUE"
It will save you 20 to 50% on your Summer requirements. Such values that we offer could not be bought from any other source at anything near our low prices.
SAVE 20 TO 50% ON YOUR SUMMER REQUIREMENTS
Send to-day for a copy of this Sale Catalogue and cut your expenses in two.
It will be Mailed Free.
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MONTREAL
SAVE AS YOU SPEND

taken when a cow has accidentally eaten a part of a sack of oats, wheat or corn. From one to three pounds of epsom salts given to a cow immediately after such a large feed may save the cow's life and also prevent her being foundered. The thing to remember is to do something for the cow immediately after the accident has been discovered.

Essentials in Making Good Clover Hay

The problem of making choice clover hay is often a very difficult one, much more difficult than that of making timothy hay, writes G. G. Williams of the Ohio Argricultural Commission. One reason for this is the earl er season in which it has to be made. The ground is not so thoroughly dried out in June as it is a month later, and consequently hay cures slower. Then, green clover carries a higher percentage of moisture than does timothy, and the journey from field to hay-mow is consequently a longer one. Furthermore, clover shatters much more easily and the saving of the entire plant is accordingly more difficult. And finally, clover hay does not shed water as quickly as timothy.

The total yield of hay and the amount of protein, nitrogen-free extract, fat and ash are higher when the clover plant is in full bloom than at any later period. The harvest should begin promptly, in order that it may be completed before the quality has seriously deteriorated. Clover when cut at its best carries from 75 to 80 per cent of water. Before it is in a condition to safely store in mow or stack, this percentage must be reduced to 15 or 20 per cent. It is important that this be accomplished in as little time and with as little effort as possible. The shorter the time between mowing and storing, the less chance for losses from bad weather.

For the early harvest two methods are workable: 1. There can be no question but that the clover hay is made by way of the hay cock. This is hardly practicable on large areas, but on small and medium-sized farms it is much in vogue. The clover is cut in the forenoon as soon as the dew is off: if heavy, the tedder should be started in two hours; early in the afternoon it can be raked into loose windrows and be put in large, well-made cocks during the afternoon, where it may be left for two or three days Before hauling the cocks should be opened out a little for an hour or two.

Cured in this way the leaves and blossoms are preserved almost entirely, and the color and flavor are at their best. The objections to this method is, of course, the great amount of hand labor required. Upon many farms it is out of the question.

(2) In using the second method usually it will be better to defer the mowing of the clover until the latter part of the afternoon, say from 3 p. m. on, for two reasons; it is not planned to store the hay the day it is cut and one can make wiser plans for the day following late in the afternoon than earlier in the day, but if he does miss it, the damage to the green clover from rain will be little, if it be shook out as soon as the weather becomes fair. Cut at the time of day when the plants carry the least amount of water the clover will be in shape to make rapid strides for the hay mow as soon as the dew is off in the morning. The tedder can probably be used twice during the forenoon to advantage. Early in the afternoon it should be possible to start the side delivery rake, and shortly after the hauling, depending upon the sun and air, as well as the dryness of the ground under the clover. With everything favorable it will do to store in 20 to 24 hours after cutting.

But whatever method is followed it is not advisable to fill up barns or stack half-cured hay. It is important to note that the leaves carry fully three times as high a percentage of protein and fat as the stems, and the heads more than twice as much.

Curing clover hay just right, so that it will come out af the mow bright and sweet, with leaves and blossoms intact, is a rare accomplishment. Its achievement depends upon a happy succession of events, some of which are not in the hands of the hay maker. He must make, and frequently unmake and remake his plans in short order. Hay making is indeed an art. It is as impossible to set up in cold type specifications which will enable one to tell just when his clover hay is done, as it is impossible to tell one how to write a poem. Clover hay, like poetry, is something which has to be felt and heard! The weight of a pile of hay as one lifts it at the end of a fork, appeals to the sense of touch; one can feel whether it is properly made or not. And who that has spent days in the hay field has not not reached a point where the rusele of the clover tells the story of a finished product?

The Better Farming Special.

(Continued from page 683)

star boarders and fifteen profit producers.

Prof. Robert Newton, Principal of the Woodstock Agricultural School and Mr. Reid, the new Field Husbandman for the Province had charge of the field crops section. One exhibit of particular interest in this section was a series of long glass test tubes partly filled to various heights with samples of oats, wheat, barley and peas to depict the difference of quantity in yeild secured by sowing on five different dates seven days apart. In every case with the exception of the peas the exhibit, which was the result of a five years' test at McDonald College, showed that it paid to sow at as early a date as possible.

Mr. Durost talked bees, fertilizers and drainage, using observation hives, apiarian appliances, chemicals, and samples of tile and draining tools to illustrate the various subjects.

D. B. Flewelling, Assistant Horticulturist and Mr. S. L. Peters, Fruit Inspector for the Province had charge of the Horticultural car. In this car was a splendid array of pictures and mounted specimens of farmers' friends and foes in the insect and feathered worlds. This exhibit was prepared by Mr. Wm. McIntosh, Curator of the Natural History Society, St. John.

The inquiring, interested visitors gleaned a fund of information that will help them in their work and the casual visitors could not help but become imbued with the conception that it takes a man of brains to be a successful farmer.

Dr. Morse's Indian Root Pills

are made according to a formula in use nearly a century ago among the Indians, and learned from them by Dr. Morse. Though repeated attempts have been made, by physicians and chemists, it has been found impossible to improve the formula or the pills. Dr. Morse's Indian Root Pills are a household remedy throughout the world for Constipation and all Kidney and Liver troubles. They act promptly and effectively, and

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Cleanse the System

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—

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A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it towards the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyne, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded. Extra burners 35c. each.

The Maritime Farmer

SUSSEX, N. B.

We are exclusive agents for these burners in the Maritime Provinces. We want agents for exclusive territory.

GOODS SATISFACTORY OR MONEY REFUNDED, INCLUDING SHIPPING CHARGES.

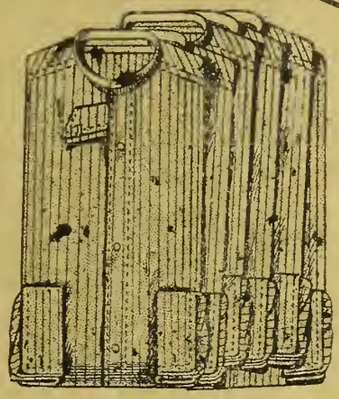
EATON'S

FREE DELIVERY
WE PREPAY SHIPPING CHARGES ON $10.00 ORDERS AND OVER

WEEKLY MAIL ORDER BARGAINS

WE OFFER YOU THIS WEEK SIX VERY INTERESTING SPECIALS—INDEED, THEY ARE EXCEPTIONAL BARGAINS. OUR OPINION IS THAT AT NO TIME OR PLACE COULD YOU DUPLICATE THE SAVING YOU CAN SECURE BY BUYING NOW. JUST LOOK OVER THIS LIST VERY CAREFULLY, AND COMPARE PRICES IF YOU CARE TO. THE MORE YOU INVESTIGATE THE MORE YOU WILL BE IMPRESSED WITH THE ADVISABILITY OF ORDERING AT ONCE. WE HAVE A LIMITED QUANTITY, AND THOSE WHO DESIRE TO SHARE IN THE SAVING SHOULD NOT DELAY ORDERING.

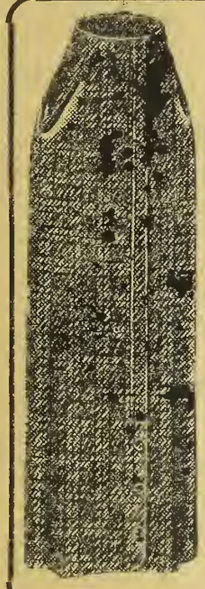
STATE SIZE WITH ORDER



SHIRTS SELLING LESS THAN COST 89c

40-F77. 480 Men's High-class Fine Imported American Outing Shirts going at less than cost. They are made from a fine quality mercerized material, in the popular coat style, with separate lounge collar, soft double cuffs. Come in plain colors of neat self striped effect in the popular **Blue or Tan shades.**

Sizes 14½ to 16½ Each 89c or 2 for 1.75



STYLISH TARTAN PLAID SKIRT FOR 2.95

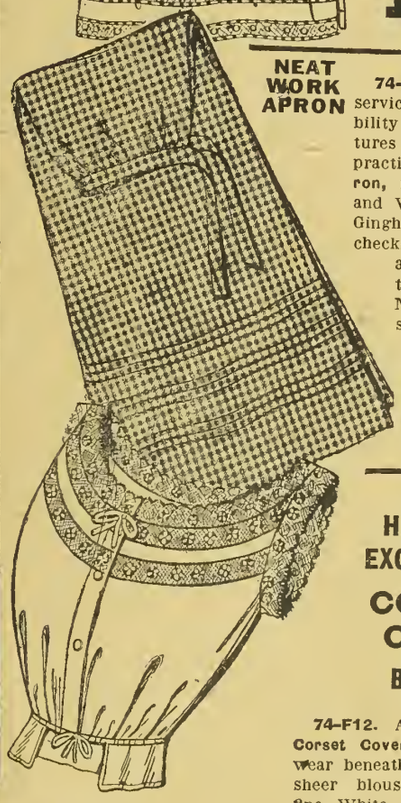
82-F340. Just a little over half price for a **Skirt** of such serviceability and beauty is surely a wonder. Choice of either the "**Black Watch**" (dark Green, Black and Navy); or the "**Argyle**" (similar ground as "Black Watch," with Red Check line). **Waist measures 22 to 29 inches. Front lengths 37 to 42 inches.... 2.95**

IMMENSE WHITEWEAR BARGAINS

JUST LOOK AT THIS VALUE

74-F11. Woman's Umbrella Drawers, made of good quality White Cotton, trimmed with a wide frill of mustin and lace insertion. Seams and band well finished. Open or closed style. Selling at a very special price. **Buy to-day—to-morrow may be too late. Sizes 25 and 27 inches.**

Price **19c**



NEAT WORK APRON

74-F10. Value, service and durability are the features assured in this practical **Work Apron,** made of Blue and White Checked Gingham, with fancy checks in red, white and blue across the bottom. Neat band style.

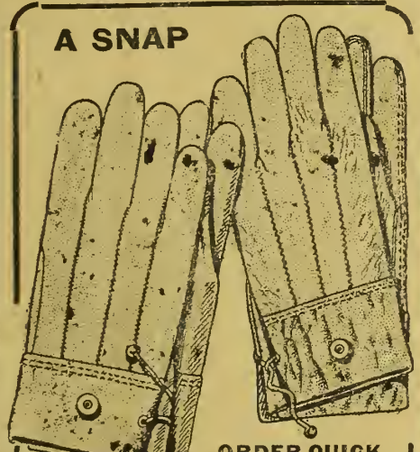
Price **15c**

HERE'S AN EXCEPTIONAL CORSET COVER BARGAIN

74-F12. An up-to-date **Corset Cover,** suitable to wear beneath the season's sheer blouses, made of fine White Cotton, trimmed with insertion and lace; finished at the waist line with a drawstring of strong tape and neat fitting peplum.

Price **19c** Sizes 32 to 42 inch

A SNAP



ORDER QUICK

JUST LOOK AT THESE STRONG GLOVES for 35c Per Pair

20-F70. Men's Chrome Tanned or Horse-faced Work Gloves, made from strong skins, extra sewn seams and cord and fastener. **Be sure and order early, as there is only a limited quantity.**

To clear, per pair..... 35c

There are many other equally big Bargains to be found in our

SEMI-ANNUAL SALE CATALOGUE

If you have not received a copy, send us your name and address, and we will forward a copy without delay.

THE T. EATON Co LIMITED
TORONTO - CANADA

How Best to Wean a Colt.

Much harm often comes from improper weaning. When a colt is five or six months of age, we place a strong halter on him and put him in a stall with the motber in an adjoining one, and the partition so arranged that they can get their heads together.

The first few days of this treatment we let the colt nurse twice, the next few once, and so on until the weaning operation is completed. We feed the mare on dry feeds and about half milk her twice daily, until she is dry, allowing a little more milk to remain in her udder each time.

We feed the colt on new grass or fine clover hay, and give him a pint of oats three times daily, and in about three weeks' time he is weaned.

When the mare becomes dry the colt and mare are again turned into pasture. Care is taken to provide the colt with a strong muzzle, for if it ever gets another taste of its mother's milk the weaning operation will have to be done all over again, and it is a more difficult task the second time than the first.—W. H. Noland.

For soreness of the muscles, whether induced by violent exercise or injury, there is nothing better than Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all dealers.

FLORICULTURE.

In answer to "Shanklin" would say the reason of the dropping of buds from roses was the sudden change from outside to the close air of the house. In transferring all plants, especially hard wooded ones, the change should be made gradual. After planting keep them where they can have open air for a week or more, spraying well in dry weather and gradually accustom them to a closer air; the same in setting them out from the house in spring bringing them in when the nights seem cooler. In this way you can save the foliage and buds.

My sweet peas did not do as well as usual last year. It is better to use new ground every year for all annual plants of the same kind but plants of different kinds can be planted in soil occupied the last season by other kinds to advantage as the excreta of some varieties of plants act as food instead of poison to other varieties. With the proper amount of potash, nitrogen and phosphoric acid, and given to the soil every year in an available form, the soil kept in good mechanical condition, the same soil can be used many years for the same varieties of plants but as the requirements of different classes of plants of different amounts of these foods vary, a change of location is safer than experiments on the same plot. Two or more feet removed from the old locality would give a change for most annuals.

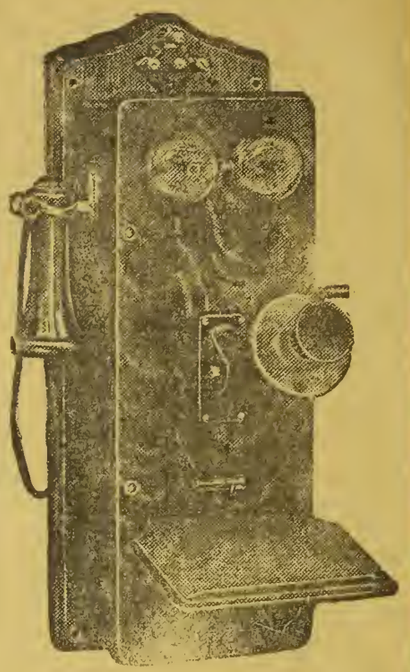
Amherst N. S., writes:—How can I get some early blooming plants—something in the bulb line.

If you wish to have early blooming, summer flowering bulbs such as Gladioli Bessica, Elegans, Hyacinths, Cardicana, Montbritia, Milia Belfora and Tigrideas, pot them as early as you can in April in four inch pots, giving good drainage, using one bulb to a pot or three of the small sizes. Just cover the crown of the bulb with soil, press firmly, water well afterwards sparingly until top growth is established. Give them a moderately warm position, they do not need sun until top growth is established. When two or three inches of this is made give full sun and all the air you can. When danger of frost is over turn out the ball and plant in the garden.

Westfield writes:—Would you be kind enough to tell me in your Farmer what I can do with ants. Our grounds about the house are just alive with them and they are swarming in the Snowball bushes. What could I do to prevent them getting upon the blossoms as they did last year?

It is very difficult to get rid of ants in a lawn (which I presume correspondent means) without injury to the sod. Powdered Borax is the best thing I know of. It should be applied in small quantities and frequently on the infested soil as regards the ants in the Snowball shrub. They are there on account of the aphis, which causes the leaf to curl. As soon as the aphis is destroyed they will not bother the shrub. Apply kerosene emulsion during a dry time.

Put the Latest Style Telephones On Your Lines!



INCREASE the efficiency of your Telephone system by installing the latest style Telephones. Canadian Independent Telephones are the highest grade made. We guarantee them to be superior in style, workmanship, and material to any others on the market. You can prove this true by trying them out on your own lines, side by side with other phones. This you can do without risking a cent. Just ask us about our Free Trial Offer.

Get Our Advice If your locality does not enjoy the social and business advantages afforded by an up-to-date telephone service it is time you got into communication with us. We are the largest Independent Telephone Manufactures in Canada, and have been instrumental in seeing that the majority of the independent local and municipal companies have started into telephone business along lines that ensure succees. We can help you get a telephone line for your locality. Write us and we will tell you how.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4 describing our magneto telephone is free on request.

SEND FOR A COPY

Let us quote you on your year's supply of Dry Cell Batteries.

Canadian Independent Company, Limited

1820 Duncan Street, - - Toronto

"Also Manufacturing Agents for the Magnaphone Co. under Mr. George R. Webbs' Canadian Patents No. 123363, No. 124537, No. 131145.

The Professional Horse Trader.

There are many men whose chief vocation is "trading" horses. Of course I do not refer to men who do a legimate business in buying and selling horses, or to those who occasionally trade horses. An honest exchange of horses can often be made by which both parties are benefited, each getting a horse more suitable for the duties required of him and in general a fair exchange of value being made. I refer to the professional trader the man who makes it a business. He is not only always ready to trade, but is constantly an the lookout for a victim.

Such a man does not want to trade because his horse does not suit him and he desires one of another type or class. His idea is to make money out of the transaction and in order to do that he must "do the other fellow." He is a failure. On general principles he must never "deal" unless he is getting some "boot." He occasionally comes into possession of a horse of considerable value, which he will trade for one that is unsound or of bad manners and of little value. In this case, of course, the "boot" will be a good deal and perhaps the "other fellow" has also made a good trade. Now the skill and tricky knowledge of the "trader" has an opportunity for application. His function is to patch up this animal to make him appear sound and valuable so that he may be able to "do" his next victim.

HOW LAMENESS IS TEMPORARILY CURED.

The knowledge these experts acquire in this line is remarkable and in some cases almost incredible. The ability to temporarily check or disguise a case of lameness is an act in which they have attained considerable proficiency. The practice of this art is, of course, seldom possible in cases of acute lameness, but when the lameness is not well marked it may be, and often is, successfully accomplished. When a horse that is to be "traded" is lame in one foreleg below the knee the trader knows that if the nerve supply to the foot can be temporarily rendered inactive the lameness willd isappear. Hence when he is about to show the horses to a prospective victim he will inject a little cocaine or other drug that acts directly upon the nerves underneath the skin on each side of the leg just below the knee. In about 30 minutes the nerve supply to the parts below the knee has become paralyzed and the horse, not experiencing any pain during progression, will go "sound."

Horses that have become sore in one or both fore feet and hence of little value but being generally good iodividuals and probably high-class, if going sound, will often after a few months' rest and attention to the feet make a temporary recovery and go apparently sound. They are then sold or exchanged and the new owner finds out, after having used them for a short time on the roads, that they begin to go tender or groggy.

OTHER PATCH-UP REMEDIES.

When a horse steps short and quick and, when standing, rests one foot and then the other, this should be sufficient to dispel a person's anxiety to buy or trade for him from the professional horse trader, for in practically every case a careful examination will reveal the fact that one foot has been tampered with.

Many "horse traders" know that certain drugs given in certain doses will check the ordinary symptoms of heaves for a short time, fn some cases for a few hours. These men are always ready to trade or give a few dollars for a heavy horse provided the animal, in other respects is a fair individual. The new owner, after finding out where there would be a prospect for a sale or trade, gives a dose or two of the drug and when fts action is established he shows the horse to his prospective victim and in many cases effects a deal.

In case of sweeney or other disease which has caused a shrinking of the muscles, the trader is aware that by forcing air underneath the skin covering the shrunken muscles he is able to fill the hollow. If the hand be passed over the parts filled with air the touch is found to be abnormal, and a crackling sound, like passing the hand over paper, is produced.

Means of temporarily checking undesirable or vicious habits are many. For instance, the use of an iron extension to the crupper so hidden in the hair of the tail that it cannot be noticed is often successfully used in disposing of a switcher and probably one that will kick if he gets the line under his tail. The ways of the professional horse trader are many and usually successful—for him.—W. H. Underwood.

Stock Notes.

"Attention is drawn to an ad. in this issue on page 710 from the Allandale Farm, Hampton, of a nice assortment of stock, including some young stock, as well as mature cows, and as this farm is situated near the railway station at Hampton, N. B., it is a handy location for the stock to be seen, and it will bear inspection of the closest kind.

We would recommend any of our readers, who are in need of stock to go to Hampton and look these over."

During the summer months mothers of young children should watch for any unnatural looseness of the bowels. When given prompt attention at this time serious trouble may be avoided. Chamberlain's Colic, Cholera and Diarrhoea Remedy can always be depended upon. For sale by all dealers.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

B. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Milking Shorthorns.

E. W. Heurtley, P. O. Sutherland's River, N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Cheviot Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Southdown Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Shropshires

C. A. Archibald, Truro, N. S.

Yorkshires.

R. J. Messenger, Lawrencetown, N. S.
E. W. Heurtley, P. O. Sutherland's River, N. S.
Steward Bros., Murray River, R. R. No. 1, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Thos. W. Prowse, Union Road, P. E. I.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
A. A. H. Margison, East Centreville, Carleton Co., N. B.

White Wyandottes

R. J. Messenger, Lawrencetown, N. S.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

PURE BRED STOCK FOR SALE

Guernsey and Ayrshire Bulls ranging from four months to twenty months old.
One Pure Bred Ayrshire Cow 5 yrs. old (Fresh milch.)
Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, - Shubenacadie, N. S.

Riverview Stock Farm

High Class Holstein Cattle and Yorkshire Pigs

Several young Bulls fit for service for sale, sired by Bob Dorindo, 9532, several times champion and a son of the well known champion Mercena Vale 5828. Dams are heavy producers and show ring winners.

D. R. NICHOLSON, Coxheath, N. S.

GUERNSEYS

Buff Orpingtons and White Wyandottes.

R. R. BLACK,
Highland View Dairy, Amherst, N. S

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, hetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

"Homestead Farm"

Holstein-Friesian Cattle
Clydesdale Horses
Shropshire Sheep
Berkshire Pigs

Our present offering is three bulls, fit for service. They are all good individuals and have good official backing. Can part with a few heifers ready to freshen next fall; also some bull calves. Our Berkshires are about all sold and we are now booking orders for ram lambs for fall delivery. Write for description and prices.

Long Distance 'Phone.

LOGAN BROS., Amherst, N. S.

KYLES RHODE ISLAND REDS

If you look up our winnings at the Maritime Fall and Winter shows or if you visit our yards, you will see that we are headquarters for the best Rhode Island Reds in the Maritime Provinces. Eggs for hatching at reasonable prices. Let us book your order for delivery at any set date.

Thomas A. Kyle, Sussex Corner, N. B.

SHORTHORN CATTLE

Best blood of this breed obtainable, with size, style and quality. Also a few choice grades.

Prices within reach of every farmer who wishes to improve or renew his stock.

J. E. Hetherington,
Cody's N. B.

GET A START CHEAP

Four Bronze turkey eggs, six Sicillian Buttercups eggs, five Single Comb Rhode Island Red eggs, all for $2.50. Turkey eggs $3.00 a dozen Single Comb Rhode Island Red eggs $2.00 for 15. Sicillian Buttercups, $3.00 for 15. Grey African goose eggs, 50c each. A good 120 egg incubator and brooder, $15.00 for both if taken at once.

SARAH E. MOSES SMITH.
Woodward's Cove, N. B.

STRAWBERRY PLANTS

We make a specialty of Strawberry Plant Growing. All the leading varieties, true to name. Prices reasonable. Send for descriptive catalogue.

JOHN N. CHUTE,
Berwick, N. S.

EGGS FOR HATCHING

From Rose and Single Comb Rhode Island Reds. Silver cup winners at Amherst Winter Fair. Best pens $3.00 per 15 eggs. Second pens $2.00 per 15 eggs. No mating list. Write for particulars.

W. H. Henry, Shubenacadie, N.S.

DURHAM BULLS

Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale. Also a number of nice calves and yearling heifers, well bred for milking qualities and in fine shape.

C. C. H. EATON,
Canard, - - Nova Scotia

FERTILIZERS

We carry the famous
HARAB FERTILIZERS
Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,
Moncton, - - N. B.

PURE BRED SIRES

THE LIVE STOCK BRANCH

Dominion Department of Agriculture.

WILL PURCHASE during 1914, a number of CANADIAN BRED Stallions, Bulls, Boars and Rams.

Animals must be of right type, in good breeding condition and of the following ages.

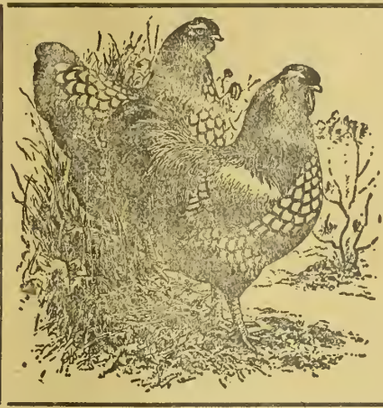
Stallions, three to five years.
Bulls, not under one year.
Boars, not under six months.
Rams, not under six months.

All stallions will be purchased subject to veterinary inspection and bulls subject to the tuberculin test.

Breeders in Eastern Canada having CANADIAN BRED male animals for sale, filling the above requirements and registered or eligible for registration in the Canadian National Live Stock Records, are requested to communicate with the Live Stock Commissioner, Department of Agriculture, Ottawa.

The purchases of stallions and bulls will be made during the current spring months. The purchases of rams and boars will be deferred until the autumn.

Communications must state age and breeding of animals offered and price asked.—60271.



'SILVER LACED WYANDOTTES"

Stock and Eggs for Hatching for Sale.

The Silver Laced Wyandottee is a breed combining quality and beauty, prolific layers, fine table fowl and rank high among breeders of poultry.

The Magnolia Poultry Yard's stock of Silver Laced Wyandottes were winners of first breeding pen at the Amherst Fair in 1913, among strong competition. This is only one of the reasons why you should buy this stock. The work is personally supervised by the owner, and the stock this spring has never been in better condition. Some of my customers have reported 100 per cent. hatches from eggs purchased from me this spring.

Write for information and get your pick of the stock now.

The Magnolia Avenue Poultry Yards
E. KYLE, Prop., Sussex, N. B.

SCOTCH COLLIE PUPPIES

We have some fine Scotch Collie Puppies for sale, the puppies are from the finest stock in Canada both sire and Dam being prize winners at the recent dog show at St. John, N. B. as well as other big shows in Upper Canada. These Puppies are finely marked, dark in color and should make very fine dogs. Write for prices, pedigree and full particulars.

Kingsdale Poultry & Supply Co.
SUSSEX, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex N. B.

HEAVY Horses for sale. Apply to F. L. GILLIS, Norton, N. B.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

PURE BRED HAMPSHIRE RAMS FOR SALE —First orders get best choice. BOX 45, Hillsboro, N. B.

BLACK, WHITE, AND BUFF ORPINGTON Eggs for Hatching from birds that have size, shape, color and great layers, only $2.00 per setting of 15 eggs. C. H. WISENER, Pictou, N. S.

100 POST CARDS, POSTPAID, 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Two six H. P. gasoline engines, both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R J. Pictou Co., N. S.

WANTED.—Man and wife wanted immediately, Man to do barn work, wife to keep house for 3 or 4. Also experienced man and wife to look after farm. Scotch preferred. Apply giving full particulars to L. E. Y., care of Maritime Farmer

FOR SALE—Six months Guernsey bull for $30.00. Sire "Nonpareil of Glen View" 39081 21472 A. G. C. C., dam "Glen View's Comely" A. G. C. C. W. H. HODGSON, R. F. D. 3, Fredericton, N. B.

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

ONE HUNDRED BEAUTIFUL HALF TONE and colored Maritime Province views or 100 side splitting comic postcards 40c. A postcard album free with each order. P. D. AYER & CO, Moncton, N. B.

OXYGENOPATHY IS THE BEST PATENTED Oxygenic device marketed. Exclusive territory open in your district. If you feel you can handle a good article, one that pays, write for information to J. R. COTE, Kingston, Ont.

FOR SALE—(1) Meadowbrooks Milkman 41830; (2) Helena of Bloomfield 38034. (3) Eva of Bloomfield 38035; (4) Irene of Bloomfield 38033. No 1 calved May 17, 1913; No. 2 calved Aug. 22, 1912; No. 3 Sept. 16, 1912; No. 4 Sept. 14, 1912. Price $200 f. o. b. station. Reg. and Transfer in name. HY. McDONALD, French River, Pictou Co., N. S

ALEXANDRA HOSPITAL FOR CONTAGIOUS DISEASES, Montreal.—Probationers wanted between 19 and 25 years of age, for a year's training. Lectures and Diplomas given; and arrangements made for the transfer of successful candidates to a General Hospital. Strict references required. For Forms of Application etc. apply to MISS GRACE M. FAIRLEY, Lady Superintendent.

220-Acre Farm, $3100
Income Last Season, $3000

Aged and infirm owner must sell quickly; great bargain for quick buyer; borders the beautiful and famous Minas Basin: cuts 40 tons hay; splendid soil for potatoes, hay, grain and fruit; pasture for 40 head; 400 apple trees besides plums, cherries and berries; estimated to be 1000 cds. wood besides the timber; splendid 2-story, 8-room house; large barn, carriage and poultry houses; timber and wood will pay for farm; apples, hay and other crops will bring in big yearly income; only part cash required, easy terms; all details and travelling instructions, page 84, "Strout,s Farm Catalogue 37", just out; choice selections of real bargains at wonderfully low prices throughout N. S. and the N E. States; write today for your free copy. Address Farm c/o Maritime Farmer.

REGISTERED YORKSHIRE PIGS

Bred from best stock in Ontario

A few boars and sows from six weeks to six months old.

E. W. HEURTLEY,

Sutherland's River, - - Nova Scotia

The Bloating of Cattle and Sheep.

When a cow bloats tap at once in severe cases. Make a small incision through the skin on the left side between hip point and last rib, about four inches below the spine. A canula and trocar (a trocar is a sharply pointed instrument inclosed in a hollow tube, the canula) is the best instrument for puncturing the stomach. Insert this through the incision in the skin, press downwards and inward till the stomach is punctured. Withdraw the trocar and leave the canula in the wound until all the gas has escaped through it, which will be an hour or more. Then withdraw the canula, wash wound with an antiseptic solution and allow it to heal naturally. If there is no trocar and canula at hand, a pocket knife may be used but it is not nearly as satisfactory.

In less severe cases, pass a piece of rope, soaked in tar or dip between the jaws and tie it around the horns. This will cause the animal to work his jaws and gullet and so tend to open up the passageway for the gas to escape. Pour cold water over the animal's kidneys.

Two ounces of turpentine, diluted with milk, ounce doses of aromatic spirits of ammonia diluted with water, four ounces of Jamaica ginger well diluted in hot water, and two tablespoonful doses of common baking soda in water are all remedies to be given as drink. Give gentle walking exercise and for a few days feed mashes and give lukewarm water to drink. As an ounce of prevention is worth a pound of cure, never feed moldly or frozen feed and do not pasture on heavy clover, alfalfa and similiar crops after a heavy dew or frost or a light rain.

SHEEP.

Tap the same as for cattle, except tap three inches below spinal column, instead of four. Be sure to clip off all wool within a few inches of incision.

A remedy, not commonly known but that has been successfully used by the writer, is freshly drawn milk. When the sheep is first noticed, run to the nearest fresh cow and draw a quart of milk. (Go to the nearest cow, whether the owner's or the neighbor's, as a moment's time may mean the life of the sheep.) Drench the sheep with this fresh warm milk and in all but the severest cases the animal will be up and moving in about an hour. Other remedies are: Epsom salts, 1-4 pound; sweet spirits of nitre, 2 dessert spoonfuls; bicarbonate of soda, 1 teaspoonful; ginger, 1 teaspoonful. Dissolve in a pint of lukewarm water and give as a drench. If this does not give relief in an hour try: Raw linseed oil, 1 teacupful; spirits of turpentine, 1 dessertspoonful. Give as a drench: if there is no relief in two hours, try: Sweet spirits of nitre, 2 dessertspoonful: bicarbonate of soda, 1 teaspoonful: ginger, 1 teaspoonful. Mix in a half pint of lukewarm water and drench animal every two hours till relieved.

A Hint on Feeding.

A prominent dairy writer has said: "Average dairymen feed their milch cows all alike, equal rations for every stomach, no matter how large or how small the animal may he. By this plan the large eaters suffer at the expense of the small eaters, for the latter set the pace for what the whole herd is supposed to require." Visits at several dairies at feeding-time show that, with rare exceptions this is just what the average feeder of milch cows does. There has been so much said about the importance of feeding properly compounded rations that most dairymen have a fair idea of the subject, and feed fairly correctly in that respect; but feeding each the same amount of the artificial food, whether the cow be small or large, and gives little milk or much, is a quite general error. Usually the bran, cake or whatever artificial food is given is mixed in with chaffed hay, straw, or green fodder, and then each cow given a certain measure of it, regardless entirely of individual capacity and requirement. It is in the feeding of the extra ration where the great error in feeding exists. What is badly needed is to test each one of the cows with artificials, and establish the digestive capacity of each animal and then feed accordingly. There is likely to be found great variability in this respect, and this can only be decided by investigation. This is the only way one can be prepared to do justice to his cows and to his pocketbook. Great stress should be laid on the point of feeding each cow just enough extra ration, but not enough to surfeit. Some cows will consume and appropriate more than others, and, if, their physical needs are not fully supplied, their greatest powers of milk secretion cannot be exercised. Regularity off eedingthat is what in Regularity of feeding is about as essential to best results as correct feeding. All good dairymen are aware of this, and act accordingly. They have a time set for doing everything pertaining to their cows. These animals are particularly creatures of habit. They soon get accustomed to any routine the dairyman may pursue in their behalf, and then they look for the same at the accustomed hour, and almost the same minute, and if milking, feeding and watering do not occur at the same time each day the animals get uneasy and nervous, and they will not do the best their is in them. A wisely conducted dairy is a good place wherein to bring up a young man, for . there he learns the lessons of promptness and regularity which will be likely to govern him in all his business transactions through life.

AYRSHIRE STOCK FOR SALE

Pure Bred Ayrshire Stock or Legible for Registration. Call and look the stock over. Long distance Phone at farm

1 cow, 2 years and 7 months, just fresh; 1 cow, 3½ years, due with second calf this fall; 1 cow, 7 years, grand breeder; 1 cow, 12 years, bred by Turner, Hamilton, Ont.; 1 heifer, 2 years and 3 months, now bred; 1 Heifer, 7 months; 1 heifer, 4 months; 1 heifer, 2 weeks; 1 bull, 2 1-2 years; 1 bull, 1 year; 1 bull calf, 4 months.

We price this stock as follows:

Heifer Calves $15.00 when dropped, $2.50 per month thereafter for feed and care till they freshen
Bull $10.00 " $2.50 " " " " " "
Prices of mature cows based on production basis.

Call or write.

ALLANDALE FARM, HAMPTON, N. B.

Stables 10 Minutes walk from Station. All Trains Stop.

PARTNER WANTED!

For a growing Poultry Supply Business, a good opportunity for a man interested in poultry desiring a steady income. The business at present in good paying condition and growing to such an extent that the owner needs assistance, prospects for future very bright. Books and all particulars of the Company open for inspection, correspondence invited.

Address Box 27, - - Sussex, N. B.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.
Correspondence solicited. 'Pone 111.

J. FRANK ROACH, - - Sussex, N. B.

Horses For Sale

Heavy Team Horses 1250 to 1550 in fine condition.

Apply to

F. L. GILLIS,

NORTON, R. M. D. No. 1

or

Chas T. White & Son,

SUSSEX, N. B.

Annapolis Valley Fruit Farm
Income Last Year $3065

140-acre money-making farm, near depot and village, schools, churches, markets and adv.; 60 acres in rich loam tillage, cutting 60 tons hay with acreage used for other crops; pasture for 20 head, spring-watered and wire-fenced; valuable wood and timber; good prospect for 1500 bbls, apples this season; apples sold here last year for $3.50 per bbl.; good 9-room painted house with piazza; barn for 25 head, horse fork and cellar; poultry house and shop; for sale only because owner has another farm and cannot manage both; if taken now, 13 acres grain, potatoes, hay; apple crop and tools will be included; price only $8900, part cash, easy terms; for all details and traveling instructions to see this and a good apple farm of 200 acres for only $2800, see page 83, "Strout's Farm Catalogue 37", just out, choice selections of real bargains at wonderfully low prices throughout N. S. and N. E. States; write today for your free copy. Addres Farm c/o Maritime Farmer.

If you are a housewife you cannot reasonably hope to be healthy or beautiful by washing dishes, sweeping and doing housework all day, and crawling into bed dead tired at night. You must get out into the open air and sunight. If you do this every day and keep your stomach and bowels in good order by taking Chamberain's Tablets when needed, you should become both healthy and beautiful. For sale by all dealers.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

REGISTESED TRADE MARK

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, JULY 21, 1914. Number 20.

Second Annual Report of United Fruit Companies of Nova Scotia, Ltd.

THE Second Annual meeting of the United Fruit Companies of N. S., Ltd., was held in Berwick, N. S., on Tuesday and Wednesday, June 30th and July 1st, when the following report was submitted by the Board of Management:

Annual Report.

Your Board of Management beg to submit for your consideration their second Annual Report and Financial Statement.

The year through which we have passed has presented problems of a most extraordinary and unusual character and your Board feel much gratified that, even under most trying and adverse conditions, they are able to present a report which records success in all its undertakings and a justification of the various policies which have been pursued.

We wish to place on record our appreciation of the splendid loyolty to the principles of co-operation displayed by the great majority of our membership during the trying times experienced at the commencement of the season.

The previous year had, as you are aware, been a year of low prices and the season under review opened with indications of a short crop all around.

Speculators, aware of these facts, visited co-operators and offered prices that in comparison appeared large indeed.

These prices would not have been offered but for the Co-Operative Movement, and we are glad to report that practicaly all of our members remained loyal to their fellows and turned down all offers made, thus successfully defeating the efforts of self-interested speculators to break up the co-operative movement.

Not only did these co-operators demonstrate thereby their loyalty to their fellows and to their cause, but they also showed common sense in recognizing that the speculators were buying for profit and that their Central Association had exactly the same means of earning that profit as the speculators; the only difference being that in the one case the growers marketing through their own business would earn and retain the profit for themselves, while in the other case all would go into the pockets of the speculators.

The test that these circumstances made possible has shown what sterling qualities are possessed by the majority of our membership and should serve as a lesson that it is futile to throw away money in bait to co-operators now that the great superiority of the co-operative method is so thoroughly understood.

During the year six Companies have taken stock in the Company making a total of thirty-eight Companies holding shares in the Central Association and necessitating an increase of authorized capita.

Your Secretary elected at the last anual meeting had to resign in September last having accepted a position on the Experimental Farm at Ottawa.

While we exceedingly regret losing Mr. Davis' services we congratulate him on having secured such an enviable position.

Your Directors at a meeting held in September last appointed Mr. A. E. Adams Secretary to the company.

The system of centraization for which the United Fruit Companies of N. S., Limited, stands, has found ample justification during the past season, as will be demonstrated as this report is presented.

We think that it will be generally admitted that there has been an immense improvement in the administrative department during the past year, and the accountancy department is now as perfect a machine as can be devised.

The promptness with which all accounts have been rendered every month and payments of all balances due have been made, must have been appreciated by managers and must have done much to satisfy all co-operators.

In addition to prompt monthly settlements no company making any reasonable application for funds in advance has been turned down.

We feel that we have every reason to be proud of the prices we have secured and paid.

During the season your Central has handled 274,000 barrels of apples and 38,000 barrels of potatoes, a grand total of 312,000 barrels

Out of this quantity, however, there were only 79,459 barrels No. 1, 36,459 barrels No. 2, the balance 158,000 being No. 3.

There were also in this quantity no fewer than 170 varities, comprising a very large percentage of apples difficult to market on account of the fact that they are unknown.

Yet, in spite of that overwhelming proportion of No. 3 and all those odd varieties your Central has been able to make a return which works out at a mean average (including absolutely everything) of $2.57 per barrel, ones, twos and threes.

While we are prepared to admit that a general shortage of the apple crop has in a measure been the reason for such high prices, yet the system under which we have marketed the apples entrusted to our care has been principally instrumental in enabling us to make such large returns for such a

DELEGATES ATTENDING THE SECOND ANNUAL WOMEN'S INSTITUTE CONVENTION, FREDERICTON, N. B.

During the Convention Mr. W. W. Hubbard, Supt. of the Experimental Farm, Fredericton, invited the Delegates to Visit the Farm. The above photo was snapped in front of the Farm Barns, While the Ladies Were Inspecting the Various Interesting Features.

percentage of the entire crop as we handled.

This method of market regulation was practiced to a certain extent last year but has been perfected during the year now ending; the large percentage of the entire crop now under our control considerably helping to bring about the desired result.

The success of the system to which we refer is only limited by the quantity of fruit beyond our control and for that reason we would welcome the active co-operation of those Companies at present working independently, feeling sure that it would be to the benefit of all to have all co-operators of the valey folowing out the real idea of co-operation, i. e., "working together for the mutual advantage" for thus only can many much-needed reforms be effected.

The new by-laws under which we are working and which were aproved by the Lieutenant Governor of Nova Scotia in Council on Sept. 8, 1913, have been most helpful and have assisted your officials considerably during the year.

The carying out of some of the provisions contained in these by-laws has done much to bring about the better feeling that exists today in all Companies towards the Central Association.

In accordance with these by-laws a meeting of your Directors was called September 27th, and an estimate for the ensuing year was submitted.

According to this estimate which was made before the real business of the year started, the expenses would work out at $13,300 for apples and potatoes and $2500 for supplies, a total of $15,800.

In actual fact the expenses for the year have only amounted to $12,300, for apple and potato accounts and $5452.28 for suplies or a total of $14,-653.48 about$1,100 less than our estimate.

That portion of expense applicable to apples and potatoes works out at four cents per barel.

We are aware that in the matter of expense the Central Association has received some criticism.

We are unable however to understand how the expense can be cut dow in any way and yet have an efficient machine.

We consider, and it is also the opinion of the various Government departments of both Canada and the United States who have investigated our system, that our expenses are absurdly low, considering the amount of work acomplished and the great saving effected in the cost of handling, the enhanced prices realized for the Valley's crop and the reduced prices now paid for nearly all necessities of the farm.

We have, however, investigated the expenses of the various other organizations and we find that our expenses are ridiculously small in comparison.

For instance, we find, acording to the Bulletin of Economic and Social Intelligence that the Californian Fruit Growers' Exchange shows an expense of 7 2-3 cents per box.

The Secretary of this Company, claims that this is the lowest marketing cost for any agricultural product in the United States.

The North Pacific Fruit Distributors write us that the cost of their Central is 15c per barrel, while the sub-central expenses amounts to 30 cents a barrel They state that salaries vary, all the way from $1200 for a manager of a small local, to $10,000 for their Central Manager. They further state that it is the man who can successfully manage the business they want; if successful he can secure about any salary. We feel, therefore, that we need make no apology for an expense of only 4 cents per barel, especially in view of the fact that another 200,000 barels could be handled with practically no additional expense.

The unusual climatic conditions that prevailed during the fall had a very detrimental effect on fall varieties of apples, causing considertble loss to the valley

Much of this loss could have been avoided with more intelligent management in many of our warehouses.

In many warehouses fall apples were hauled in without restriction and piled four or five tiers high

Every barrel brought heat in with it and the doors were often left open all day to admit all the warm air possible and then closed at night to prevent it escaping.

A better system of regulation will have to be employed in future by subsidiary companies to minimize, as far as possible, the effects of adverse climatic conditions. Special instructions will in due season be issued governing this matter.

Your management naturally, during the period referred to, turned their attention to pre-cooling or cold storage as a means of asisting in the marketing of certain varieties.

After making very exhaustive enquiries and collecting all possible data and satisfying themselves as to the utility of certain systems they called your Directors together to obtain their consent to a practical experiment with a Madison Cooper Gravity Brine System.

Although your Directors were satisfied themselves that in the interests of all fruit growers such a plant should be installed, they considered that such a step should not be taken without consulting the membership of all Companies.

Warehouses of the United Fruit Companies Limited, at their Head Office, Berwick, N. S.

The Directors' meeting was therefore adjourned to enable the Directors to place the proposition before the members whom they represented.

At the adjourned meeting an overwhelming majority voted in favor of this progresive step being taken but unfortunately the delay occasioned by the adjourned meeting proved disastrous to the proposal.

Immediately your Directors consented to the erection of a plant the necessary ice-cutting tools were wired for, and a suitable building for storage was purchased.

As soon as the tools arrived every available team was procured to haul, but towards the end of the second day a thaw commenced and our sleding was spoiled

During that short time nearly two hundred tons of ice was cut, hauled and stored.

While this quantity is insufficient to operate a Madison Cooper Plant yet it wil be sufficient to permit of an experiment along the lines of a system of pre-coling now in vogue in certain parts of the States

This experiment will be carefully conducted and strict records will be kept of the results, which will be of great value to your management in any further developments.

During the season your Central load ed apples and potatoes on to no less than 118 boats.

Of these 20 were mail boats, doing the trip in about seven days. Fourteen steamers were brought into the port of Halifax, especially to load apples for this Company.

One steamer and three schooners were chartered to carry potatoes to Cuba. We regret that one of these schoners, the Benefit, was lost, the crew fortunately being saved. Our interests being covered by insurance, no loss was incured.

The average time occupied by the freight boats carrying apples, that is the boats of the Furness-Withy, C. P. R, and Warren lines, was 11 days.

The average is brought up thus high on account of the delay of the Rappahanock and the two trips of the Almeriana, which occupied much too long a period. Including all boats, mail and freight, the average time was 9½ days.

Thermograph charts have been received by your office of the temperature of the holds of all boats carrying your apples.

The themographs have been placed in each hold of each boat and we have therefore, by a careful study of these charts been able to gather much valuable information as to the best apple-carying boats and the best positions in such boats.

The information thus gained will be put to practical use.

With reference to the pack of this year we are glad to be able to report a vast improvement in the direction of the uniformity This is borne out not only by the daily report of your local inspector but also by the detailed and tabulated report of your European representative, who met each boat and examined all packs. It is also borne out by the Trade on the English market who reports a distinctly more uniform pack than at any time previously.

This opinion has also been confirmed by the Special Commissioner sent over to England by the N. S. Government; Mr. Elderkin reports:—

"We have an object lesson of the success of co-operation as applied to agriculture in the packing and marketing of apples in the Annapolis Valley. It was most gratifying to us, talking with people in Great Britain, particularly in Covent Garden, to learn that to-day the brands ot the packing houses in Nova Scotia are sufficient guarantee of the quality of the contents, and will be acepted on the other side without investigation. This was not always so. In fact, many informed me that the reputation gained for Nova Scotia apples, owing to the inferior packing of the fruit was one that was discreditable indeed."

While these good reports apply to practically all varieties we are afraid we cannot include the Nonpareils under the same heading.

There is little doubt that many Companies fell away badly in the packing of that variety.

We attribute this to two reasons, one being the temptation of the big price and the other the fact that our inspector was engaged in organization work throughout the period that this variety was packing.

Reviewing the whole year we consider that to have maintained the reputation of the co-operative pack on a year when our apples were so atrociously scabby and spotted has been quite an achievement and reflects the utmost credit on all concerned.

We are gratified to note that, generaly speaking, fruit growers have realized the absolute necessity of spraying and that this spring spraying has been carried on in a manner never before aproached in the Valley.

The address delivered by Professor Caesar at Kentville, the vigorous campaign carried on by the Co-operative News and the costly expericnce of the past two years have all had their effect in bringing about the desired result.

It is well for the future of the Apple Growing Industry that this awakening has taken place and we trust that at no time will our orchardists revert to the old careless and half-hearted methods of the past.

As an indication of the increased attention that has been given to this vitally important matter, we would state

---

The salaries paid to your officials were as follows :

Mr. S. B. Chute, General Manager	$2500.00
Mr. A. E. Adams, Secretary,	1200.00
Mr. A. E. MacMahon, Organizer and Inspector	1200.00
Mr. J. N. Chute, European Representative	1111.50
Capt. C. O. Allen, Halifax	1000.00
Combined Salaries of Office Help	1847.03
A total for Salaries of	$8858.53

The expenses incurred by these gentlemen in the course of their work are as follows :

Mr. Adams, when visiting Companies and on organization work	$..74.15
Mr. A. E. MacMahon, Organization Work	321.25
Mr. A. E. MacMahon, Inspection Work,	512.00
Mr. J. N. Chute, London Office (including office help)	761.60
Capt. C. O. Allen, Halifax Office,	180.38
Mr. M. K. Ells, Home Markets..	114.25
	$1963.63

The balance of the Expense Account is made up as follows :

Telephones, Telegrams, Cables, etc.,	$926.86
Books, Stationery, Office Equipment, etc	835.75
Printing and Advertising	560.80
Auditing	177.30
Solicitor	100.00
Delegates and Directors' Expenses	349.77
Board of Management	567.00
Sundry Expenses ..	313.84
	$3831.32

that your office handled three times the quantity of spraying material this year compared with last.

We wish to give some explanation in connection with our method of handling the large spotted apples.

During the first few weeks of the season we were permitted to pack such fruit as number twos, but later, in deference to the requirements of the Fruit Marks Act, this pack was discontinued.

Your Board of Management did not feel that they would be protecting the interests of the growers by allowing such splendid fruit as represented by these apples to be simply marked No. 3. They therefore instituted a special pack known as Co-operative No. 3. On the face of the end of the barrel was attached a label reading as follows:

"Important

The apples in this barel are guaranteed to be number one in size but have the defect of being either off-color or spotted. The Dominion Fruit Marks Act forbid this class of apple being marked number one."

The idea of this label originated in the mind of Mr. F. M. Chute, of Waterville, to whom we accord the credit of an idea that has put considerable money into the pockets of the Co-operative Fruit Growers of the Valley.

While dealing with this matter of pack we would quote from the report of Mr. Philip J. Gabler, Cargo Inspector for Canada at Liverpool, published by the Department of Trade and Commerce in Bulletin No. 68 being the April issue of the Census and Statistics Monthly.

He states:—"It will be generally admitted that in these days of keen competition continued improvement is necessary if we are to hold our own or keep ahead and I would like to call the attention of Canadian packers to the fact that the Western New York State people are making a big effort to capture the best of this market. Their fruit is of very good quality generally, and very well graded, and they go sometimes to the extent of what may be termed, fancy packing in barrels, (i. e. fancy paper lace for the face of the barrels and a pad at top and bottom.) These apples easily command top prices."

It should be borne in mind that our apples have to compete with these packs and it is of vital importance that we put up a pack that wil enable us to compete successfully.

We should not be content and cannot afford to take second place to any other apple producing country.

We feel gratified that the Dominion Government have recognized the importance of the Fruit Industry by establishing a Fruit Department and by creating the office of Fruit Commissioner.

We feel that the Government have been happy in their choice of Fruit Commissioner and we extend to Mr. Daniel Johnson our heartiest congratulations on his appointment and feel sure that his administration of our department will be productive of much good.

We wish to assure Mr. Johnson that he may always rely on our support and hearty co-operation in all measures he may undertake to improve the condition of the Fruit Growers in Canada.

In the death of Mr. Alex. McNeil we have lost a true friend not only to the Fruit Industry but also to the Co-operative Movement.

A true co-operator he extended a helping hand to all endeavoring to co-operate with their fellows.

The pioneers of the Co-operative Movement in the Valley owe much to the encouragement and practical assistance they received from Mr. McNeil and we shall never forget that he travelled all the way from Ottawa last year in a wretched state of health, and therefore at great inconvenience, because he was informed that an address from him would accomplish very much good and would be of material assistance to the Central Association.

Cargo Inspection Service—Loading Nova Scotia Apples at Halifax, N. S.

His visit to Nova Scotia was practically the last work he did and we mourn the loss of a friend tried and true.

In August next there will be a Dominion Conference of Fruit Growers at Niagara, to which you have been invited to send a delegate. It will be your duty to elect that delegate during this Convention.

There will be some very important matters discussed at the Conference, the agenda at present dealing with the Size of Packages, Fruit Marks Act, Potato Inspection, Transportation, Markets and Marketing.

We have had occasion to enter protests in connection with certain matters of transportation and three cases have been prepared and submitted to the Board of Railway Commissioners.

These deal with the following subjects: 1st, our right to a clean B L for all shipments; 2nd, our right to route our shipments with our own desire or the wish of our buyers; 3rd, in respect to agreements made under which sidings will be laid to warehouses.

These maters are of the utmost importance, but, on acount of the fact that they are sub judice, we cannot well go into details in this report.

With reference to our operations with potatoes we are glad to be able to state that in spite of the hazardous nature of this business we have been able to pay top prices throughout the season and finish up with a very fair margin.

We wish to call our members' attention to the fact that there has at no time throughout the season been a market that would justify a price higher than 40 cents per bushel, and that would have been the limit of price had it not been for the co-operative movement.

The potato business, however, is as we have stated before, a very hazardous one and will have to be handled in future on exactly the same lines as the apple business, that is, average prices will have to be returned and potatoes will have to be subjected to inspection before being accepted.

In addition to this, on account of the untrustworthiness of many of the buyers on the Cuban market, it will be essential that we have our own man there to represent our interests.

We are firmly of the opinion that this business cannot be successfully and safely conducted otherwise.

During the past season, on account of the smallness of the apple crop, practically nothing has been done in the direction of developing new markets beyond correspondence.

There are always risks of a loss with trial shipments to unknown markets, and as the crop was short and all the members loked for big prices, we had to abandon trials of certain new territory that our own judgment told us should be tested in readiness for a big crop.

One small shipment, however, was made to a certain market with exceedingly good returns and, as a result, arrangements have been made for regular shipments throughout the coming season.

With a large crop ahead of us to market, additional men will have to be engaged to work up certain known markets and develop new ones.

Your London office has again been of unqualified success under the able management of Mr. J. N. Chute.

Mr. Chute will later submit a report to this meeting dealing fully with the work of that office.

There is one notable achievement of your European representative that we wish to deal with and which with becoming modesty he barely mentions in his report.

We refer to the historical change that has taken place in Liverpool.

In last year's report Mr. Chute explained in detail the system under which fruit was handled in this important market; he explained the operations of the various organizations: the Importers' Association, the Brokers' Association and the Buyers' Association

Strong protests have been made for generations of apple shippers from all parts of the world, especially concerning the operations of the Buyers' Association who had the monopoly of the auction rooms and -who persistently refused to allow any but members to buy in the rooms.

Such protests, however, have always been in vain because there was no organization powerful enough to withhold supplies and thus compel recognition.

We are naturally unable to go into details as to how it has been accomplished but have the satisfaction to be able to report to you that today any firm of good financial standing and clean business record can enter the Auction Room and bid for your apples so that in future instead of a few men being able under certain conditions to fix the prices they will pay before the sale comences, your apples will be sold to the highest bidders drawn from all parts of the country, many of whom have previously had to pay the old Buyers' Association as high as 50 cents per barrel profit.

The fact that this extra competition means enhanced prices and prevents market rigging is of course apparent.

In addition to this none of your apples are now tolled by the Importers' Association, saving in that direction, approximately 20 cents on every barrel.

We feel that this is the most important achievement of The United Fruit Companies of N. S., Ltd., and feel sure that all co-operators will share our satisfaction in the knowledge that it is by their concerted action alone that this sweeping reform has been brought about. We will not refer further to the work of your European representative as Mr. Chute's report will deal fully with all details.

Your Halifax office has also accomplished good work at comparatively little cost.

The saving of 50 cents on each Bill of Lading made out, while contributing largely to its upkeep, is only an infinitesimal part of its unquestionable necessity.

Having a Halifax man, with a knowledge of the shipping business, stevedoring, etc., assures the proper placing of cars at the respective boats and the safer handling of the apples. This is very important owing to the large percentage of the loading being done at night after the officials of the steamship companies have gone home, leaving the loading entirely in the stevedore's charge, when frequently boxed and barrelled apples are unloaded

(Continued on page 722.)

Prices Realized by the United Fruit Companies, Limited, in 1913—1914.

	No. 1	No. 2	Co-op No. 3	No 3.
Gravensteins, general average	$3.26	$2.83	$1.50	$1.11
Gravensteins, complete average	3.36	2.81	1.98	1.12
Blenheims	2.52	2.01	1.50	1.02
Ontario	2.22	1.75	1.20	1.15
Kings	2.84	2.32	2.10	1.35
Ribstons	2.03	1.75	1.00	.70
Emperors, general average	2.60	2.10	1.53	1.14
Emperors, complete average	2.81	2.43	1.53	1.14
Wolf Rivers, general average	2.56	2.10	1.20	1.08
Wolf Rivers, complete average	2.67	2.10	1.20	1.16
Pewaukee	2.20	1.70	1.68	1.30
Bishop Pippins	3.15	2.83	2.02	1.25
Greenings,	3.00	2.42	1.65	1.31
Wealthy, general average	3.27	2.20	1.72	1.21
Wealthy, complete average	3.57	2.80	2.00	1.15
Wagners	3.05	2.42	1.72	1.25
Seeks	2.87	2.30	2.05	1.60
Talman Sweets	2.20	1.80	1.26	1.18
Pomme Gris	3.50	2.60	1.63	1.60
Red Starks	3.40	2.30	2.10	1.80
Starks	3.60	3.02	2.35	1.75
Mann	2.76	2.16	1.90	1.47
Vandevere	2.70	2.14	1.80	1.30
Golden Russets	4.60	3.80	3.10	2.55
Baldwins	3.51	2.80	2.20	1.60
Northern Spys	8.50	2.85	2.15	1.40
Red Russets	3.21	2.61	2.10	1.70
Fallawaters	3.10	2.54	2.00	1.60
Ganos	3.60	3.02	2.90	2.37
Ben Davis	3.51	2.83	2.43	1.73
Salomes	3.75	3.02	2.93	2.20
Coopers Market	4.00	3.50	3.30	2.60
Nonpareils	4.15	3.60	2.73	2.50

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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JULY 21, 1914.

DATES OF ISSUE.

August 4-25
September 15-29

THE COUNTY FAIR.

The season for the county fair is almost here. The annual recurrenee of exhibition interest and effort that comes to the farmer and stockman lives in his thought and plans almost from the closing of the fair to its opening the next season. This is just the spirit that should take possession of every progressive citizen in the county where the Agricultural Fair association is organized, and is to become what its highest purpose of educational influence designs it should be, a school of training, in the improvement of agricultural conditions in the community and on the farm.

In every county where there is an effort being made to produce crops and grow live stock there is an urgent demand for the stimulating influence and educational advantages that accompany the well organized and properly conducted county fair. It is the cultivation of a friendly spirit of rivalry among the people of the county that is needed most. To encourage a spirit in each to excel in what they produce on the farm, in the orchard, in the pasture, in the field and in the home.

It is the incentive that encourages competition that should be cultivated. This cannot be so effectively done by any other means than the county fair. The county fair brings all the people together in a happy, jolly frame of mind, and when a neighbor excels the whole community rejoices in his success and try to benefit by their own defeat. The lessons learned at the fair, through these friendly contests of display, are not taken as rebukes, but as good fellowship contests in a common interest. They are in a general way conducted fairly and honestly and are decisions that meet the endorsement of all concerned.

The fair deos not enlist the sympathy and support of persons. It should, but does not. Many will view it merely as a place of amusement, a place of diversion and pastime, a good place to go and see the neighbors and have a good social time. To this class of persons it is worth more than it costs. To others it is an open book; they read as they go from exhibit to exhibit. Each department opens up a new and interesting field of study for consideration and discussion. The educational influence is great, even with those who seem to be but slightly interested. The causal observer is benefited, some new idea is brought before his mind or immature ones developed into practical thought and plans for application.

The county fair is of greatest practical benefit to the exhibitor. When the farmer or stock grower enlists as an exhibitor at the county fair, the seeds of improvement have been sown and the results will be found on the farm by improved grains, improved stock, improved machinery and a general spirit of advancement in all lines of agriculture.

The social feature of the county fair is an important consideration with the family and should not be lost sight of in taking up the advantages of county fair organization. The boys and girls on the farm demand more recreation, amusement and social life than are usually accorded them. The two or three days fair may be made quite helpful as a social feature to the families in the various neighborhoods. The people of the farm are demanding more of the refining influences of social intercourse and will have it. The county fair may be made a great social event in any community. It has all the elements of a picnic or celebration and can be made to take such a position if desired. It is much easier to place the county fair upon a high educational, moral and social plane than to invite rowdyism and dissipation within its gates.

A CREED FOR THE COUNTRY BOY

I believe that the country which God made is more beautiful than the city which man made; that life out of doors and in touch with the earth is the natural life of man. I believe that work with nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do, but how you do it; that opportunity comes to the boy on the farm as often as to the boy in the city; that life is larger and freer and happier on the farm than in the town; that my success depends not upon my location, but my self; not upon my dreams, but upon what I actually do; not upon luck, but upon pluck. I believe in working when you work and playing when you play, and in giving a square deal in every act of life.

STUDYING TO IMPROVE HIGHWAYS.

The necessity of having good roads, as demanded not only by the rapidly increasing auto traffic in all countries, but by the increased production of crops that must be hauled to market, has become so important that the United States Department of Agriculture, in co-operation with State Highway Departments and local road authorities, has begun detailed road-making studies in 100 counties.

The purpose of this study is to discover the point of excellence and defects in existing local methods of building and maintaining roads which will aid the state authorities to put local road management on a systematized basis.

This investigation is prompted by the fact that there is at present very little knowledge as to the most effective and economical methods by which a county can develop its roads. At present the methods of financing local road improvements vary from calling on farmers for a certain number of days' labor in lieu of a road tax, or the use of county prisoners in road construction, to bond issues.

The department will study these systems with the view to determining what system or combination of systems work best in actual practice.

Neither is there any standard system of keeping accounts for road building and maintenance, and while some counties know to a penny the purpose for which money was spent, others have no definite check or reporting system. Convict labor in road construction work will be carefully studied.

In connection with the scientific study, the department's highway engineers will advise freely with local officials as to improvements, and thus give each county visited the advantage of direct co-operation, engineering supervision, and assistance.

The investigations, it is believed, will yield important economic data bearing especially on the benefit and burdens of road improvement and showing the extent to which financial outlay under given typical conditions is justifiable. These data, when obtained, will be published and thus made accessable to all county and state road officials.

We trust the data thus obtained will be utilized to to the full by road makers in the Maritime Provinces. Our roads surely needs systematic handling. A man in charge of road work should be a mechanically inclined man possessing enough brains to get the work done to the best advantage, not only from a financial point of view but also from the view point of take advantage of the material and local conditions available. A mechanically inclined man will do more and better work on a certain section of road with $25.00 than a botch could do with $50.00; yet how often political influences put the wrong man at the head of the job.

LET US GROW BUMPER CROPS.

The Editor of the MARITIME FARMER had a pleasant chat a few days ago with Prof. Trueman at Truro. The conversation lead to a discussion on farm crops during which Professor Trueman remarked that "it would be the part of wisdom for the farmers of the Maritime Provinces to concentrate their crop growing efforts mainly on Timothy, clover, oats and turnips rather than waste too much time and energy on crops that are inclined to be seriously affected by sudden changes in climatic conditions. Let us go after hay, oats and turnips until we can grow the largest crops in the world of these three. If one acre can be made to produce from two to three tons of hay there is no reason why adjoining acres could not be made to produce a like quantity if conditions are made the same."

Practical Care of the Dairy Bull

While the conditions on the average farm pertaining to the care of the bull are not so bad as they were ten years ago, still on many farms the bulls are so neglected that their care almost amounts to cruelty to animals. Usually the dirtiest and darkest corner of the barn is selected for the bull's stall, whereas the very opposite ought to be true, as he must be kept in the barn a large part of the time, and for this reason, particularly, needs sunshine light and cleanliness.

The first thing to be considered is the feed of the bull, and I tthink the one ideal ration for a bull is plenty of good clover hay or mixed clover and timothy. Then, in addition to this, I would give four to eight pounds a day of a grain ration consisting almost exclusively of bran and ground oats. If I were to add anything to this ration it would be one pound oil meal. Next to clover hay I would prefer alfalfa, and the feed of a bull is, perhaps, the only place where I would prefer clover to alfalfa.

While many breeders have been successful in feeding a bull some corn silage and while, as far as the bull's condition goes, it is a very desirable feed, my own personal experience, and that of many other breeders as well, is that it has a tendency to make the bull impotent, due probably to its excessive carbohydrates rather than to its succulence. On the farm where they are grown, this succulence can be supplied with roots to better advantage.

A bull should always be given all the clean water he can drink at least once a day.

Handling the Bull.

It is plain from conversation with most dairymen that they are afraid of a bull and this is one of the reasons why so many good pure-bred bulls are sacrificed when two or three years old. Right care and training will do much to combat this tendency. The bull should be halter broken as a calf and when about a year old he should have a two and one-half inch copper ring put in his nose. This is a very simple operation as the cartilage in the nose can be pierced without much pain to the bull, if gone about in a businesslike way and the bull's head is well secured. The operation can be completed in less than two minutes and without the bull becoming excited at all. He should not be handled by the ring until the nose is entirely healed up and is no longer sore.

Then the bull should be tied with a strong bull halter to one end of the manger, and by his ring to the opposite end of the manger, and the two tie places should be three or four feet apart. This will make it possible to approach him from either side without giving him an opportunity to catch you.

As a rope tied in his nose ring becomes wet and dirty and soon rots, a chain made of about three-sixtenths inch iron links, or something equaly as strong, with a large heavy snap to fasten to the ring, is the best way to fasten him on that side. The bull halter should be made of the best one and one-half inch leather well looped, and he should be tied with three-fourths or seven-eighths inch rope.

The Bull Stall.

I have made a cement manger for one of my bulls and I am very much pleased with it. It goes across the front of his stall which is about seven feet wide and is about eighteen inches high and eighten inches wide and the bottom about a foot off the floor. Then in the front of this concrete manger, which is about four inches thick, I have put two upright gas pipes, two inches in diameter, that are bedded in the cement about a foot from each end of the stable. The bull is tied to these two upright rods and there is nothing that he can tear out or that will rot or wear out. There is no place under the manger to harbor rats and vermin.

I atke it for granted that it will not need an argument in these days to convince anyone that the floor is cheaper and more sanitary if made of cement. It is hard to keep a bull stall reasonably clean because so many of them will paw their beding with thair front feet, but this trouble can be obviated to quite an extent by using cut straw or shavings for beding as they cannot paw this back as readily as the whole straw. They should be given beding enough to keep them thoreugh ly clan and they will greatly appreciate and do much better if given a daily brushing.

Whenever the bull is to be handled, it should always be with a good, long, strong staff in his ring, and one that is so constructed that it will not easily unsnap and leave the caretaker at the mercy of the bull. Some of the patent staffs now advertised, especially those having a handle at the end of the staff, and with different contrivances that screw on the ring rather than snap on, are very desirable. Treat the bull with kindness yet firmness, and so handle from calfhood up that he will always respect you as boss, and never have the opportunity to learn that you are really powerless to handle him, even with a staff, if he knows his strength. Pet him if you wish, but never let the thought leave your mind that he is watching for on opportunity to gore you, and this caution is especially needed if the animal is apparently tame as nearly all the accidents with bulls are those that are quiet and therefore trusted.

Trimming the Hoofs.

Where the bull stands in the stall, as he has to a large part of the time, his hoofs become too long and need trimming. This is often done with hammer and chisel but cannot be done satisfactorily in that way. Commence when the bull is young and throw him when you need to and cut off his hoof with a saw. The bull can be thrown with a hobble such as are used on horses, but an equally good or better way is to throw him with the so-called three-way hitch.

To do this a rope is tied around his horns with a knot in back midway between his horns. The rope is run back about a foot and then around his neck just forward of the shoulders and back through the rope at top, making a slip hitch, then back along his spine to a point just back of the front legs when the same sort of hitch is made around the body except in an opposite direction; then back along the spine again to a point just forward of the hips when another hitch is made around the body in the same direction as the one around the neck and in the opposite direction from the one around back of the shoulders. About 30 or 40 feet of one-half inch rope is snugly adjusted and the bull is in an open field or yard with plenty of room, let one man who is used to handling the bull hold him by the staff and two or three men pull on the rope when usually without much trouble, the bull will lie or fall down. Then place a wooden block, as large at least as four by four inches, under the hoof to be sawed off, and with a sharp strong saw, with medium sized teeth and plenty of set, saw the hoof off so that it will be in the shape it should be.

A little care is needed to find the exact place and not saw them close enough to bleed and for this reason it is best not to saw them too short the first time. Saw them off at the heel as well as at the toe of the hoof and this will have much to do in keeping the bull's legs sound and free from blemishes and therefore add to his long usefulness.

The Value of the Tread Power.

Nothing is more important and more often neglected than exercise. This is one of the things that there is one best way to do and that is in a tread power. Any cross bull or one hard to manage can be easily quieted and easily handled if given plenty of work in a tread power. I have had a tread in my barn in which the herd bull has been worked to run the separator, twice a day for twenty-one years with not over five dollars for repairs. I think it will be good for several more years. In these twenty-one years several bulls that I have purchased, and that have been more or less unruly, have been quieted and made easy to handle by this work. I am sure that a tead powe would be a good investment if you made no othe use of it except te execise a bull. The best powers have automatic governors and these can be adjusted so as to control the motion whether the machinery is attached or not.

One of the difficulties in teaching a bull to work in the power is that it will become wet and slippery sometimes and he will have hard work to walk. Try sprinkling on the power a quantity of dry, fine sand so that it will not get in the bearings at the end of the lags and this will fix it so that he can walk even if it is wet. When you start to work him he should first be tied with a rope around his neck, knotted at the throat and then run through the ring and tied in front in a way that will keep his head up somewhat but will still let him walk far enough back so that if he begins to slack up his hind feet will slip out of the power. Then the person in charge should keep hold of the end of the break beam and let him start very slow at first and he will be inclined to fall back and thus fall out of the power. You can stop the power just when his feet begin to go down over the end. Usually a little slap with the hand will make him step ahead and he will very soon learn what is wanted of him and will go faster and faster, but someone should stand behind him the first time or two that he works and see that he does not back up and fall out and hurt himself. He will very shortly learn to enjoy the work and will look forward to the chance to go into the power for his daily exercise. He will not only be quieter and more kind, but more potent, because of this enforced exercise. I realize that not every farmer who owns a bull will think that he can afford to own a power, though I think they could well afford to.

Exercise in the Yard.

Not having a power, the next best method of exercising is to build a strong yard of logs or planks in which the bull can be allowed to run loose. This should be at least two rods square. Even when provided with such a yard some bulls will take no exercise, simply standing around waiting for the door to open and let them back in their stall; or, if exercising at all it will be attempting to tear the fence to pieces. The best method for getting a bull to exercise under these conditions is to hang a block or stump either from an overhead wire stretched across the yard from posts outside or hung from a log. Most bulls will stand for a long while every day and fight this block.

I once saw a bull that had been used to such exercise for a long while, that as soon as he went out in the morning started in anew as if in a great frenzy and worked until he was actually in a sweat. While not as good as the tread power, still in most cases it will be very effective. This is easily within the reach of any farmer and every bull should have one or the other of these methods of exercise.

While the immediate object of such exercise is to make the bulls potent, kind and quiet, the mere fact that it does make them potent and kind means that more and more of the old bulls will be kept until they have proved their worth. It is indeed a very sad commentary on our business sense and foresight that nearly all of the best dairy bulls have been slaughtered before their worth was known.

The Value of the Mature Bull.

I could tell of hundreds of such instances, but to give one concrete example, the results up to date show that the Guernsey bull, Golden Noble II., was easily the best sire that they have had, at least in recent years, on the Island. Because he was cross and because few aged bulls are kept on the Island he was killed when about two and one-half years of age. He would be but nine years old if alive now and would be worth any price that they might ask for him as he was not only a good sire but a splendid individual.

Another point of great interest is the fact that figures certainly seem to prove that bulls at their maturity are better sires than when young. I have looked up the records of fourten of the most successful sires of the Guernsey breed that were kept until they were really mature buls, and the atached table of what I find will surely be of interest. I am unable to say just how old many of these bulls were when they died as I do not have this data at hand. Under each of these bulls I have given the records of their highest and next to the highest record daughter and placed opposite the age the bull was when he sired this daughter.

	Fat Lbs.	Age Yrs.
Glenwood Boy of Haddon 4605 A R.		
Dairymaid of Pinehurst 24656	916.67	10
Jedetta of Pinehurst, 17434	778.80	7
Governor of the Chene, 1297 P.S.		
Rouge III. of the Brickfield 28376	632.79	8
Rouge II. of the Brickfield, 28335	612.53	6
Masher's Sequel 11462		
Pride II. of the Marai's 28425	690.94	3
Newgrove Queen II.27175	639.33	3
Benjamin 1931		
Primrosedale 8606	576.75	6
Primrose Tricksey 7236	508.	4
Buckthorn 4781		
Pentheselia 17625	658.39	6
Belle of Helendale 25113	565.12	10
France's Masher II 7248		
France's Milkmaid 5341	592.77	4
Violet Robilliard 36805	577.35	3
Sheet Anchor 2934		
Grande Dame 13138	558.85	9
Sheet Anchor's Rutila 9170	477.83	4
Standard 4652		
Standard's Morning Glory 12801	714.01	3
Robiline II 16117	603.59	6
Strong Anchor 5849		
Clare of Poplar Grove II 14345	520.17	2
Olga of Ingleside 19838	515.67	4
Wolfgram 5640		
Matinee 16960	524.98	4
Companion 17634	4v1.	5
Treynore 3523		
Treynore's Lenorill 17223	505.01	7
Lilynore 15370	494.71	8
Island Champion 6263		
Firoham Beauty 18113	585.39	10
Masher's Justinee 16002	510.58	6

Of the 24 cows, not one was sired when the bull was younger than 2 yrs. One was sired at 2 years old, 3 at 3 years, 6 at 4 years old, 6 at 6 years old 2 at 7 years old, 2 at 8 years old, 1 at 9 years old, and 3 at 10 years old.

At least two of these bulls are still alive, Governor of the Chene and Masher's Sequel. There are several other

(Continued on page 746.)

Second Annual Report of United Fruit Companies of Nova Scotia, Ltd.

(Continued from page 719.)

from cars and left standing on the shed floors for hours at a temperature often below zzero.

During the shipment of the early fall fruit, when cars of apples lay on the track awaiting loading, one of the important duties is to have these cars opened up during the cool of the night thereby enabling the fruit to go on board the steamers at a much lower temperature. This of itself may mean several hundred dollars at the final sale of one shipment.

It will be remembered last season that the United Fruit Companies were furnishing over half the apples for a chartered boat, the representatives of the other interests had secretly arranged with the shunters to place their apples alongside of the steamer last in order to get the benefit of the hatch ventilation; this is the most important on outside chartered boats not equipped with the fan ventilation; besides this, the apples are the first unloaded at port of discharge, enabling an early sale when a catchy market might easily mean a few shillings per barrel higher.

It is needless to say your Halifax representative got on to this scheme and immediately reversed the order of affairs.

With the United Fruit Companies handling from one quarter to one half million barels of apples and potatoes, it would be impossible to estimate the value of having them carefully looked after at the port of loading. "A chain is no stronger than its weakest link."

Important as your apple inspector in the Valley, your representative in England, so also is your Halifax office if you want the United Fruit Companies of Nova Scotia to be of a uniform strength.

To show that everything is not plain sailing at Halifax the following letter which speaks for itself was sent from your office there to the Board of Trade

Halifax, N. S., Jan. 3, 1914.

"To Council of Board of Trade,
Halifax, N. S.

Gentlemen:—Through your honorable body we wish to try to eliminate certain conditions that have existed at Halifax for some time, i. e. the delay in getting cars of apples shunted down to tht steamers at deep water.

On New Years Day we had 33 cars of apples coming in for S. S. "Montrose," at Pier No. 3. The first special had 10 cars which arrived at Richmond at 6.40 p. m. Seven gangs or 119 men were ordered to start work on steamer at 7 o'clock. Through some carelessness these cars never got alongside the boat until 9 p. m. which meant paying 119 men for two hours each at .35 per hour to shiver and shake in the cold. While such unnecessary expense had to be paid by the Steamship Company, nevertheless, in the end, it is borne by the shippers of the goods and is always an important feature when discussing future freight rates on apples through the port of of Halifax.

Besides the expense there is the danger from frost during such delay. If the near zero temperature on New Years night had been accompanied by a gale of wind undoubtedly the apples would have got touched with frost.

Now, gentlemen, we respectfully ask you to take this question up and to straighten out a condition that is working against "the good old port of Halifax."

One of the most important ventures of the Company during the past season was the commencement of an official newspaper.

It was felt that this step was necessary as an educational factor, the majority of our membership having a very incomplete knowledge of the principles of co-operation.

It was also felt that some method should be employed to keep co-operators posted as to what was being done by their Central to give them some idea as to the markets and what their apples were doing.

The necesity was also realized of having some means of rebutting many of the false and vindictive reports, which were constantly being circulated, such reports unless promptly dealt with being liable to do considerable harm.

The Co-operative News also provided a valuable medium through which ideas for the improvement of conditions could be aired.

Its columns have also been used as a means of education to our members along horticultural lines and articles by some of our best authorities and specialists have been published from time to time.

The entire cost to the Central Association of this department has been $436.35 and we feel that, considering the amount of good that has been derived and the useful purpose it has served, that money has been well expended.

This department was placed under the control of your Secretary who has every week without a break written one or more articles for its columns.

At present the Co-operative News is run as a part of the Berwick Register which is found to be a most satisfactory arrangement owing to the proximity of the printing office and to the fact that this alows a certain amount of elasticity as to the amount of space used.

It is suggested in some quarters that a paper entirely our own issued fortnightly would be better.

Before our present contract expires the advisability of such an arangement will be considered.

We regret to have to report that we have received intimation from many quarters that, generally speaking, the books of subsidiary companies are not being kept in a manner that is at all satisfactory.

We are afraid that the members and directors of our subsidiary companies do not appreciate the magnitude of the business that is conducted in their offices and consequently make no provision to have competent bookkeepers.

We feel that this is a matter of vital importance as nothing is more apt to wreck the whole Co-operative Movement than the dissatisfaction and suspicion that is bound to arise in Companies where the accounts are not properly kept.

The Central Association supply all necessary books to subsidiary companies, covering records of detail of packing, which, being tabulated are comparatively simple but trouble seems to arise through lack of knowledge as to keeping accounts necessary to the proper compilation of profit and loss accounts and the financial statements of most companies are useless from the point of view of demonstrating the present financial standing of the company or showing clearly from whence revenues has been derived and how it has been expended.

It has been suggested that a Central Auditor should be employed whose business it would be to visit all Companies and instruct managers or bookkeepers and audit their work and thus ensure a uniform system in all Companies and Co-operators a guarantee that their accounts were being correctly kept.

The Provincial Government, in their new Co-operative Act recognize the importance of this and provide for such an official; other Co-operative concerns in Europe employ their Central auditors to audit the books of the share-holding Companies.

We would like to have this matter discussed by the Delegates present and to obtain their views.

The most serious problem that confronts us today is the necessity of more expeditious handling of fall fruit.

We would recommend that a committee be appointed to work with one or more of your officials with a view to submitting to this meeting before it disperses some definite proposal or recommendation to remedy this undoubted flaw in the system of the Central packing.

Your Directors, recognizing the importance of a uniform set of By-laws for all Companies, appointed a Committee to prepare a set that would be suitable.

The Committee which consisted of Messrs. A. S. Banks, F. W. Foster, A. E. MacMahon and your Secretary, found it necessary to make certain amendments to the Act of 1908 before any set of By-laws could be compiled that would be deemed satisfactory.

The amendments that we submitted to our legislators at Halifax and which passed both houses read as folows:—

"Be it enacted by the Governor, Council and Assembly as follows:—

1. Section 14, of Chapter 33 of the Act of 1908 is repealed and the following substituted therefor.

14. The shareholders at any annual meeting, or at a special general meeting called for the purpose, may from time to time make by-laws, rules and regulations not contrary to this Act, or the laws of the Province.

(a) To regulate any matter connected with the internal affairs of the Company.

(b) To regulate the sale, barter or disposition by the Company's Shareholders of fruit and farm produce grown by them.

(c) To provide for forfeiting the shares of any shareholder who violates any of such by-laws.

(d) To provide for the payment of pecuniary penalities by any shareholder who violates any such by-laws, which penalties shall be recoverable on summary conviction; and to alter, amend, or repeal the same. A copy of such by-laws, rules and regulations, certified under the seal of Company and the hand of its President or Secretary, shall be delivered to the registrar who shall register the same, and such by-laws, rules and regulations when so registered shall be in force unless and until altered, amended or repealed by the shareholders in accordance with this chapter, or disallowed by the Governor-in-Council.

An Amendment to a Bill entitled an Act to amend Chapter 33 Acts of 1908 entitled "An act to faciliate the Incorporation of Farmers' Fruit, Produce, and Warehouse Associations."

Add as Sections 2 and 3 and 4.

2. Paragraph (a) of the third clause of the form of Memorandum of Association in Schedule "A" to said Act is amended by adding thereto the following:

"Arsenate of lead, spraying materials, and all kinds of insecticides and fungicides, power spraying outfits, hand pumps and all other commodities or material incidental to the use of the same, nails, pumps, leads, paper and all material necessary for the purpose of packing fruit, and farm produce, flour, feeds and all milling produce, artificial fertilizers of all kinds, seeds, farming implements, tools and wagons and all manner of merchantdise.

3. Paragraph (b) of the third clause of the form of Memorandum of Association in Schedule 2 "A" to said Act is amended by inserting before the word "storehouses," in said paragraph the word "stores" and by inserting before the word "warehousemen" where it occurs therein the words "storekeepers and."

4. Sections 13 of said Chapter is amended by adding thereto the following sub section,

(2) Every Company under this Chapter subject to the conditions of and in addition to all other powers conferred by this Chapter shall, with the Shareholders at a general meeting called for the purpose, have power to borrow money for the purpose of carrying out the objects of its incorporation and to execute by mortgages of its real and personal property, to issue debentures secured by mortgage or otherwise to sign bills, notes, contract and other evidences of or securities for money borrowed or to be borowed by it for the purpose aforesaid and to pledge debentures as security for temporary loans."

The set of by-laws that were subsequently compiled will be submitted to your Directors for opproval in due course.

The Committee appointed last season to investigate as to the best method of utilizing our By-Products (the culls), have carried on some useful investigations.

A report from this committee will be submitted to you tomorrow.

We feel that in the purchasing of supplies your Central Association has again been successful and the whole Valley has saved considerably by its operations.

We need hardly call your attention once again to the great difference today in the prices of fertilizer, arsenate of lead and other commodities compared with the prices maintaining before the growers bought these commodities co-operatively.

We are aware that in certain details improvements could be affected and we trust your Board of Management for the ensuing season will see their way clear to adopt certain suggestions that will be passed on.

Your purchases for the past year have included:

575,000 pulp heads; 35,000 lbs. nails; 67,800 lbs. grass and clover seed; 22-745 lbs seeds various; 48,300 vetches 4,500 bus. seed oats; 2,060 bbls. flour; 19,649 bags of feed; 6,044 tons fertilizer; 104,000 lbs. arsenate of lead; 8,-900 rods wire fence; 1,800 bbls lime sulphur; 2,200 lbs. black leaf 40.

These supplies have cost in round figures $183,000.

Fire Insurance Risks, $450,000.

We had hoped to see more Companies take hold of the feed and flour business.

A considerable saving to members is to be effected by Co-operative handling of these essential products and in view of the large quantity of feed brought into the Valley and the large percentage of the growers who are co-operators a much greater quantity should be handled co-operatively.

It is hoped that arrangements that are now being negiotiated will result in this business being handled in a more expeditious manner than possible heretofore and with even greater profit to our membership but this can only be effected by every member doing

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GEORGE B. CUTTEN, D.D., Ph.D., President.

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W. L. ARCHIBALD, Ph.D.,
WOLFVILLE, - - NOVA SCOTIA.

his share and buying all his supplies through his company.

It should hardly be necessary for us to urge this when the great savings to be effected are so obvious and which become greater with every member who takes hold of Co-operative buying.

He would like to remind Co-operators that the United Fruit Companeis N. S. Ltd., is their own business and its administration and destiny is in their hands.

By judicious administration it can contiuue to protect and safeguard the interests of fruit growers and be a source of great profit to all.

The history of Co-operative Movements demonstrates the necessity of the careful selection of officials, who should be selected for ability and for trustworthiness alone.

Ninety per cent of the failures of co-operative movements are attributed to affairs being in the hands of incompetents; we in Nova Scotia should benefit by the experience of others and obtain the very best men available; we cannot afford to employ any less.

In conclusion we wish to state that never has the Co-operative spirit been stronger, never have the principles of Co-operation been better understood than today, all of which we attribute to the fact that during the year of which this marks the close the system of Co-operative Centralization for which this company stands has been amply justified.

We wish to place on record our appreciation of the valuable asistance we have received from the management of the subsidiary Companies throughout the season.

This assistance so readily given and the evident desire of all to co-operate has alone made it possible for us to bring our various operations to a successful conclusion.

We leave this record of our stewardship to your judgment and consideration, urging that you press steadily forward with the great work that you have started take advantage of every opportunity that Co-operation provides perfect your organization and the great industry in which you are all so vitally interested will become one of the most profitable in the Dominion.

John Donaldson, President,
A. E MacMahon,
F. W. Bishop,
F. H. Johnson,
B. W. White,
Board of Management.
S. B. Chute, General Manager
A. E. Adams, Secretary.

Controlling the Budmoth.

The one insect which at the present time is causing more loss to the apple growers of the Annapolis Valley than any other is the budmoth. Unlike most of our insect pests the number of budmoths varies very little from year to year. The three species, one very common and two comparatively scarce, have practically the same life histories and can be best controlled by the same sprays.

The experiments recently completed in the orchard of Mr. R. S. Eaton, of Kentville, give us some startling data on budmoth control. The spray at one time recommended for budmoth, to be applied when the buds are opening and the budmoths are eating their way into the bud, is apparently worthless in budmoth control. In one plot receiving this spray only, the benefit as compared with the average of the checks was 4.26 per cent in another plot receiving the same spray only we found more budmoths than in the average of the checks and only 5.9 per cent less than the nearest check. While in another where the early spray was applied in combination with other sprays the benefit was 9 per cent while in another the reduction in numbers was 16.5 per cent. The reason for the failure of this spray to act is the long period, from ten to twelve days, during which the budmoths emerge from their winter quarters, the rapid opening of the bud at this period rendering the spray worthless in one or two days by opening up new surface.

The spray applied two weeks after the blossoms fall is more useful than the spray applied when the buds are swelling but is of very little use in controlling budmoth.

The sprays which control the bud moth are the one applied from one to 5 days before the blossoms open and the one applied immediately after the blossoms fall controlling (applied by a hand sprayer,) 62.89 per cent of the budmoths. These two sprays are of about equal value. The two applied are slightly more than twice as valuable as either if but one is applied. The reason that these sprays are so efficient is is; the budmoth while feeding under cover is occasionally tying down new leaves to feed upon and while one budmoth may tie down a new leaf the day after the spray is applied his next neighbor may not need a new leaf for a week; so the reason for using the most adhesive poison obtainable is obvious.

The best time to spray for budmoth is as we see during and after the damage for the curent season. The main benefit is not derived until the following season.

It was noticed that in most cases in buds infected with budmoth the blossom clusters opened and usually two or three good blossoms appeared; in order therefore, to get the actual damage counts were made in the blossoms after the set took place in 1913.

In 1000 blossom clusters not infected with budmoth 1205 apples were set. In 1000 blosom clusters infected with budmoth 305 apples were set. The set in the infested clusters therefore was reduced 75 percent. The ordinary infestation in unsprayed orchards will run over 40 percent. of blossom clusters infested often going to 60 and 70 percent in varieties such as Ribston, Nonpareils and other rough-barked trees which offer good crevices for winter hibernation. Taking a low estimate of 40 per cent infestation in unsprayed orchards we see that the set of fruit in these orchards is reduced by 30 per cent. on account of budmoth alone. Our experiments show that with a hand sprayer we can eliminate 62.89 per cent. of this loss, and undoubtedly more can be done by using a power outfit. We are therefore safe in saying that two-thirds of this 30 per cent. decrease in set can be saved by two sprays, one from one to five days before the blossoms open and one immediately after they fall.

Now to get down to figures, by these two sprays we can reduce budmoth injury by two-thirds or in orchards previously unsprayed we can in two years cause 100 apples to set where 80 set before or increase our set by 25 per cent.. Estimating therefore that apples are worth $1.00 per barrel on the trees, an orchardist may spend $25.00 for every 100 barels of apples that his orchard will average in applying two sprays, one before the blossoms open, and one after they fall, and be certain that he will get his money back the next year in increased set of fruit.

Twenty-five dollars per 100 barrels for two applications is of course away high. Most orchards in the Valley do not ordinarily cost more than $5.00 per application per 100 barels of fruit average However, the worst orchards, that is those containing old scraggy trees, give the greatest benefit when sprayed as they are usually very badly infested when not sprayed. Any orchardist who is at all in doubt as to whether spraying pays may be certain that the benefit derived from controling budmoth by his two sprays, one before and one after the blossoms, will more than pay for the entire cost of applying four sprays to his orchard. I am not decrying the other sprays in any way; they are as useful as the two here spoken of for other purposes, but we are in a position to state with certainty that we can control budmoth to such an extent in the Annapolis Valey that the benefits derived from controlling it alone will more than pay for the entire cost of spraying.

I need hardly say that it is above all necesary to use the most adhesive poison obtainable such as paste lead arsenate.—G. E. Saunders in Berwick Register.

New Science Building at the Agricultural College, Truro, N. S.

The contract has been let for the new Science Building at the Agricultural College, Truro, Nova Scotia. This building is to be 120 feet by 50 feet, and three stories in height. The first story is to be devoted to Chemistry; the second to Entomology and Plant Pathology and the third to Domestic Science. Hitherto classes in these subjects have for the most part been conducted in the Science Building at the Normal College, but the large increase of attendance at both the Agricultural College and the at the Normal College has made it imperative that a new building be erected on the Agricultural College grounds. In architecture and finish this building will be superior to any of the other buildings which have up to the present time been constructed at Truro, and will, therefore, prove a very substantial addition to the excellent plant on the Agricultural College premises.

The funds for this building have been secured by capitalization of part of the Dominion grant for the air of Agriculture and it augurs well for the future of the Agricultural College that the Federal and Local Governments should co-operate in the development of this important institution, which has for its aim the improvement of agriculture in Maritime Canada

When this building is completed the facilities for agricultural education and investigation at the Agricultural Colege at Truro will be largely increased. Up to the present time the officers of the College have not had much opportunity for carying on original investigation work, but the new laboratories and equipment will provide facilities for this. A begining has already been made in the somewhat cramped quarters, but there are great problems to be investigated before full understanding of the agricultural conditions in the Maritime Provinces is arrived at.

As a small indication of what has already been accomplished and what is prospected, the following will prove of interest.

Fundamental work is being done in the Chemical Department where a soil survey of Nova Scotia is being undertaken. In the Annual Report of 1913, the complete analysis of some 86 samples of soils taken in various parts of Nova Scotia is presented, and judging by the facts already arrived at, it would seem that the chemist, Mr. L. C. Harlow, B. Sc. A., will be in a position to give some extremely valuable information to the farmers in those parts of Nova Scotia from which the soils were selected. Perhaps the most striking fact which has so far come out from these analyses is that a large proportion of the soils analysed are slightly acid in character and are considerably below the standard of lime content. A good productive soil should contain from 5 p. c. to over 1 p. c. of lime. The average of the uplands and intervale soils so far analyzed by Mr. Harlow indicates a little less than 3 p. c. of lime, which goes to indicate that lime may prove of great value in the improvement on the soils of Nova Scotia.

In comparison with the above figur es, the average of sixteen marsh soils analysed indicates 75 p. c. of lime and these marsh soils are all productive. In view of the above facts, much interest is attached to the experimental work which is now being carried on in many parts of Nova Scotia, in the application of ground limestone of which there are many deposits in the Province.

However, it is not our intention in this article to fully discuss the question, but merely mention the line of investigation that has been taken up and which will be rapidly rushed forward when the new building is completed.

Equally important lines of investigation work are being taken up in Entomology and Plant Pathology and in connection with the various problems of plants, soils, insects, etc., etc., and as a result we think that the Nova Scotia Agricultural College is going to contribute more and more to the building up of agriculture in the Maritime Provinces.

It is extremely satisfactory to observe the rapid increase in attendance at this institution, which has accomplished so much for agriculture in the East. It is less than ten years since the atendance in the regular course, was only 17. Now it is well over the century mark. During the same period, the atendance at Short Courses has increased from 68 to over 350.

1914 promises to be the most succesful year in the history of the institution and we, therefore, urge all the young men of the Maritime Provinces to write to Principal Cumming at Truro and secure a calendar which gives full information in regard to the courses which will be conducted during the ensuing year.

Regularity

of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

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The Awakening of Joe Beaton

THE kindly beams of the ever faithful sun was shedding its warm rays over all nature as it had done for thousands of years in the past, and on this beautiful spring morning in the month of June it had not failed to be punctual to the dot of peping through the dingy window of Joe Beaton's small printing office, where Joe almost as punctual as the sun, sat at his desk writing editorials for the paper.

He had been editor, proprietor, office boy and soul of the 'Nova Scotia News' for over twenty years. He had worked hard and had given his life to bring his paper up to a place of prosperity. It had never been in a successful condition, and it was not in its present condition that he took pleasure.

In his rare moments or reverie, his mind would wander back to the night when he counted out the purchase money and closed the door upon the former broken spirited owner of the paper.

He locked the door, he remembered, and in the close, rank, inky smell of the composing rom, lighted only by a solitary feeble kerosene lamp, how he stealthily, like a shame-faced lover, crept about the room caresingly running his hand over the dusty forms, and after a general survey of the room sat down at a pine table, which served as the editorial desk, and wrote his first leader.

Twenty years before Joe Beaton had walked into the village a penniless, ragged, silent boy, of fourten.

From some source he had inherited a keen desire of bettering his condition.

Boys of his age are apt to think it an easy thing to go out in the world and earn their own living. But they often find themselves in difficulty, possibly in want.

To be sure, his scheme was not as romantic as that of some boy's, who leave good homes armed with revolvers to hunt for Indians. If a real Indian, in his war paint should suddenly make his appearance, he would put to flight a hundred of such boy hunters.

Joe Beaton was not as well fitted as the great majority of boys to make his way in the world. He lacked the advantages of an education. But he was full of confidence, as most boys are, and posessed the determination to raise in the world, which is often lacking in boys blessed with good advantages, and who often throw them away.

A boy being thrown upon his own resources is not only required to have, for his success in life, thrift, application and industry, but good health, and a firm trust in the guiding hand of our Heavenly Father, which is the only safe guide for a successful life.

Joe Beaton had managed, often by some unboyish effort, to get a living, and a scant education. His craving mind gleaned from every printed word that came his way.

At eighteen he was a stable boy, reading Herbert Spencer by the light of a smoky lantern, and admiring his secret ambition to own a newspaper. At thirty, by careful management he had managed to save enough money to buy the miserable equipment that made up the 'Nova Scotia News' printing outfit, which was being hastened to an early grave by lack of support, and the persecution of a local rival.

As Joe Beaton sat at his desk writing editorials, this fine spring morning a woman partly opened the door and bent her slender form in the half open doorway.

"Joe," she said, and at the sound of her voice Joe rose and turned toward his wife. In her face there was such a look of strain and fright that he said hastily, "What is it, Mary ?"

She was almost breathless, as if she had been running, and the warm sun of the spriug morning had brought color and prespiration to her usual colorous face. Her eyes searched the room despairingly. "Have you seen Johnnie?" she whispered.

Joe Beaton shook his head irritibly and turned to his desk.

Mrs. Beaton sank upon a chair as if hope and strength had left her.

"Oh, Joe," she cried, "I don't know what Johnnie has done, but I am afraid"— "Afraid of what?" Beaton asked. His voice was harsh but a look of dread crept into his eyes.

"Is it unusual to have him spend the day the dear knows where?"

"No, but—Mrs. Foster told me that Jones store was broken into last night and a lot of things taken. She said some boys were suspected, and I fear Johnnie may be in it too." And Mrs. Beaton buried her face in her shawl to conceal her grief, and her husband gnawed at his moustache while his face set in lines of bitterness.

"Well," he said at last, "There is no use of your crying after all; this latest affair is not so unexpected is it?"

The woman winced at the tone, but like a flash she remembered what little interest he had taken in his boy. Deep in her soul she felt her husband was to blame. The tears dried in her burning eyes. Raising her head with reproach burning in her expression, said:

"Johnnie has always been a good boy to me. I offered him what money I had to get a pair of shoes and he wouldn't take it. When he had work in the factory last summer he gave me money for a new dress. And when I was ill he sold his rabbits to get me a bottle of wine. He's got a good heart, and he'd be a good boy today if you'd take a little interest in him. Have you ever taken any notice of him Joe, but speak discourageingly to him if his work didn't please you? Did you ever pay him when he set type in the office here all Christmas vacation? He was trying to be a good boy then, I knew it—but what ever sit down of an evening and help help did you give him? Did you ever sit down of an evening and help him with his lessons, or pay any attention to his schooling, except to sneer at him when he didn't pass? You know how he loves dogs and horses. If you would let him have a pet of some kind instead of punishing him when he hung around the livery stable, he'd be a better boy to-day."

Her shaking hand caught a faint sob as she uttered the last words. The restraint of years had given away to something fierce and primitive, which the Creator has put in the heart of every mother had conquered the mild commonplace wife. Stinging truths, which all her maried life she had only dully realized, rushed into words, shaking her with their new intensity. She lost the usual courticies for the man before her. If he sneered she did not hear him, her eyes swam in a hot mist of tears.

"You've buried yourself in the paper," she cried.

"You've spent your money on it. You'd eat and sleep here if you could. You care more for one of those machines here than the welfare of your son. Your heart's got room only for the paper. Your a selfish and hard man, Joe Beaton, and your son's a thief because you have neglected him and allowed him to grow up without your kind sympathy and advice I—I— Oh, Johnie, my Johnnie!" she gasped, as she hastily rose and closed the door behind her, before the man stirred.

The silence caused by the departure of his wife fell upon Joe Beaton like a pall. He pushed the paper away from him, which lay before him on the desk, and sat unconscious of the hours as they passed, staring into the shadows of the dingy room, while the memory of his boyhood days stirred within him so strongly that the hours slipped by unheeded. He was aroused at last by the clock striking eleven, he doubted the accuracy of the hour the faithful clock had tolled out. Puling out his watch he glanced at it, reached for his hat, and went out.

News of the robbery of Jones' store began to circulate, and afforded a new topic of conversation among the village folk. Some of the stolen articles had been found, and the arrest of the boyish thieves immediately followed. Most of them were boys of questionable character and their connection with the affair caused little surprise. But when the name of Johnnie Beaton came out the town was shocked as he had always been looked upon as a boy of good habits.

Joe Beaton soon returned. Seating himself at his desk, he pulled a writing tablet towards him. What he felt in the heart of him, people never knew.

In a quarter of a column he gave the events of local interest, an account of the robbery and the names of every boy connected with it, following with a half column of advice to fathers

Perhaps not a person who read it, would feel its under-current of misery, but it was there, running through each line, a bitter tide of self-accusation, the writing of it had been like salt in a wound.

How true it is, as George Eliot says "Conscience is harder than our enemies." He drew the copy sheets toward him and took up his pencil, but in a moment he cast it aside and fell to staring into the dark corners again.

He was haunted and hindered in his work by a dim sense of melancholy, the cause of which eluded him.

He had no fear of the opinion of any man, and yet this escapade of his son, had stirred undreamed of depths of unhappiness Certain of his wife's words mingled with obscure fragments of thoughts and memories possessed his brain. The fire of his defiance died; something stirred within him, which was like the blind groping of feelings and instincts long repressed. His thoughts sped back to the day his son was born, to the pride he had felt and then forgotten in the stress of his fight for place.

Many other things he had sacrificed and when life was two-thirds gone, he was just beginning to count the cost of what he had thrown away.

His thoughts came back to the present, he saw where he had

His thoughts came back to the present, he saw where he had made a mis take in the past, and resolved to do differently in the future. Carying out this decision he went bail for his son, and pleaded his youth.

That evening he asked his son to come over to the office as he wished to see him there.

A sense of inability fell upon Joe Beaton's heart.

In one of those moments of clear vision, that comes once or twice in a lifetime, he realized that his own son looked upon him with alien eyes. Whose was the fault ?

The truth plucked at his heart and he knew the answer.

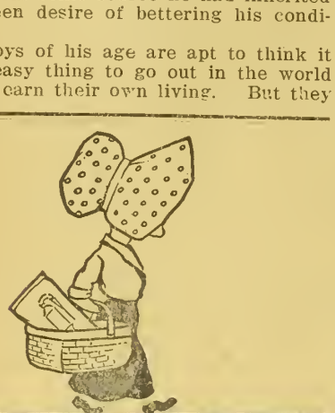
The seconds rushed into hour—long minutes, while he searched for the words he knew he must speak then or lose forever, what had become suddenly precious above everything.

He had sunk so deep in his unaccustomed thoughts that he did not hear the door open, and he started, when his son entered. He looked at the boy's face, there was no help in it His eyes dropped to the ragged condition of the boy's shoes. As the man looked at them, a recollection, swift and cutting as a kuife within him. He had once seen his own feet clad like that once, and they were wet with the dew and muddy with the soil of the plowed field.

A painful crimson flushed over his face, but with that moment the way cleared before him.

"Johnnie," he said, and the boy's eyes darted toward his father's face, with a look of fear and doubt.

Nothing in Joe Beaton's life had hurt him like that look, but he did not draw back.



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"Johnnie," he said again, "will you come over here, I want to tell you something."

The boy stumbled silently into the chair opposite his father's and Joe Beaton began to speak, simply, as if thinking aloud but with his eyes fixed on the boy's face.

"I'm going to tell you something, Johnnie," he said. "and I've never told anyone else before, so that you will understand."

"I took something myself once that didn't belong to me, and I want to tell you about it."

The boy's eyes gew large with wonder and perplexity, and the sullen look died out of his face as he listened.

"I was born on a farm, John, a miserable, hilly farm, all stones and stumps. Before I was ten, I began to hate the farm and its work, and the lonesome life. I had to work harder than you have ever done. Though I was younger than you are now, and we were so poor that I had to stay out of school a good deal because I hadn't decent clothes to wear, but all of that came to an end when I was fourteen.

My father had been to town one day and after supper he sat down by the table to count out the money he had got for a load of vegetables he had taken with him. I stood watching him for a time and finally I said, father, how much of that are you going to give me? I can see now, how my father stared at me, and can hear, just how he said: 'How much do you pay me for your keep?"

A sense of indignation and injustic rose within me. I couldn't stand any more. You see I never had any wages and I had worked almost as hard as a man, I forgot everything except the sense of my being wronged. Without a word I left the room.

The next day, my father sent me to market with a load. After disposing of the vegetables, I returned the horses to their stables and made out into the road. I never stopped until I got six miles away to a railway station. I never saw my father again.

The next morning I took a freight train to this place, it was only a very small village then, and it wasn't easy for a boy to get his living. I got my breakfast for cutting up some wood. I got my supper by cleaning out a furnace. In winter I shovelled snow, in summer I mowed lawns. I sold papers, I drove delivery teams, I broke stones on the road. I was ragged most of the time, and I don't think I had much to eat, but I never took another cent that didn't belong to me, John, and I sent the money back to my father, that I took from him that night."

A swift flust swept over the face of the boy. He had listened like one fascinated against his will as his father talked, but the last sentence threw him back upon himself again, and a look of shame took the place of the interest he had shown. His father noted the expression and with a pang of regret he realized that he must go on.

"I was almost thirty before I could save enough money to buy this paper, and when I got it, I had to fight so hard to keep it there was no time for anything else. When you were born I supose I was glad, but there wasn't time to think even about you. The old enemies of the paper followed it to me, and plenty would have been glad to see it go to the wall.

I used to think sometimes if I could hold on until you got old enough, I should have someone to help me. But someway, I—I— Well, perhaps I'm not an easy man to work for.

Your mother says I'm a selfish man, and wrapped up in the paper I know she is right. I haven't had much time to help either of you. Money is always scarce it seems and perhaps in the fight for it, I've forgotten what made me run from home when I was a boy like you."

Joe Beaton relaxed a little from the strain the foregoing had given every nerve, and siting back in his chair he said:

"Now, Johnnie, I'll tell you, Lawson leaves Saturday. "I'll give you the same wages I've been paying him, if you'll take his place and do his work. I hope you will, John. And I think, if we go at it in earnest, we will show the country a paper that no one can beat."

Johnnie was moved at what his father had said, he had never talked so kindly to him before, he looked at the floor with trembling lips, he felt encouraged that his father had taken such unusual interest in him, he also felt ashamed and overwhelmed with a sense of his own wickedness, but in his heart there sprang up a new adoration, he could have gone down on his knees, but instead, being a noble boy, he brushed away the tears that swelled his eyes, saying:

"I like the work and I guess I can do it, I'll try and do my best."

It was long past the usual closing time, and Mr. Beaton rose to prepare for home, and as they walked home together that memorable night each felt that a new life had dawned upon them.

Joe Beaton saw as never before, the mistake he had made, and resolved to lead a new life.

Johnnie began work in his father's printing office the next morning, so as to acquaint himsef more fully with the routine of the work before him, before Sam Lawson, the foreman took his departure.

Johnnie entered into the work with a will and being a fairly good type setter, got along splendidly.

Soon a marked improvement began to be noticeable in the paper. The circulation began to increase. Extra work came in for the job printing department and the staff had to be increased to keep pace with the growing trade. And as the Editor often confesed, all this success and prosperity was due to "The Awakening of Joe Beaton."—R. E. Caldwell, Annapolis Co., N. S.

The Cow is Not Always at Fault.

When the returns from the dairy business are not satisfactory it is not at all unusual for the owner to make the complaint that his cows are poor and for his friends to advise him to obtain better ones. The explanation is plausible and the remedy is easy to suggest, but it often occurs that the explanation is not correct and the remedy is impracticable. It is much easier to blame the cows than it is to carefuly investigate the cause of their short comings and it is pleasant to do this than it is to admit that the owner may be more deserving of blame than are his cows. But easy and pleasant ways are not always the right ways. They sometimes lead those who follow them far astray

Comparatively few cows have ever reached the limit of their possible productiveness. The great majority have an actual and a potential accomplishment, what they did and what they have the capacity for doing. The quantity of milk which they yield is below, and in many cases it is far below what it might and ought to be. If the animals are judged by their present productiveness they must be ranked as poor cows. But if possible yield is made the basis of judgment I am perfectly satisfied that many of them will go into a higher class.

It is perfectly natural that the owner of a cow that never yields more than a very moderate quantity of milk should be dissatisfied with her. But in a great many probably in the majority of cases, much can be said in behalf of the cow. She has never been given any special care and attention. She has never been placed under conditions which would enable her capacity for milk production to be determined. No intelligent and consistent efforts to find whether she can do better than she has done has ever been made. It is true that she may not be a valuable milk producer, but it is not fair to the owners to condemn her as inferior until she has had a fair and adequate test. She should not be put in the class of poor cows until well directed efforts for her improvements have been made.

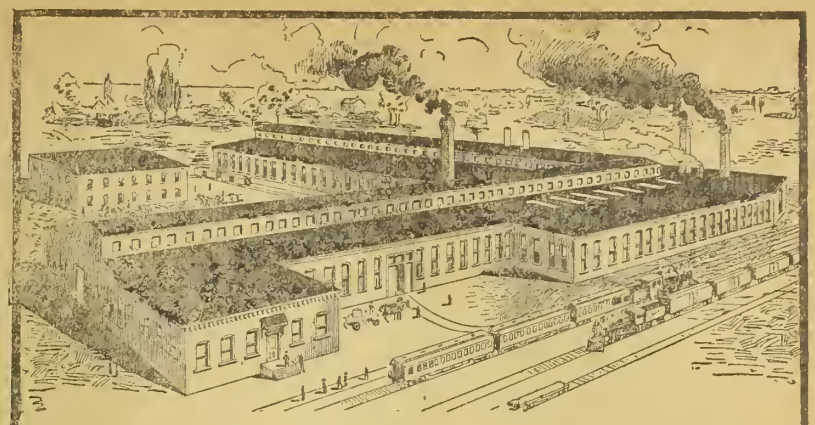
Whenever conditions are at fault, they should be corrected and the cow should then be given a fair period of probation. If this is done it is not at all improbable that a good part of the blame for the short coming of which he has complained should be placed on the owner rather than on the cow.

There are various ways in which conditions may fall below a proper standard. There are farms on which the cows should be better protected against sudden changes of temperature from extremes of heat and cold, and from exposure to storms. During warm weather if there are no trees in the pasture some kind of artificial shade should be provided so that the cows can get away from the direct rays of the hot sun during the middle of the day. Hot weather has a more or less depressing influence on stock of all kinds and when cows must stand it without protection and be tormented by flies there is always a decrease in the milk yield. In the winter time good warm well ventilated barns are of course very esential. All causes of discomfort should be removed as fully as posible. It is useless to expect that a cow will do her best if she is not satisfied and contented.

On many farms the principal efforts for improving the conditions and thus increasing the productiveness of the cows should be directed toward the feeding. Changes along this line may be made with great advantage. They may involve the giving of larger quantities of food or the use of more expensive materials in the ration. Or they may require the use of the same materials in different proportions or some change of food stuffs which will not increase the cost of keeping.

On some farms where the convenience of the owners is regarded as of greater importance than the welfare of the cows greater regularity in the times of feeding would be of marked benefit. The water supply, too, is sometimes at fault. Where this is deficient or the quality of the water is poor the yield of milk will be only moderate and the character of what is produced will probably be bad. In cases like these all adverse criticism should be withheld from the cows and be bestowed upon the owners. The only profitable course to take where the dairy does not yield a fair profit, is to find out whether the cows are inherently and consequently hopelessly inferior or whether their low rate of production is due to the conditions under which they are kept. If the conditions are not favorable the first thing to do is to improve them. Then if the cows seem to be well and are contented with their surroundings but still fail to be productive, careful experiments in changing their food should be made. The present rations may keep them in good health, yet may not enable them to produce large quantities of milk. Or the kind of feed may be sufficient to maintain the cow and leave a surplus from which milk can be made

(Continued on page 746.)



Used on Canada's Greatest Industrial Plants

It's worth noting that the largest firms in Canada specify Brantford Roofing for their new plants. The great works of The R. McDougall Co., of Galt, Ont., shown above, were roofed entirely with Brantford Roofing.

It was chosen for its well-known enduring qualities and because it represented to the shrewd business men at the head of The R. McDougall Company, the best roof-investment money could procure. They sought a roof that would be proof against heat, frost, wet, fire, acids and destructive gases such as are given out by the locomotives that pass the plant many times daily.

Brantford Roofing

met all these requirements, and at the same time had a reputation for durability unknown to inferior roofing.

When men who want the best buy Brantford Roofing—when it costs no more than ordinary roofing—when it is the safe roofing for you to invest in for the purpose of protecting your possessions, isn't it worth your while to know all you can about it. Write to-day for our big FREE book, containing samples and money-saving facts for your information.

Our new patented appliance for laying Brantford Roofing is worth investigating. Positively prevents buckling or expansion.

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Liquid Manures for Farm Crops.

The fertilizing values of liquid manures is appreciated to a much greatextent nowadays than it used to be. Farmers and gardeners are usualy quick to recognize its importance and all kinds of appliances have been devised to conserve it and distribute it for the benefit of crops. Plenty of natural liquid manure is produced on the average farm. The cattle, horses, sheep and pigs all add to the supply, Generally, however, this valuable and very rich fertilizing material has been and is now in some cases, allowed to drain away into the ditches around the yard. Very feeble attempts have been made to preserve it undiluted by rain or exposure to the elements. Latterly, however, I have noticed that many progressive farmers have sunk tanks in the ground or have dug clay-lined pits for the purpose of storing this liquid manure. Pumps have been put in, and every facility has been given to the careful storage and economical distribution of this valuable product.

The liquid manure produced in the farmyard should be carefully collected and stored not only because it is a valuable fertilizing material, but also because of sanitary reasons. I have seen many dung yards where the floor or ground was quite porous. so that all the liquid drainings from the byres and stables were quickly lost. To remedy this, one should remake the floor with a well-beaten layer of clayy, and, as a further safeguard, a good covering of rubble should be placed on top. A cement or concrete floor is naturally expensive. Do not forget that the floor should always have a decided slope toward the centre of the yard, and away from the byre itself. If a tank or pipt is to be put in for the purpose of storing liquid manure it should always be situated at the back of the cowhouses or stables, and at least seven or eight yards away from them. Flagged drains must be laid between the pit and the buildings, and the former should of course be large enough to accomodate the liquid drainings from all of the live stock on the farm.

What is liquid manure? As ordinarily understood, it consists solely of the liquid excrement voided by cattle and horses and other stock. Commonly it is known as urine and it has been demonstrated that the urine of a cow is richer and more valuable as plant food weight for weight, than the soil excreta or dung which is mixed with the straw and litter or bedding materials that is used in the cowsheds. The cows produce "liquid manure" which, on the average contains 0.8 per cent of nitrogen, 0.7 per cent. of phosphoric acid, and 0.6 pepr cent. of potash. The urine of the horse and sheep is somewhat richer in nitrogen and about the same in potash while that of the pig is richer in phosphoric acid but poorer in nitrogen and potash. The nitrogen in liquid manure is very active and most easily available. It is however, very easily lost owing to a process of fermentation, which causes the urea of the liquid to change into ammonium carbonate, which is a volatile substance. If gypsum or superphosphate is sprinkled in the urine, however, this loss of nitrogen will not take place so easily.

The liquid excrement from any animal consists chiefly of that part of the food which has been digested, but which has not been retained in the body. Nitrogenous foods are a most important part of the diet of cows and horses. Generally these nitrogenous constituents are grouped under the term "albuminoids," and the organic nitrogen which is at once the most costly and the most important manurial ingredient in these nitrogenous foods is passed from the animal's body to a greater extent in the urine than in the solid excrement.

The value of a liquid manure as a fertilizing medium can be very easily appreciated by anyone who has taken the trouble to study the root growth or habits of plants. It will have been demonstrated that the extremities of the roots always strike downwards into the subsoil below in search of the three essential forms of plant food. nitrogen, phosphoric acid and potash. These different constituents are usually present in the soil in a liquid form, and therefore it is clear that liquid manure of any kind must be a very desirable form of nourishment for growing plants, particularly in soils that are comparatively poor in nitrogen— the most costly of all the three "essentials." The great drawback is that there is so very little phosphoric acid in liquid manure. And besides this, there is admittedly a serious and very rapid loss of nitrogen as soon as liquid manure is exposed to the air.

In addition to the ordinary drainings from cowsheds and stables, liquid manure can easily be made by steeping certain fertilizing agents such as nitrate of soda, sulpphate of soda or guano in water. No more than half a pound of either of these agents should be used with twelve gallons of water. Another very valuable form of liquid manure is that known as soot water. It may be made by steeping a bag containing about six quarts of soot in a hogshead of rain water.

Perhaps the most powerful and concentrated form of liquid manure is that known as sewage liquid, but gardeners and farmers had better give this a wide berth unless there is some convenience for properly diluting it before use. In any case, always apply liquid manure after a shower or rain, otherwise it is apt to scorch all the plants if the soil is dry and parched. Also, never use at mid-day, but only in the morning and evening. For fruit trees, apply liquid manure in weak dressings, only after the fruit is properly set, and not before. This manure will usually prove of considerable assistance in helping the fruit to swell. Peaches or nectarines seem to derive more benefit from dressings of liquid manures than any other fruit trees. Soot water is good for all garden crops, especially green crops.

Humane Treatment in Summer.

It must be remembered that the summer is always a season of more or less discomfort for the farm stock as well as for individuals in the household.

Everything that is under your care, the horses, the cows, the hogs, chickens—in fact, al forms of live stock that are kept upon the farm—deserve your attentoin and protection against the discomforts just so far as it is possible for you to give it.

The greatest profit is derived only when the stock is kept where there is the least discomfort and annoyance—the least friction to be overcome by the animal in its fight for a living. If cows are forced to fight flies all day, if they are forced to stand in the hot sun and drink water from a slimy pool they will not have the opportunity to turn so much of this rich grass and succulent food into milk. The cow that has little to do except eat and make milk will be more contented and will make a better profit than her sister, who is kept under different circumstances.

With the horses, it is a little different, for usually the men work with them all of the time and they are wise to the discomforts and the dangers that are incident to excessive heat. Thus horses are usually protected but the cows are turned into the pasture, and forgotten until night.

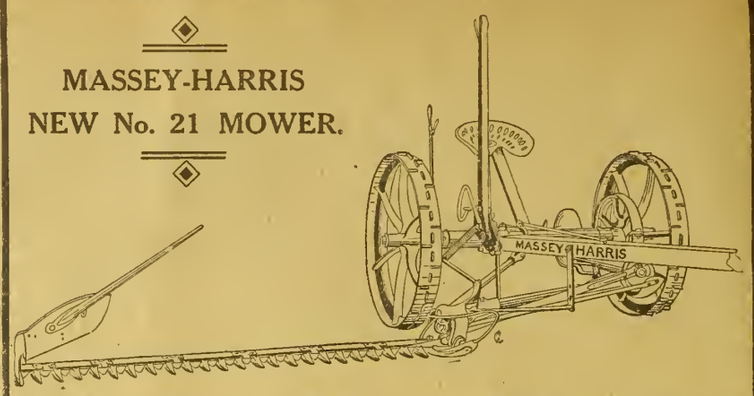
The same things are true in raising hogs. No hog can make the best gain unless provided with plenty of shade as well as good feed. The small chickens and the old hens that are forced to lie around in the intense heat without being given any shade will not make the best growth or yield the best profit.

It is possible in all of these cases to provide shade if it is not done by nature. If the hog yards and pastures and chicken yards are not located where there are trees, a shed may be improvised which will provide a comparatively cool place in any kind of weather and it will protect from the excessive heat of the sun.

Another thing that must be borne in mind is the value of pure water. Every form of live stock on the farm must have this in order to keep the constitution and vitality at the right degree of efficiency. Pure water is necessary for the health and development of an animal. This does not mean that the stock wil have to hunt the sloughs and the pools and the slime covered ponds for their drink. There should be easily accessible a tank of clear, pure water directly from the well.

The third point in this consideration is in regard to flies. Much can be done by the use of fly repellent and fly traps to protect the stock from this pest and if such provision is made the profit wil be increased. Remember to keep all the cattle and all the stock that is under your care during the summer humanely. It will pay.

MASSEY-HARRIS
NEW No. 21 MOWER.



A Big New Mower
for Heavy Cutting

Wide Tread—Wider than on any other Mower—ensuring steady running and overcoming side draft.

Improved Clutch and Throw-out Device.

New Simplified Lift—Attached direct to the Frame—Pole may be removed without affecting the lift or any other parts.

Push Bars are especially heavy and stiff, have Screw Connections at both ends and both Connections are machine-fitted.

Hinged Coupling has long broad Bearings and heavy Pins, doing away with any looseness of the Cutter Bar.

Lift Spring is placed at the rear, giving a direct connection, and is easily accessible for adjusting.

The Sections are longer than on any other Mower, giving longer cutting edges and greater clearance.

Special Circular tells all about it.

Massey-Harris Co., Limited.

Head Offices—Toronto, Canada.

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Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Calgary, Yorkton, Edmonton.

— Agencies Everywhere —

Killed by Lightning.

Are we looking closely enough to our losses caused by lightning? Farmers each year suffer severe losses on account of stock being killed by the lightning. What can be done to lessen this loss?

Generally the animal dead from lightning is along the fence row or in the barn. Very seldom do we find one dead in the open field on account of being struck by lightning.- Observations and inquiry show that but a very small proportion of the farm fences are grounded. It is a small outlay of either time or money to place ground wires on your fences thereby reducing your loss from lightning to a minimum.

In building a new fence run a wire from the top of the post to the bottom, securely stapling the wire on the fence so that it will come in contact with the ground wire on the post. Place these posts on which the ground wire is stapled every five or six rods in the fence. The danger of stock being killed by lightning is very small in pastures which are enclosed with fences in which the steel or iron post is used. These posts act as ground wires

The old-fashioned lightning rod was practically no good, but the rods now in use, properly placed on the buildings and properly grounded, are efficient. Without a doubt many a disastrous fire has been prevented by their use

The Only Method of Valuating Dairy Cows.

A dairy cow's value is largely based on her ability to produce at the pail. The introduction of the weigh scales, and Babock test to the dairy world has revealed this fact. These same little

instruments have brought forward more startling conclusions than this. Many dairymen hesitate to undertake this work on account of the initial expense of three of four dollars for the necessary outfit and the extra trouble occasioned by its use.

This is a distinct example of folly. Untested cows have been bought and sold in absolute ignorance of their value as producers. A few months' test has added $50 to $100 to some cows' value, because their productive power was made known.

This vital fact should not be overlooked. Hundreds of poor cows are being kept to-day at huge expense of whose low value the owners are also probably ignorant. Yet a three dollar outfit would help discover them soon turning the present loss into a distinct savings. Thanks to the small expense many dairymen are now making an additional income of three hundred dollars from twenty cows, because the poorest have been discarded. It will abundantly pay every dairyman to keep dairy records.

The Budmoth Meeting.

The Budmoth meeting held in the Hilcrest Orchards, on June 26th was a success. About 125 of the cream of the Valley were present, including S. C. Parker, F. M. Chute, A. S. Banks, and about 50 more of the same type, a fine crowd. The two plots nearest the house were showing up finely, one sprayed 4 times with 16 p.c. Budmoth in it, while the next plot, unsprayed, had 66 p. c. of the blossom clusters infested. In another plot sprayed before the blossoms once and again immediately after the blossoms fell gave 17 p. c. budmoth, showing that the early spray when the buds are bursting only killed budmoth in 100 blossom clusters in that one case.

Again checking the early so caled "budmoth spray" with the check; the plot receiving it gave 60 p. c. budmoth the nearest check 66 p. c. or practicaly no benefit. In the ttwo plots which everyone saw, the sprayed plot set about twice as many apples as the unsprayed, due to budmoth only, for the whole orchard received the same spray this year. the benefit in budmoth coming from spraying in 1912 and 1913 The budmoth cannot be killed in time to prevent injury for the current season Spraying this year controls the budmoth for next year, but does not prevent injury for this year.

The difer nce in sets in the Wagner Orchard at R. S. Eaton's, bears out in a striking way the figures taken in regard to the set being reduced by budmoth.

A man can apply 4 sprays complete lime and sulphure and be sure that the next year he will increase his set by controlling budmoth enough to more than pay for his entire spraying. He will also control codling moth and the fruit worm every year in each orchard Tent Caterpillar, Canker worms, Tussocks and Browntails when present, and in spot years will control the spot.

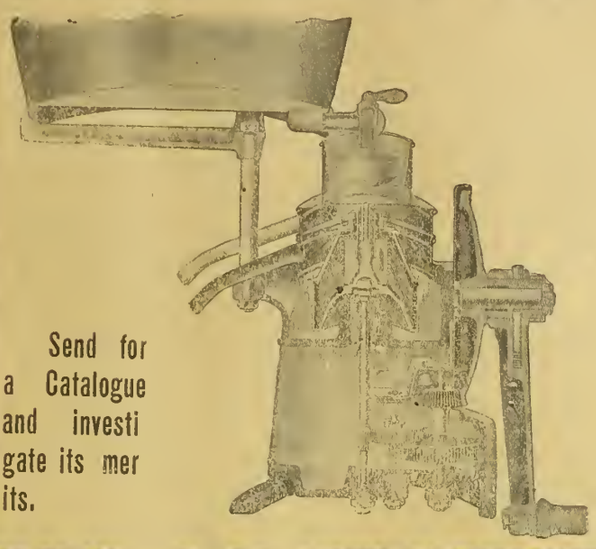
If spraying is to be regarded as insurance against spot it is free insurance for it pays for itself and more, too, by controlling budmoth every year in every orchard in the Valley. No man should mourn as many are doing that he has sprayed carefully, and then we had not enough rain to develop spot in any orchard, and his neighbor who did not spray has as clean apples as the one who sprayed The man who sprayed has more than paid for his spray by killing the budmoth. He also controled coddling moth, fruit worms, browntail, canker, worm, and tent caterpillar free.

Mr. Geo. E, Saunders, in charge of the Bridgetown Entomological Laboratory, who conructed the experiment, writes:

"There is no doubt that a man pays for his entire spray and more too, by controlling ever present budmoth, and the talk of spray being an insurance against spot is misleading many men who are sore because they have sprayed, and their neighbors who did not, had clean fruit. I want them to know they are money in pocket as it is so they will not stop spraying for I want them to spray so as to control browntail."

Points of Excellence Embodied in

THE PREMIER CREAM SEPARATOR



Send for a Catalogue and investigate its merits.

Self-balancing Bowl, easily and quickly cleaned.

Rustless Aluminum Discs, few in number, yet providing ample skimming surface.

Automatically Oiled Neck-bearing.

Machine-cut Square Gears.

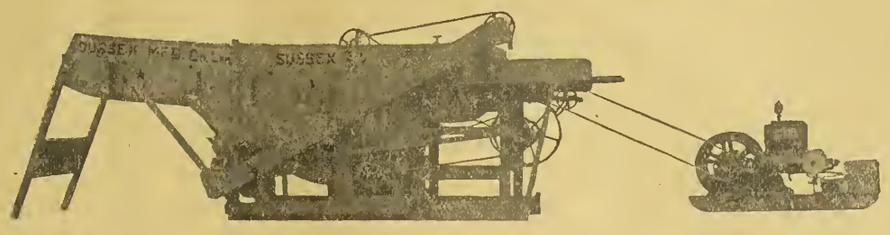
Revolving Spindles, all enclosed, and running on ball bearings and in oil.

Working parts easily accessible.

The Premier Cream Separator Company

Winnipeg Toronto St. John, N. B.

Thoughts of Threshing Suggest at Once the "Little Giant"



The "Little Giant" hardly needs an introduction in the Maritime Provinces. It's the Thresher that every operator aspires to own.

Reasons: They are almost numberless. Economy in power, easy operation, great strength in construction, excellence of material used, are but a few of the qualities which make selling the "Little Giant" such an easy matter. More "Little Giants" are used in the Maritime Provinces than of all other makes combined.

The "Little Giant" two horse thresher can be operated with engines of from two to four horse power. The four horse power requires from four to seven horse power. All threshers are supplied with or without Tailings Elevator, Straw Carrier and Bagger and Trucks.

We guarantee every Machine. Fully tested before leaving Erecting Department.

We also manufacture Hay Presses, Tread Powers, Wood Cutters, Grain Grinders, Feed Boilers, Root Pulpers, etc.

Free Catalog for the asking.

The Sussex Manufacturing Co., Limited, Sussex, N. B.

Consignment of Sheep

The S. S. Soestdijk of the Furness Withby Line, reached port this morning from Rotterdam, bringing 100 Siberia bred sheep which were a long time overdue. These animals have been the subject of much comment for some time back in the press and otherwise. It is said that the sheep are to be distributed amongst the agricultural societies over the Island. The Soestdijk was nine days coming from Rotterdam. She is bound to Philadelphia where she will proceed after she lands the government sheep.—The St. John's Telegram.

Samuel Dick e & Son were away from home when we called. The young stock in the barn looked well and the herd of black and whites at pasture looked good to us from the road. Cobequid Farm has an air of prosperity about it that comes to all who consiestently follow in the paths of the dairy.

Try an Ad in the FARMER.

THE HORSE.

Stable Equipment.

Apart from the harness and saddlery required for horses in connection with their actual work, many articles have to be provided for their use in the stable. The principle items comprise such indispensable things as the headstalls, grooming tools, rugs, rollers, etc., while there are certain other requisites which may or may not be added according to the class of horse concerned. Thus for wagon horses, including trappers, hacks, carriage horses, and the like a considerably more elaborate equipment is usually called for than in carthorse stables, in which the requirements may be cut down to a minimum, though even in these it is desirable that they be well found in regard to the more essential articles. Briefly, to consider the various items of stable equipment we have, first of all, the headstall for tying up the horse. Leather head collars are in all cases to be preferred as being the most practical and durable. Those made of webbing, while cheaper, cannot be recommended, for not only do they tend to wear out quickly, but they are not strong, a horse, if so minded, readily being able to break one of its kind by throwing itself back in its stall. It is, however, useful to have on hand one or more web halters with a rope attached forming a running noose with its noseband, to slip on a horse's head quickly on occasion or to put on underneath the bridle when taking a horse to the forge and for similar occasional purposes. They often come in handy. A special kind of carthorse collar—less elaborate than ordinary patterns in use for nags, and having neither a forehead band nor a separate throat latch—is commonly used in the case of carthorses while sometimes the latter are secured by means of a simple collar strap which buckles round the neck instead of with a proper head collar. To tie up the horse, either a chain or a stout leather strap, or a combined strap and chain or a rope may be used but the last is not to be recommended, not being durable enough and being liable to break. For carthorses a chain is the best as being the strongest.

Grooming.

Of the grooming tools required, the most important are the body brush, dandy brush, and curry comb. In addition to these there are the following:—Water brush, mane comb, hoof-picker and sweat scraper. A complete set of these various articles should be provided in the case of nag horses, one set for each groom or attendant, and preferably there should be a couple of water brushes, one to be kept entirely dry, the other being wetted when necesary. Stable rubbers, for rubbing down and drying the horse, and a large sponge are also needed, while a chamois leather to put a finishing gloss on the coat is another item that is more or less essential. In the carthorse stable, on the other hand, we do not need such a long list of things, and here it suffices to supply body and the dandy brushes, curry comb and mane comb. Body brushes vary much in price, ranging up to 7s. 6d. for the best An inferior quality is quite good enough for carthorses, but to turn nags out in first-class style a brush of good quality is essential, costing, say, not less than 6s. for the poorer brushes do not produce the same gloss on the coat. Yet another accesory to be provided in connection with grooming is a small brush for applying hoof-dressing to the feet.

Clothing.

Next we come to the clothing. In nag horse stables there should be, at any rate two rugs for each horse, one thicker one of wool for autumn and winter and one of lighter material, either woollen or twill—preferably the first—for summer use. In well-appointed stables it is usual to have special night rugs in addition to the others, so as to save the latter. For night use, jute rugs, wool lined, are very suitable, and they have the advantage of being extra durable. Besides these in regular use some spare horse blankets ought also to be on hand. As regards carthorses, these are more often than not left unrugged, excepting if clipped in the winter, when it is esential to clothe them, and on farms especially it is not usual to rug them, as this would make them tender and cause them to feel the weather too much. But even when the horses are not kept rugged, it will be desirable to have some horse blankets available, for there is sure to be some call for a rug on occasion, in cases of sickness, for instance, etc. For van horses, tradesmen's cobs and ponies, and such like, jute rugs answer well enough. When rugs are worn one roller per horse must be provided, and in other cases there should be a roller to go with each blanket on hand. The most durable and strongest rollers are those made entirely of leather, and where utility is the prime consideration and not smartness of appearance, this kind is certainly to be preferred to those made to match the rug they go with.

Suitable Tools.

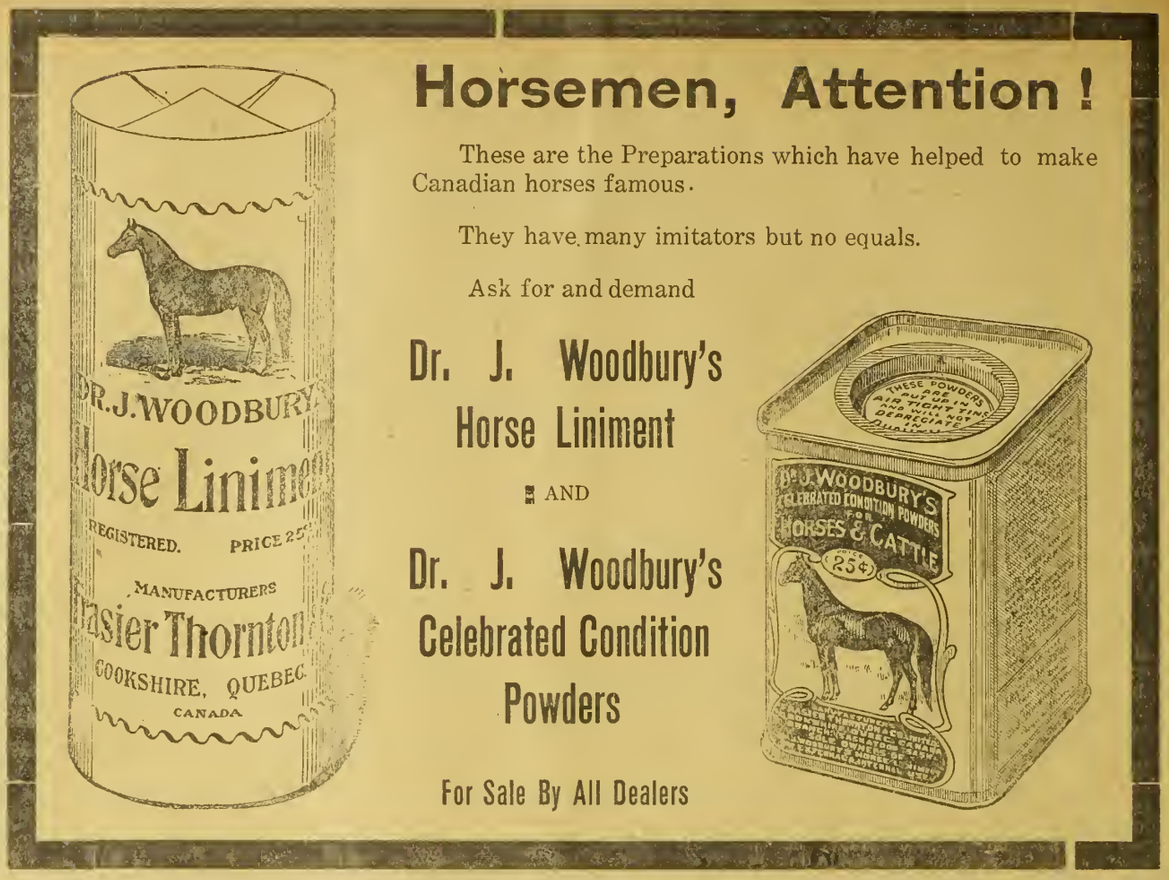
An important group of requisites to be provided in every stable are the usual stable implements, including manure and hay forks, the first four-pronged and the latter two-pronged—shovels, brooms, buckets, corn measures, and corn sieve, the last being for sifting the food before it is placed in the manger. It is generally considered the proper thing to have wooden buckets in a well-appointed stable but galvanized ones answer equally well, and in certain respects, indeed, prove more practical. Besides the buckets used for watering the horses, there should be one or more others for washing purposes. Then there is the corn bin, which should be of galvanized iron, this kind being rat and mouse proof, which wooden bins are not.

Bandages.

This pretty well completes what is needed in a carthorse stable, or when van horses, etc., are kept, but in the case of nag horses we should further provide some sets of woollen bandages while linen bandages (one pair will be enough for three or even four horses) too, will be useful on occasion though they are not actually essential. One or more so-called watering bridles, too ought to be on hand to put on a horse when taken to the forge, and for similar purposes. Knee-caps are another requirement. In well managed stables, grooms always look for a manure skip to remove the droppings immediately they have been voided. An important accessory, finally, is a clipping machine, and even in a one-horse stable this appliance should be of the power pattern. To clip by hand is old-fashioned, though a small pair of hand clippers comes in useful for clipping the lower part of the legs, ears, etc. Another article it is always advisable to have on hand is a drenching bottle for adminisetring liquid medicine and drenches.—English Vet.

Feet of Foals Need Special Care.

The great importance of properly caring for the feet of foals is entirely overlooked by the majority of those who raise them. A few give the feet some little attention and possibly one in one hundred fully appreciates the great value that should be attached to this feature of colt life while in the formative period. Many of the defective formations later found in mature horses (defects which mean loss of dollars at selling time) could have



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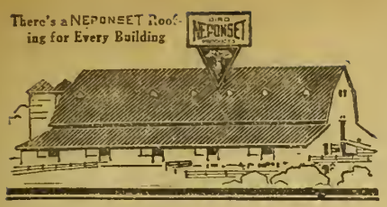

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been effectively corrected had they been cared for at the proper time. Without naming all defects or deformities which can be easily corrected if taken in time, I will mention a few of the more common ones.

Toeing.

The front feet, instead of being well formed and standing straight and true in perfect alignment with the ankle and pastern, turn out; the pastern is out of true, the inner quarter of the hoof almost straight up and down and the outer side of the hoof or wall of the foot extends entirely too far out. This condition, which is at once unsightly, not only interferes with locomotion but detracts many dollars from the intrinsic value of the animal. While speaking of crooked pasterns and ill shaped front feet, I need only add that "toeing in" is simply the reverse from "toeing out," and carries with it the same bad results. Both of these deformed conditions in nearly every instance cause interfering, and paddling, and in a mature horse are almost impossible to cure, although in the hands of a competent blacksmith, they may be corrected to a certain extent. Both of these defects could have been entirely done away with had the feet received the proper treatment at the right time.

If the foal shows a tendency to toe out from the first the hoof as it grows should be trimmed close on the outer half allowing the inner to grow longer and carry the greater weight; this done while the foal is taking on weight will not alone change the angle of the pastern, but the form of the foot as well, and it is more than interesting to watch the improvement and how quickly it rewards your efforts Treatment for toeing in is simply the reverse to that of toeing out, and much benefit may often be derived from shoeing the foal when only a few weeks old with a light plate shoe,. using of course, very small nails and putting it on with great care letting it extend slightly beyond the hoof where you wish to produce the greater bearing and the direction in which you wish to train the foot and pastern Whether one depends entirely on simply trimming the foot, or uses a shoe, the foot should receive attention every month at least until such time as the defect has been corrected.

A too straight pastern can easily be corrected by keeping the hoof cut as low as possible at the heel and allowing the toe to grow as long as possible. A foal that shows a tendency to too great a slope of the pastern should have the hoof trimmed as closely as possible at the toe, using great care at all times to leave the sole of the foot perfectly level and true

For some unexplainable reason the forward or front feet seem to be heir to most of the deformities yet it is not uncommon to find a crooked or imperfectly formed hind foot. Their treatment consists simply of common sense trimming, leaving a bearing at foot and cutting away that which is growing in such a way as to add to the defect you are working to correct.

The work of correcting imperfections in feet and pasterns of the foal can hardly be started too early. More satisfactory results can be had in the first six months of its life than in any like period later. All the bones of the foot and pastern being soft and practically in the formative state are easily influenced and their final shape and condition can be controled by following the treatment outlined. In conclusion I woud add that it is well to not force the growth of the foal with defective feet or pasterns; the less weight in flesh it has to cary the more rapid will be the improvement, and no mater what kind of a colt you are raising its added value will more than repay you for the slight trouble you take with it and should it be a pure bred one, the benefit in dollars to you of course is far greater.

Giving Drenches to Horses.

By "drench" is meant a copious dose of fluid medicine. These are now used less often than formerly. Many veterinary practitioners prefer to give small doses of medicine in a capsure or by means of a half-ounce hard rubber syringe. But colic drenches and pint or quart doses of raw linseed oil are still given to horses. Cows too are often physiced with a quart or two of epsom salts solution, while sheep and lambs are given gasoline mixture for worms and hogs now and then squealingly object to a big dose of castor oil or some such purge.

Before giving a drench be sure that it is needed, that is a sane and safe dose and one that will not scald the mouth and throat. Like the delicious lump of candy sometimes accidentally swallowed by the schoolboy, the drench cannot be recovered when it once has passed the portal of the gullet. Many a horse has been badly scalded by an insufficiently diluted dose of turpentine or aromatic spirits of ammonia or chloral hydrate, and other animals may be hurt in a like manner.

Back the Horse into a Stall

The drench is to be given by way of the mouth; never by way of the nostril. Medicine poured into the nostril tends to flow into the lungs, where it will be sure to set up irritation and cause mechanical bronchitis or pneumonia. We have known of many an animal being killed in this way. The best method of drenching a horse is to back him into a stall. place the running noose of a small soft rope around the upper incisor teeth under the lip, throw the free end of the rope over a beam, elevate the head and hold it by means of the rope at such a height that the medicine will stay in the mouth and be swallowed. Now stand on a box or chair and pour the medicine into the horse's mouth from a strong long-necked bottle, in doses of about two-ounces at a time until all has been swalowed. Do not grasp and squeeze the throat to make the horse swallow, and do not pull out the tongue. These acts hinder swallowing.

If the horse does not swallow readily tickle the roof of his mouth by rubbing with the neck of the botle. If this does not suffice, pour a teaspoonful of cold water into the nostril, and swallowing will instantly occur. When drenching a cow put the medicine into a long-necked bottle. Confine the cow in a stanchion. Stand on her right side. Pass the left hand over her face and into the left side of her mouth to steady the head, which is to be held in a straight line with her body. Now pour the medicine slowly into the right side of the mouth. Let her head down instantly if she coughs.

A drench is given to a sheep by means of a bottle or a drenching horn. The animal may be straddled and its head held in a straight line. The dose must be given very carefully to prevent choking. A hog may be drenched from a bottle to the neck of which a piece of rubber hose has been attached; or cut a hole in the toe of an old shoe, let the hog chew on it and at the same time pour in the "dope." The hog may have to be held by means of a rope noose fited on the upper jaw.—Dr. A. S. Alexander.

Salt Necessary for Work Horses.

Don't neglect to salt the horses about once a week. It is better to keep salt always before them as they know better how much they need and when they need it.

Don't urge your team into a forced and unusual gait; and it also worries them to be forcibly held back. If you want the best work from the team let them keep their own gait. For this reason it is well to train a team to walk the right gait while they are colts.

Don't forget that kindness pays very big dividends in the upkeep of a horse. It keeps him in good condition on les food, thus saving on the feed bill; it enables him to give better service increasing profits in this way; and a horse brought up in the atmosphere of kindness will sell better at a higher price, as he is nicer appearing, more sound, gentle and reliable, than a horse brought up under more adverse circumstances.

Handling Shy Horses.

It is very provoking to have a horse on the farm that is shy and hard to catch. This trouble is often the result of improper training when the animal is young. Kindness is necessary in order to break a horse of this habit. Never hit him when he is turned out in the pasture or when he is caught. A good plan is to feed him something every time he is caught. It is a good plan occasionally to bring the horses in from pasture and put them in the barn when there is no work for them to do. It requires a good deal of patience to cure a horse of shyness but it pays.

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POULTRY

Tuberculosis in Poultry.

For the benefit of our readers and especially those who may have affected flocks, we are publishing the following extract from a bulletin on "Farm Poultry" by Prof. M. C. Herner of the Manitoba Agricultural College:

Tuberculosis is a disease affecting only old birds or stock that is fully matured. The germs of this disease may be in the ground surrounding the poultry house, or in the house itself. They gain entrance through the food, drinkink water or by breathing. Birds suffering from this disease void the germ in the droppings, and these getting mixed with the feed are taken into the system and thus it is transmitted to the rest of the flock. The symptoms of this disease are a pale comb, the bird loses flesh rapidly, usually has diarrhoea, and in the later stage it wil be lame in one leg. The bird may die in the course of a few days or it may linger for three or even four weeks, in which case it is practically nothing but skin and bones. On opening the bird the liver and spleen will be found to be covered with raised whitish spots, varying in size from a mere point to half-an-inch in diameter. In very extreme cases tubercles may be found along the entire alimentary canal, and also on the bones in various parts of the body. Unlike human, or bovine tuberculosis the lungs are very seldom affected.

There is no cure for the disease. It is simply a question of keeping it in check as much as possible by observing absolute cleanliness in all details of poultry management. Kill off all the sick or affected birds and bury them deeply, and cover them with lime or better still, burn them. Clean out the hen house thoroughly and whitewash it with whitewash having a five per cent. carbolic acid added to it.

Clean out and disinfect all the nests, drinking pans and so on Put in a layer of fresh earth, sand or gravel, and use an abundance of air-slaked lime under the roosts at all times. The land surrounding the poultry house should receive an application of air-slaked lime, be cultivated and a crop grown on it. Provide plenty of light in the hen house and feed only good wholesome food. The disease is seldom met with in the winter time, but is usualy most active in the late summer months. While the disease cannot be cured, still by following these suggestions it may at least be kept in check to a certain extent.

Poultry Policy of the Experimental Farms.

The poultry policy of the experimental farm system is to conduct experimental work with poultry along the breeding, rearing and feeding lines ; the encouragement of the farmers and poultrymen generally to improve their strains of fowl, and the development of economy in methods of general management. Work along these lines is being caried out at the Central Experimental Farm at Ottawa and the branch farms and experiment staticns throughout Canada, results of which will be published and distributed at frequent intervals.

New Equipment.

Equipment is being provided to make it possible for the division to carry out this policy. Besides the original plant at Ottawa and its various types of colony houses, brooders, incubators, etc., aditional land was added to the plant last year, and this year ten acres more are set apart for special experiments with turkeys and water fowl. Modern buildings are being built, a new experimental breeding house is just completed, as are also a cockerel house and an experimental feeding and suply house. This year will see the completion of an administration building, and before another spring the old permanent buildings that have been in use for twenty-five years will be removed and the plant will be up-to-date in every respect.

At the branch farms and experimental stations the poultry plants are large enough for one man to manage. Housing accommodation is provided for from 100 to 400 head of laying hens Only two or three of the best varieties of utility fowl are kept and tests are being made to find out the type of house best suited to the climate and conditions as well as the most suitable makes of incubators, brooders and other poultry apliances.

Experiments of a general character such as breeding, feeding, diseases, etc., are being conducted at the central plant of Ottawa, where a larger staff and equipment is available, while those experiments of a local or provincial nature are carried on at the outlying farms and stations.

Among the most important of these experiments are those relating to the breeding. Already a number of egg-laying strains are being developed, and just as soon as one or more of these strains are established, cockerels will be supplied to the branch farms and experiment stations. Each year the males bred at the central farm from heavy laying strains wil be sent to the outside plants and will there be used as breeders, and as it is generally recognized now that the male is responsible for the transmission of fecundity this system should be the means of developing a high producing flock at the branch farms and from these flocks, cockerels, also pullets and eggs when available, will be for sale. Breeding stock and eggs at present are not being sold from the central farm, as both are required for experimental work.

Another very important class of experiments that is being investigated is that relating to poultry diseases. The annual losses due to chick mortality are very large and the turkey crop almost threatens to extermination if something is not found to stop the ravages of black head. The investigation of the latter is largely the reason for the acquisition this year of the new park of ten acres at Ottawa.

Housing, incubating, brooding, rearing and feeding problems as well as a host of others are being investigated. In fact anything that is of interest to the man or woman who keeps poultry is of interest to this division. New ideas in management, new "secrets", new appliances etc., are being tried out and will be reported.

It is not the intention to print bulletins or even large pamphlets, but rather circulars or leaflets that can be published often enough to be fresh. A number of these are now in process of preparation and will appear from time to time. As usual, letters asking for definite information are always welcome, and where a phamphlet does not give the required information a personal letter is gladly written.

Bacterial Enteritis.

Bacterial enteritis usually shows up in its worst form at the summer's end, though it can come at any time. It is often mistaken for blackhead or cholera, but the bacillus causing the intestinal inflammation isolated and examined under the miscroscope, shows to be of somewhat different character from the bacillus causing these other diseases. The germ causing the enteritis multiplies in the intestines and it fills up the blood throughout the body, causing a quick or at times slow destruction of the blood, added to the intestinal inflammation. The sick birds are dull, listless, hate to move about, are not hungry, though very thirsty. The birds may die quickly at the onset of the disease, and the disease may spread no further than the farm where it starts. Later cases will linger, often for four or five weeks the bird losing nearly all of its flesh. There will be a greenish diarhoea sometimes showing blood toward the end. Young birds are most susceptible. Ducks wil take it from the chickens; pigeons will not take it; rabbits inoculated with the germs show no results; chickens fed the germs in ordinary food will not take the disease, but fed to them in animal food or foul water, wil soon show the symptoms. Inoculated by the germs through the skin they die in four or five days. This shows that the bacillus spreads first among the chickens through foul water or animal fod. Without disinfection or eradicating means it will often stop short and die out, but not until it has taken from 50 to 80 percent. of the flock. To get rid of the disease in the speediest way, don't wait a day in cleaning up and using disinfectants in houses and on the grounds. Make the fowls drink from scalded vessels, the water pure, changed often and charged with ten drops of sulphuric acid to each gallon of water, or any other disinfectant that you know to be good.

Quarantine or kill sick birds. If you treat the sick, let it be done away from the flock. Give one grain soda, three grains subnitrate of bismuth, 2 grains of powdered chinchona bark, 3 times a day. This is to check the diarrhea. After the diarrhea has been checked give a good poultry tonic. This last should also be fed to the flock at large Give turkeys sick with it the same treatment.

Small Hens of the Breed.

The Kansas Farmer, in a late issue has an excellent article on the layer of any breed showing up as a rule below standard weight from three-fourth of a pound to often as much as three pounds, and asks: "Are we not bringing the standard too high as to weight in our laying breeds, not that one would encourage breeding the small specimens of the breed, but we might overdo the mater the other way, and by breeding overweight for the standard breed out profitable production? In fact, we know ourselves of a breder of Bared Plymouth Rocks who has always made it a boast that his fowls weigh from one pound to three over standard weight. At present he is disposing of that flock because it does not produce enough eggs to pay the cost of their production. All of the phenomenal prize-record laying hens were under weight. Lady Showyou, White Rock, 281 eggs first year contest, weighed but six pounds. The highest record ever made by a Barred Rock was from a hen one and one-eighth pounds under weight. (We do not know the weight of Lady Morley, the champion Nova Scotia hen.) The best record made by a Black Langshan was made by one two pounds under weight; the Black Orpington, two pounds under; Buff Orpington, two pounds under, and so on in varying number of pounds under, through Wyandottes, Leghorn, Minorca and other breeds."

The above is given because complaint so often comes in this wise: "I cannot get my flock up to the standard weight and my neighbor, with Barred Rocks, which are listed lower in the standard than the breed I keep, puts it all over me when it comes to selling

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his birds by weight." This statement based upon facts from laying contetsts should lead you to compare the laying quality of your below-the-standard flock with that of your neighbors. Your flock may be of a heavy laying strain and this kind is often under the weight. I have a laying strain of one of the breeds listed to weigh eight pounds for the hen when adult. At first it worried me because so many of my finest specimens and best layers would not reach this weight. When I realized why, I ceased worrying. Better plenty of eggs than a mere couple of pounds of meat.

Co-Operative Egg Marketing Essential to Success.

The egg is at its best when just laid and the longer it takes to place it in the consumers hands, the less it is worth. Eggs when prepared for market, should be spotlessly clean. They should be packed in clean cases, of which the thirty-dozen size is preferable. Absolutely clean fillers and cardboards should be used. The quality of the eggs should be unquestionable. It is only in this way that a good trade can be worked up.

The egg industry in Denmary has been enormously improved owing to the aplication of the principle of co-operation to the colecting, grading, packing and export of the eggs. The great progress of Denmark during the past fifty years may be at once attributed to the wonderful system of education available for its people and to the extent to which the principle of co-operation has been adopted in every part of the country and in every phase of its national industry.

Co-operation in the marketing of poultry products and in buying poultry feeds is one of the chief essentials for success in poultry raising This country should take up in earnest the organization of egg circles, where the eggs are candled and graded at the egg depot and sold in the best market Where creameries are in operation, eggs could be colected on the creamery routes and egg depots established, at the creamery The farmers cannot expect to get much better prices for their eggs until they market them in better shape The heavy loss to the country in marketing eggs is largely due to the farmer's neglect in colecting the eggs regularly and in marketing them sufficiently often Co-operation whan properly carrried out, will overcome to a large extent the undesirable conditions in marketing the poultry products

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Rearing of Ducks.

A subscriber wishes to know what is the best food for ducks after they are hatched, where and how they should be kept, and which is the best mother for ducklings, a duck or a hen.

Ducklings do not require feed for about 36 hours after leaving the shell. They will be perfectly well with the hen, or in a warm broder. Stale bread moistened with milk is the best ration for the first thre days. With this water must be provided in a shallow dish, deep enough for them to bury their beaks, but not deep enough to swim in. They should be fed five or six times a day. Although the water fowls, young ducks should not be given an excess of water, nor should they be left out in cold rains, so as to get a chil. A constant supply of water, deep enough to bury their heads is all that is required while young. About the fourth day cornmeal or oatmeal mixed with wheat bran and soaked in milk and water, should be added to the bread, a litle at first, and gradually increasing the mixture until at the end of the first week the ration is wholly composed of meal and bran. To this should be added a little coarse sand, which experienced duck raisers claim is very important in order to raise healthy ducks.

Green feed also, is necessary, no mater how much grass may be at hand Some of the delicacies most enjoyed by ducks are lettuce, corn, alfalfa, beet leaves and kitchen scrap. The "greens" should all be chopped before feeeding.

Ducks wil soon leave the hen, and will feather out at about five weeks old From this time on half their ration will be picked up on the range. They relish worms, insects and green feed. No better ration can be given than soaked bran, wheat middlings and the corn or oat meal. When raising ducks for market it is not necessary to provide a swimming pool, as experienced men claim that they will not take on flesh as rapidly when given free access to a pond. This is desirable, however, for breeding stock.

A hen is a better mother for ducklings than a duck.

Poultry Suggestions.

Human sympathy to the birds comfort amounts to dollars and cents.

Clean the nests occasionally and put in a fresh supply of nest material.

Uniform nest boxes add to the attractiveness of the house.

White diarrhoea is contagious among young chicks.

The purchase of a few baby chicks from some fine pen of birds will make a splendid start if you care to start in July.

If your breeding pens were properly bred and mated, you need not be surprised to find some of the chickens developing into better specimens than their parents.

Watch the chicks closely and mark the ones making the most satisfactory growth. Select the ones that are plump, full breasted and in good proportion. You will not care to keep those that grow leggy and have thin breasts.

Never, under any circumstances, keep more birds than you can take care of well.

Green food is necessary for all ages of poultry but doubly so for the little chicks. Water and green food are cheap and very important.

Be sure the baby chicks have plenty of exercise. Keep them busy and hungry.

Keep the hopper full of dry mash all of the time.This gives the chickens an opportunity to balance the grain rations fed.

Remember full fed chicks are paying chicks. It pays big dividends to hurry their growth.

Always practice absolute cleanliness in feeding.

Cull the flock closely. Keep the best and prepare the rest for market.

Enrich the garden plot with the poultry droppings.

Constant thought and judgment are necessary in poultry raising.

Summer Houses for Poultry.

As the weather gets warm, the poultry house should be ventilated to its utmost. A roof as a protection from storms is about all the shelter poultry need during the warm weather. If your house does not provide ample ventilation for warm weather, close it up and build a cheap shed for the hens. This shed need not be elaborate

A few posts put in the ground to suport the roof is about al that is required. If in an exposed location, it would be advisable to board up the northern and western sides. In most localities, however, this would not be necesary as the shed could be built on the eastern or southern side of the barn. The open sides should be inclosed with poultry netting to keep out prowling marauders.

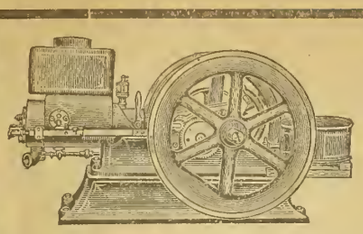
Poultry Notes.

The soil in the poultry run is better to be of a porous nature preferably of a sandy type.

In locating the sight for the poultry building it is well to select a spot where there wil be a natural drainage away from the building.

It is estimated that the cold-storage establishments of Ontario and Quebec lay away annualy in the flush egg season from six to nine million dozens of eggs.

When in Truro last week the Editor of The Maritime Farmer visited Dicksie Land Farm. Hugh Dickson's steading crops are looking well in Dicksie Lanh. Mr. Dickson has 20 acres under garden truck and field roots. At the time of our visit Mr. Dickson had six men busily engaged thinning turnips. The garden truck plots are the picture of thrift and good management. The Guernsey herd is looking well and doing well at the pail. The young heifers look particularly promising. Tne Dicksie Land Guernseys will be at the fall fairs this year stronger than ever.



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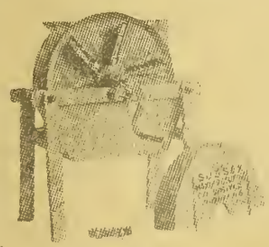

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FOR HOME AND COUNTY

This Department is devoted to the best interests of the Homes of the Maritime Provinces. Contributors to these columns are leaders in the "For Home and County" movement. This Department is yours. Use it to the best advantage by sending us timely suggestions, short articles dealing with your experiences, and reports of your Institute meetings.

"SUCCESS" :: By J. Lee Flewelling

In one of the large villages, which line the banks of the Hudson River, some fifty miles from New York City, at the time our story opens, lived Dr. Ruddock, and his little family, consisting of his wife, and a little boy, the latter at this time about ten years old.

Dr. Ruddock had a good country practice, and was a skilful doctor, and one who would in all probability, made a name for himeslf had he gone to New York City, where his talents would have had wider scope, but his beautiful wife loved Marlboro, where she had always lived, and as she had never seemed very strong, Dr. Ruddok feared to try the experiment of transplanting her to the hothouse of a city life, dearly as he would have wished to be located there himself.

Then again, their little boy Charlie, the sole fruit of their union, whom both so fondly loved, was growing to be a manly little fellow, the high altitude of the village with its bracing air, seeming each year, to make him more rugged and activ, and in his earlier years his father feared that he had inherited the weakly condition of his mother.

These were considerations that induced Dr. Ruddock to curb his natural ambition to rise in his profession, and brought him to think that the Marlboro situation might be the best for them

Charlie had been going to school for some four years and he was a bright, little fellow, and had much help from his mother at home, had made such rapid progress that he was already in the fifth grade, and brought home excellent monthly reports from his teacher

There is not usually a great deal of ready money among the poorer people of a country village, and these seemed to be the people in Marlboro who had the most need of our dotor and as he had a widely extended practice he had a great deal of hard work to do without a corresponding renumeration for the same, so that at the time our story opens, he had only been able to save about $500 over and above the expense of living, and this amount he had deposited in the bank at Newburg that quaint litle town, which was the headquarters of Washington at one time. during the war, and which still retains in good condition, the little stone cottage in which the great general and his staff then stayed and which is now full of momentos of the war period.

Many a night after he came home from a long, hard drive and was quite worn out and should have been restfully sleeping, he heard the little clock chime the hours while he lay awake, planning how he might best arrange for his boy's future.

Having had to restrain his own natural ambition, bythe force of circumstances, he was most anxious that Charlie should have advantages from which fate had debarred him.. With much gratification had he witnessed the expanding and developing of the intellect of his boy, who was a hand some young fellow, with light curling hair like his mother's and with the dark brown eyes of his father, and who gave promise to becaome a more than ordinariy clever young fellow.

One day having been called to a patient in the chief hotel in Newburg, as he stepped into the office on his way out, he was surprised to meet there, an old college chum, whom he had not seen for years and whom he was heartily glad to meet again

During the conversation which folowed, he learned that his friend was selling stock in the Gold King, a mine situated in Colorado, of which the doctor had heard considerabe , but to which, up to this time he had given no attention. "I tell you, what it is, John, I have at this time the option of one thousand shares, which a man purchased of me about a month ago, and on which he now wishes to realize. He paid me fifty cents a share and is now willing to sell for the same amount as he has other uses for the money here invested. I think he is very foolish as the mine has been paying large dividends—one percent. per month at the present time, and I am confident the same stock will sell for a dollar inside of twelve months, the way it is now booming"

"In the years that I have been here" said Dr. Ruddock "I have been able to save only five hundrer dollars, would you advise me to risk it in this investment ?"

"I certainly think," said his friend, "it will be the best investment you ever made"

After some further talk, Mr. Chipman agreed to hold that certain amount of stock subject to his friend's order until the following day.

That night the doctor thought much of the matter turning it over and over in his mind, and again robbing himself of his needed rest.

It is a pschological fact, hard of explanation, that any matter which worries one, seems to most effectually get its work and banish sleep at about three o'cock in the morning. Any one who has had business troubes will attest to this fact. About this time Dr. Ruddock woke, thinking over and over this matter unti the morning; thinking of the money that might be made by this means thus securing to his wife and boy the advantages which come from wealth, and which he so longed to have for them.

By morning he had fuly made up his mind to venture the few hundred dollars he had saved, in the enterprise, immediately after breakfast, without consulting his wife for he seemed to know that she would oppose this scheme, he drove down to Newburg, and announced to his friend that he had decided to take te stock.

As soon as the transfer of stock could be made, he withdrew his money from the bank and paid it over, and returned home, the proud possessor of one thousand shares of Gold King. In just three months from that time he received a letter from his friend stating that he was offered $100.00 per share for the same stock, it having boomed even beyond expectation—"I would advise you John to take this offer, you will thus clear $500.00 on your investment, and I have not full faith in that the future of mines will be as rosy as the present. Answer by telegram, and if you sell, meet me at 29 South Street to-morrow, to which place you may address your telegram."

Dr. Ruddock had full faith in his friend, and so answered, "Yes, I will sell."

The following day the Doctor went to New York, completed the arangements and on his way home, stopped off at Newburg and deposited one thousand dollars in place of the five hundred lately withdrawn. Already in imagination the doctor saw himself the rich man he longed to be.

As Charlie stood in his favorite attitude, leaning against his father's shoulder, after tea, that night, Dr. Ruddock told him that he hoped to be able to send him next year, to the collegiate school at Milton, where boys were fitted for college. "That has been my ambition for you all along, but I could not quite see my way to it, but I guess luck is turning our way."

"Is your practice increasing, John?" asked his wife. "I have noticed that you seemed more cheerful of late, and I have not heard you bemoan the fate of a poor country doctor for some time."

"Oh, things are looking up a little, dear," was the ambigious reply.

Some months subsequent, there appeared in Milton, where Dr. Ruddock chanced to be on profesional business, another agent, for the great scheme of extracting gold from sea-water this time. We know it now as an exploded scheme, which wrecked many men, but under the eloquent tongue of Mr. Perkins, it seemed most plausible. "All men know," he said, "that the streams which come down the sides of the hills and the rivers which run into the ocean, all carry much gold in solution so that the ocean water must hold vast quantities of gold and the only difficulty is how to extract it."

"The originator of this company has devised a simple means of doing this, and the company has all the stock sold, with the exception of a two thousand dollar interest, which I am now offering. The company has already been incorporated, and next month will begin operations at or near the Maine seaports. No more stock will be offered, and as the company is a rich one and does not wish to have too many stock holders, this lot will only be sold en bloc."

As the chance of selling did not seem over good, the agent readily agreed to wait a couple of days, until he should hear from Dr. Ruddock, before disposing of the same.

Again our doctor had one of his sleepless nights, new visions of increasing wealth, came to him, and he longed to try his luck, as he termed it once more.

Now it became necesary to take his wife into his confidence. So, after breakfast, after Charlie had left for school, he said to his wife: "Ida, I wish you would come to the study for a few moments, I have something I want to tell you about."

Here he told her how he had all along been dissatisfied with his position in the village, thinking that he was cut out, as he expressed it, for better things, a more lurative city practice ; but knowing how hard it would be for her to leave the old home, and fearing for her health if he made the change, he had been in a measure content to remain at the village for her sake, and degenerate into an ordinary country doctor. He also told her about the investment he had made some time before, and the splendid results; and explained to her very fully the new investment that was now offering. I have often, he said, thought of this same thing myself, there is litle doubt that the ocean water does contain in solution, a vast amount of gold, and it seems that an eminent scientist has perfected a scheme of extracting this gold and there is a chance for all who hold stock in the company to become fabulousy rich. As I have shown you I have already one thousand dollars in ready money, and should you consent, I can put a mortgoge on our place here for the other thousand, but, of course, cannot do it without your aid, as you would have to sign the deed of mortgage.

His wife could not see the matter just as he did, and thought it would be quite enough to risk the thousand dollars, without imperiling the home, but said she, "I have the fullest confidence in your judgment, John. and will do as you think best. Perhaps, we had better as is said, sleep on the matter, and leave our decision until to-morrow."

On the strength of this understanding, Dr. Ruddock felt justified in telephoning to Mr. Perkins, that he would call on him at Milton at two o'clock the next day and to hold the stock for him until that time. As one can readily guess. this the agent agreed to do.

The first thing in the morning after breakfast was over, the doctor broached the subject again and his wife said in reply, that while she would not have possible gain for herself and Charlie; yet she could not but consider that the obtaining riches would make matters much easier and pleasant for him, the doctor, that she would pocket all her scruples and do as he wished."

"Where," she asked, "do you expect to get the money."

"Lawyer Toole," he said will be quite willing to advance one thousand on a place that is worth twice that."

"Oh, John," said his wife, "I dread to be in the power of that man — he

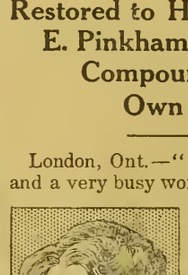
Better Than Spanking.

Spanking does not cure children of bed wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

FARMER'S WIFE ALMOST A WRECK

Restored to Health by Lydia E. Pinkham's Vegetable Compound — Her Own Story.

London, Ont.—"I am a farmer's wife and a very busy woman. Last summer I was taken with severe pains in my back so bad that I could not get up or scarcely move without pain, and my periods were painful. My husband called in a good doctor and I was under his care for some time, but he did me little or no good.



One day a friend of mine told me to try Lydia E. Pinkham's Vegetable Compound as she had been greatly helped by it. I began taking it and soon got well, and my periods became natural again. Since then I have had perfect health. In fact I have never felt so well in my life. Lydia E. Pinkham's Vegetable Compound is a medicine many women need. If you think this letter will help other women please publish it."—Mrs. K. C. YOUNG, Tambling's Corner, London, Ontario, Canada.

Women who suffer from those distressing ills peculiar to their sex should not doubt the ability of Lydia E. Pinkham's Vegetable Compound to restore their health.

If you have the slightest doubt that Lydia E. Pinkham's Vegetable Compound will help you, write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass., for advice. Your letter will be opened, read and answered by a woman, and held in strict confidence.

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would not hesitate, should things go against us, to turn us out of house and home."

"Never fear, dear," said the doctor, "he has a certain amount of respectability to maintain, and would scarcely dare to show so much injustice and if the worst comes, I still have my practice to depend upon."

When he called on Lawyer O'Toole, he found him most affable and he said most certainly, doctor, you can have the money and by 12 o'clock, as you wish. I will despatch my clerk with a check to draw the money at once, and will have time to prepare the document and come up to the house for your signatures by the time he returns. So, if the demand is somewhat sudden, I tihk we can have it by the time you specify."

At eleven o'clock, promptly, Lawyer Toole called, "with the deed of mortgage," as he said rubbing his hands, "all ready for signature. My clerk has not got back yet, but he will be here by eleven, there, I see him just turning the corner now—he will be here inside of five minutes and that will be as soon as you can have your signatures affixed and the acknowledgement made."

The doctor ran his eye over the document, which like most of the kind drawn up by a lawyer, was unnecessarily long:

"Why, what is this," the Dr. said: "I did not agree to keep the house insured in your favor and the mortgage covers all the goods and chattels in the house and barn as well as the premises. You know well that this house and lot is worth twice the amount you are giving me, and alone, should be ample security for your money."

"Oh, well, doctor, it is our custom to include these things and as you will no doubt redeem your property in a short time, it doesn't really matter much and there woud not be time enough now to rewrite it."

"If my wife were here, and knew these things were included, I doubt if she would be willing to sign and I could not blame her; but the case is urgent and there is no time to spare, but, I shall remember you in the future, Mr. Toole, and shall risk my property in your hands as short a time as possible. There is my signature, and I acknowledge that to be my hand and seal. Then stepping to the door, "Ida come here a moment'"

"My husband tells me you want my signature to some document Mr. Toole Have you read it, John, is it all right?

"Yes," with white lips.

The acknowledgcment was duly made, before the young man, Mr. Toole's clerk, who now came in for that purpose, the thousand dollars paid over and Lawyer Toole, seemed to slip out of the door, climbed into the wagon with his clerk and the horse was put down the steep hill at a clip that threatened to endanger their necks He seemed to want to get from under the influence of Dr. Ruddock's stern eyes.

The doctor's horse was soon on the road to Milton, which he reached before 2 o'clock. The deal was closed, and when he started for home, he was the possesor of a large interest in the Ocean Gold Scheme.

The hills of Marlboro as I have intimated, are very steep, so much so, that double seated wagons as well as truck wagons are rigged with a brake, which the driver can apply to the hind wheel, by the use of his foot

It has always been supposed, that Dr. Ruddock's horse, must have stepped on a rolling stone, when going at a fair pace down one of these steep hills, the one that approaches the factory near the boat landing at Marlboro for, sometime afterwards, the horse was found with one front leg broken, making vain efforts to get on his feet and neighing pitifully. and the body of our poor doctor lay not far away, with the neck broken, as it was afterwards discovered. He must have fallen on his head when the horse went down.

The first to discover the accident was a farmer, who was taking a load of poplar to the factory. He gave the alarm and kind friends, for the doctor was a universal favorite, took charge of the body, and after dusting the clothes, and washing the dirt from the face and hands, started a mournful procession towards his late home. Mr, Meredith, an old friend of the doctor's went ahead to break the sad news as gently as possible to Mrs. Ruddock, and was agreeablg surprised to find that she made but little lament. but it was that her grief was too deep for words. When they brought the body into the house, as she placed her hand on the doctor's cold brow, she gave one moan and sank to the floor. She never regained consciousness.

"Heart disease," so said the Newburg doctor who was hastily summoned.

Hundreds gathered from all parts of the country, to attend the double funeral, unusual sympathy being aroused by the exceptionally sad circumstances.

Poor Charlie was left a penniless orphan, in his twelfth year, for under the mortgage, Lawyer Toole took possession of the homestead and all its appurtenanes and the shares in the "great scheme for extracting gold from sea water were worthless, the great bubble had already bursted. A meeting of the villagers was held to see what had best be done for the orphan boy.

A farmer, named, Selden, who lived about forty miles further up the Hudson, on what he termed a back-settlement farm, agreed to take charge of th boy and send him to school, giving him, as he said, his food and clothes, for the help he could render about the house until such times as he would be old enough to look out for himself. This offer, they thought it best to accept, as none seemed to care for the burden of an extra boy, and after extracting a promise from Mr. Sheldon to take good care of him, they placed Charlie and his few personal belongings in Mr. Sheldon's wagon and saw that worthy drive off though not without the shedding of some tears by the sympathizing women present.

When the forlorn boy, reached his new home, tired and sore, from his long journey in the farm wagon, he was far from pleased with the prospects.

The farm buildings were old and rough, and Mrs. Sheldon received them with anything but graciousness. After she had heard her husband's account of how he came to bring the boy, "much use he will be to me," she said, "another back to clothe and another mouth to feed."

In the years which Charlie sppent with the old couple he was compelled to assist Mr. Sheldon with the farm work each summer and only sent to the village school during the winter months.

As he was an ambitious boy he made the most of his opportunities and having a good teacher, who was soon much interested in him, and lent him books and assisted him in every possible way, he still made good progress in his studies. The spring of the year which he was sixteen saw him a sturdy, handsome young fellow, in spite of the fact that his clothes were anything but good, being made over, as they were , from the disused ones of Mr. Sheldon. He never had a suit of new clothes in the whole four years that he spent with the old couple. Still

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THE worries of a day at business, and the chill discomfort of a stormy journey homeward at its close, make home's warm welcome doubly grateful. Cares forgotten, mind and body alike relaxed and comfortable, you feel GOOD.

Not the least of those things that contribute to the pleasure of this home-coming is an

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Write for this interesting booklet about the "Blazer" —Free upon request.

Enterprise
FOUNDRY CO. SACKVILLE, N.B.

his life had not been wholly unhappy. He and the other boys of the school managed to get a good deal of fun from swimming, boxing, trapping and such other things as boys find most entertaining. In all of these sports, Charlie took a prominent part, and had such a powerful stroke that few of the boys cared to put on the gloves with him unles he promised to "go easy"

One warm day in early spring Mr. Sheldon and he were putting a large stone on the drag, to haul it off of a piece of ground they were gong to plow, when the stone, slipping off the side of the drag, bruised Mr. Sheldon's foot somewhat. It was his own fault as he did not lift enought to keep his side up, but, as usual, he chose to blame Charlie for the accident, and, madened perhaps with the pain, gave the youug fellow a cuff alongside the head, the first time he had gone far enough to strike him. He had no sooner done it, than Charie, now a strong young fellow with muscles like iron, gave him a shot under the ear, that sent him reeling backwards.

When the old man regained his senses, our hero said to him, "in all the years I have been with you, you have treated me most shabbily. my living has been a poor one, you have put me at the worst kind of drudgery, you made all my clothes from your own old cast-off garments, and you always seemed to begrudge me my winter's schooling; and you and your wife have been surly and ugly. I have never had a pleasant word from you since the day I came here, and I put up with it al. You never struck me before; that is the one thing I won't stand. I am done with you now. I will uever darken your door again.. I am going to look out for myself after this."

"I'll have the law of you, for this," said the old man. "You'll find you can't run off just as you like."

"You had better just leave the law alone, and me too," said Charlie.

"I'm going to face the world and work for myself now, and I never want to see your face again." So saying, he put on his coat, jumped the fence with an agile bound and started down the highway which led to the river.

He arrived at the long wharf at Roundout, just as the steamer Albany on her way to New York, hove in sight up the river

When the boat was moored to the wharf, Charlie went on board and he made his way up to the pilot house, where the Captain was.

As soon as he saw that officer, (and he knew him by the name in gold letters on his cap), he said:

"Captain, I want to go to New York and I have no money, can I do any work that would pay for my passage?"

The captain looked at him with a quizzling glance: "Running away, eh? Why didn't you sneak aboard and steal your passage, as many of the young fellows do?"

"Because I'm not a sneak, Captain", said Charlie, looking him squarely in the eyes, "and if one of your boys had been where I've been for this last four years, you would have wanted him to run away long before this."

Charlie said this in such a modest yet manly way, that Captain Fownes, who was a most kind-hearted man, was at once interested.

Pointing to a stool he said, "we will be here for about fifteen minutes — sit down and tell me your story, I can see that you will tell a straight story, but boil it down boy, boil it down."

Charlie understoor what he meant, and gave a short succinct account of his life, from the days when he lived in Marlboro, his father's and mother's pride, up to the present time.

"So said Captain Fownes, "you are Dr. Ruddock's son? Many a time he went up and down the river in this boat. I remember him very well and I also remember the whole circumstances of his being killed, and the double funeral, and of Lawyer Tooles dispossessing the young heir, and I am very glad my boy to have it in my power to give Dr Ruddock's son a lift I believe he would have done the very same for my boy, had our circumstances been reversed."

When the boat got under way, again, he had Charlie do some steering under his direction and was pleased to see the readiness which he showed in the work. Why, Charlie, he said, jokingly, I believe in a short time you would be able to take this ship thro' alone.

When dinner was called, the mate came and took the wheel. "Come, Charlie," said the Captain, "let us go to dinner." When they came to the saloon, he said to the steward (all of the waiters aboard this boat were colored people), "I want this young man on my right."

"Yes, Captain."

To sit at the right of the Captain, is considered the highest honor of the dining-room. The Captain's placing him there, insured for our young friend that his wants would be well attended to, and as our hero had had nothing to eat since the early morning, he did full justice to the good things placed before him, and there are few boats, ocean or river, that set a better table than the old Albany.

When they had returned to the pilot house, and the Captain was enjoying his cigar, he turned to Charlie and said: "Well, now; my boy, that you have had a good dinner, we had better come to some understanding about the future. You say you are going to New York to look for employment, what do you expect to do when you get there?"

"I don't know, sir," said Charlie, "but in the big city, there must be a place for such as I. I am willing and able to work. I only ask for a place to start and a chance to work up. I know that I am unused to the work as I will find in the city, but I am willing to start at the bottom but I don't intend to stay there."

"Well said, my boy," said Captain Fownes, "you'll be all right or I'll miss my guess and I very much doubt if the temptations which come to the young men of the city, have much effect on you—the grand qualification for success in a city life, is to learn to say no, to things that lead to folly."

About 6 p. m. the Albany aried at her dock at 23rd Street, as Charlie was walking off the gang plank, having previously thanked the Captain, for his great kindness, the Captain called to him to wait, he wished to see him. As soon as he was at liberty, he said:

"Now, young man, come with me." They walked to Broadway and took the trolley car to Pearl Street. Here they alighted and after walking some distance came to a large wholesale warehouse, with "Price & Co." on the door. Inside the noise was almost deafening, a hundred hammers seemed to be going at once.

(To be continued.)

The First Convention of P. E. I. Women's Institute.

The first Convention of the Prince Edward Island Women's Institutes was held in the Assembly hall of the Prince of Wales College, Charlottetown on June 29th.

The first session was presided over by Mrs. J. A. Matheson, who welcomed the large number of members present in a brief address in which she emphasized the possibilities of the "for home and country" moment.

Mrs. Matheson said:

It gives me much pleasure to preside over this opening meeting of the first annual convention of the Women's Institutes of this province. It is an event full of great possibilities for the future of our people, especially to the young and rising generation.

Of late the question of women's rights has been forced to the front in the Motherland by a frenzied zeal and acts of violence tending to delay rather than advance the cause. We hope to pursue a different course and not only improve the condition and bring about results which will not only improve the condition of women, but will be for the greater good of the children, the men and women of tomorrow.

In looking over the reports of your Women's Institutes and getting some idea of the scope of your work, it seems to me it must tend for good in all departments where women's work is needed most,—first, in the home, then the school and then the social life of the community. It is needless for me to remark that the home in the centre of our work, the heart of the country,—from thence the best inspiration comes. There are matters that will take up your attention, but at present I will deal with one wnich to me is of the greatest importance,—I refer to the schools. There is spent the greater part of the life of our children. We as mothers should see that our school-houses are kept clean and sanitary, and the surroundings as attractive as possible. In the past, in a great many communities, the school has been overlooked and neglected. Anything will do so long as it has walls and a roof. Sanitary conditions are unthought of, and as for beauty in connection with education, why, the matter is unheard of.

Every day we hear more and more of the necessity of sanitation in the prevention of disease, and the cleanliness of our schools should be quite as important as in our homes. No one can do good work in unhealthy surroundings. I cannot emphasize this point too much. If the Institutes now established will make a special effort during the present year to raise the sanitary condition of the schools, they will be pioneers in a much needed reform that will soon remove the reproach from our Islann that the school-house is often the meanest, most ill-kept building in the community. Our hearts should be in the schools:—our greatest treasures are our children, and where our treasures are there should our hearts be also.

Hon. Murdoch McKinnon, Commissioner of Agriculture, then addressed the meeting shortly, congratulating them on the great development they had made. He said that the women's inst tutes were a factor of vast importance in the educational problem which the province had to contend with. In the past they had been guilty of one serious omission, and that was that they had not solicited the valuable help which the women, by these institutes, had proved themselves eminently capable of lending. He did not think that any system of education in the province would be complete without the women's institutes, and that was abundant reason why they should be given a hearty welcome. The Department of

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Agriculture would do all in its power to assist these institutes. There were formerly five school inspectors, whereas at the present time there were ten, the amount of work done by them being thus far more efficient than formerly. And they could see how much more still the inspectors could accomplish if they were given the full support of all the women's institutes. He hoped the proceedings would 'nterest all who were present and would as a result inbue them with such enthusiasm as would enable them to return and do as well as or even better than they had previously done.

Mrs. J. W. Kier, of Mapleque, in a few interesting remarks replied to Mr. McKinnon's address. She felt honored, she said, to represent the delegates of the Women's Institutes of Prince Edward Island and to reply to Mr. McKinnon's very excellent address. Mr. McKinnon had said many good things about them and she hoped they would be able to gleam from the proceedings of the convention ideas which would help them to live up to his good opinions. She hoped they would be able to make their institutes the medium of knowledge and culture. In regard to the schools, the inspectors were somewhat inclined to dwell too much on the fa lings of the teachers instead of telling them how they codld remedy their faults. She thought that this matter might be considered. The teachers, she thought, needed help. She thanked the Department of Agriculture in the name of the delegates, for the hospitality that had been extended to them. She spoke very feelingly about the hospitality of Prince Edward Island too. When she came here nine years ago she received such kindly treatment and such friendliness that she thought that there was no people as good as Islanders. She did not know such things could exist. "The women are all so good and kind here to one another," concluded Mrs. Kier, "and your country is so good, that I sometimes think you don't half appreciate what you have got."

SECRETARIES' REPORTS.

The reports of the secretaries of the various institutes were read. They, without a single exception, showed an increase in membership since their organizations and the keynote of everyone was a better sanitary condition of the schools throughout the country d stricts as a retult of the influence on teachers and parents which the institutes had exercised.

The question of supplying drinking fountains and individual cups to the schools was raised in several of the papers, and it was stated by one of the members that a good fountain could be had for $5.

READING.

The president, in commenting on the excellent reports which had been read, mentioned a matter of great importance and one which should receive carful attention. Mrs. Mathieson referred to the question of reading. She insisted on the necessity to a proper education of the reading of good, sound literature, and not the worthless novels which too many were fond of reading.

On the invitation of the Commissioner of Agriculture Messrs. Boulter and Crockett, two school inspectors who were present addressed a few remarks to the meeting, congratulating the Women's Institutes on the good work which they were carrying out, Mr. Boulter emphasized the importance of the drinking fountain and individual drinking cups. He said the institutes would be able to do an unlimited amount of good if they were fully supported by parents and teachers. Up to the present there was lacking the sympathy of the homes, and he had occasion to state at one school that they would never get where they would like to be in the matter of education until the women had more to say in school affairs.

Mr. Crockett said it seemed to him from the quality of the work that was being done, that the women's institutes, if they continued as they were going on at present, would render unnecessary any school inspectors at all.

There then followed an interesting demonstration in dressmaking, in which Miss S. A. Roper gave a practical lesson in the making of skirts and other articles of feminine attire. From 5.15 to 6 o'clock the time was occupied by a business meeting which was conducted by Mrs. A. E. Dunback.

The evening session was presided over by Hon. Murdoch McKinnon, with the Premier, Hon. J. A. Mathieson, and Mr. R. H. Campbell, B. A., Superintendent of Education, on the platform. Valuable papers were read by S. R. Jenkins and T. F. E. Robins and Miss W. T. Graham, Superintendent of the P. E. I. Hospital.

Following this was a general discussion, led by Mr. R. H. Campbell, B. A., Superintendent of Education. Mr. Campbell spoke on the value of medical inspection and favourably commented on Dr. Jenkins paper. He prophesied that medical inspection of schools was a matter not very far distant. He referred to the amount of sickness which was prevalent as a result of carelessness, which could be remedied by proper medical inspection. He laid stress on the need of greater care in the preparation of children for school; they could be kept dry, clean and comfortable.

The Premier in the course of the discussion congratulated the Women's Institutes on the great work they were doing and appealed to them to co-operate with the inspectors. The Government, he said, would do all in its power to further the movement. They should not, however, be in too great a hurry, but should see that everything they did was perfectly done.

TUESDAY MORNING'S SESSION.

At Tuesday morning's session presided over by Mrs. S. R. Jenkins, Mr. F. F. Smith, B. Sc., gave an entertaining lecture on the subject "School Gardens." He referred to the matter as it was dealt with in other countries, stating that there was hardly any important European nation in which this movement had not been greatly developed. Emigrants from those countries showed a surprising skill in gardening, and this was undoubtedly to be attributed to the school garden work in the lands from which they came. In a country like this, where the agriculture possibilities were so great, it would seem that this school garden work should be made specially prominent. One difficulty that presented itself was this, that in many cases the school grounds did not afford space for any attempts in this direction. It had been suggested that the women's institutes might frequently use their persuasive powers to good advantage in securing the aid of public-spirited farmers in granting the use of sufficient land for a term of years. Probably, if the land could be available for five years the success of the movement at the end of that time would ensure ite continuance after that. As most of the rural schools of the province were small, the size of the plot need not be very large. There should be provision for a small individual garden for each pupil; for the younger pupils, at least it need not be larger than 4 x 10 feet. Mr. Smith developed on this subject in an interesting manner.

Professor W. Davidson gave a practical lesson on school gardening, taking his hearers out to a splendid plot of vegetation on the ' College grounds.

Miss Hortense Phillips gave a practical address on "Home Decoration" and her efforts were highly appreciated by her large audience.

The following are the resolutions of the Women's Institutes arrived at at their business meeting.

RESOLUTIONS.

Report of the Resolutions Committee:

Whereas we have reason to feel grateful far the advancement which the women of Prince Edward Island have made in the Women's Institutestes movement; Resolved, that we express our appreciation of the work accomplisheh, and extend to Honourable J. A. Mathieson, Premier of Prince Edward Island, and Hon. Murdoch McKinnon, Commissioner of Agriculture, and the officials of the Women's Institute branch of his department thanks for their noble service and untiring efforts for the advancement of good health, better homes and better schools, throughout the rural sections of our province.

FIELD WORK.

Whereas, realizing that our province has yet considerable territory where there are no women's institutes; Resolved, that we recommend to the Department of Agriculture that the women's institute movement be extended as much as possible during the coming year, and urge upon the public in general the benefits to be obtained from these organizations.

SCORE CARDS.

Whereas, score cards have been arranged for the judging of bread, canned fruits, canned vegetables, jellies and preserves: Resolved, that these cards be put into general use.

EDUCATIONAL COURSES.

Whereas, we realize the great benefit to be derived from instruction in household science and manual training: Resolved, that we urge the members of the women's institutes to use their influence in securing the introduction of these courses upon the school curriculum of every rural school throughout the propin(e.

Whereas, considering the growing interest in the excellent results from the short courses given in the past by the Department of Agriculture to the women in the province: Resolved, that we express out heart appreciation to thase officials for their valuable assistance; and Resolved, that we ask the Government for their favorable consideration for the continuance and extension of the work; further Resolved, that we ask the Gov ernment for their co-operation in the granting of the services of capable instructors to the womens institdtes for short courses in dressmaking and home nursing during the institute year 1914—1915.

WOMEN'S INSTITUTE PIN.

Whereas the desire for an institute pin has been expressed by members of the institutes of the province. Resolved that we ask the Government to advance a sufficient sum required to purchase these pins, the same to be placed to the credit of the institutes on payment of same by members.

Whereas this meeting has been enjoyed by all: Resolved, that we extend to the offieers in charge of the convention our thanks for their ex-

(Continued on page 738.)

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Dates to Remember.

St. John Exhibition, St. John, N. B., Sept. 5 to 12, 1914.

Haliax Exhibition, Halifax, N. S., Sept. 12 to 19, 1914.

St. Stephen Exhibition, St. Stephen, N. B., Sept. 15 to 18, 1914.

Charlottetown Exhibition, Charlottetown, P. E. I., September 22 to 25, 1914.

Sydney Exhibition, Sydney, N. S., Sept. 29 to Oct. 3, 1914.

What's Being Done to Put the Home on a Business Basis.

(Continued from last issue.)

First of all, the efficient attitude of mind for the housewife and homemaker is to realize that, no matter how difficult and trying are the household tasks and burdens she finds placed upon her, there are positively ways to meet and canquer them efficiently—if she approaches these problems vigorously, hopefully and patiently.

Secondly, that far from being dull drudgery, home-making in all its details is fascinating and stimulating if a woman applies to it her best intelligence and culture.

Third, that no matter how good a housekeeper and home-maker a woman might be, she will be eager, not only to try, but to persistently keep on trying, to apply in her home the scientific methods of work and management already proved and tried in shop and office throughout the world.

If housework is drudgery to a woman it is only because that woman has not in her mind the conception of mental interest which lies within her work. She sees nothing more to conquer in it; her mind has become fatalistic concerning it. She refuses to avail herself of the improved equipment and efficient methods of human labor which the outside world is evolving, and she does not delve into the mysteries and unsolved problems of her own sphere. She does not know that her lack of analytical interest is part explanation of her fatigue and dislike.

The art as well as the science, of homemaking, if followed out on an intelligent basis, is the most all-satisfying, broadening, and stimulating career open to any women, and one which offers her widest talents their most varied scope. Home-making is broader and more inspiring in its opportunities today than it ever was. In fact, home interests have already been extended into the field of municipal politics, education, economics, chemistry of food, hygiene, sanitation, etc., but the great mass of women have not followed them. Like hens with ducklings, they are dissat sfied to stand alone in their oldfashioned kitchens and homes, but yet hardly dare follow their ducklings into strange elements! The home has grown faster than they!

Of course, many women disparage any serious effort to revolutionize home work. There have been many critics of "efficiency" in the household. Magazines have printed humorous skits and stories telling the sad adventures encountered in "standardizing Lizzie" or making "motion studies," of minding the baby. I have laughed at them all and welcomed them all, and was, if anything, sorry that the magazines and newspapers were not full of more of it! None would deny that the home is still operated on more or less medieval lines, or that vast number of women yearn to get away from its chains: but with the familiar human conservatism, they fight or ridicule remedies proposed.

On the whole the critism has been slight and far between, for the good practical sense of women who think at all, is interested in the very logical idea of using the successful science of mastering work outside the home for mastering the work inside the home.

As Frank Gilbreth, of whose pioneer work in factory motion study we have already spoken says; "Housekeeping is an industry which embraces a variety of activities and, like all other industries, it can be well managed or badly managed. The saving of strength of the housekeep-

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SANDEN, AUTHOR.

MANLY, VIGOROUS MEN RULE THE WORLD

In reference to manly strength, I believe it is now more generally acknowledged than ever before that the manly man stands back of all that makes for progress, development and achievement in the world, a truth which any of us can easily verify if we but look about us with impartial eyes.

As a matter of fact, the man who is debilitated, unstrung and enervated cannot, for perfectly obvious reasons, expect to approach those real and masterful attainments which seem but a natural and easy accomplishment for him whose nerve force, brain power and manly strength are perfectly normal. Hence, we acknowledge the debilitated, weakened man to be handicapped in every walk of life where real manhood counts, yet it would indeed be cruel of me to here so state the fact in public print were I not of the honest opinion that there is every hope for the unmanly man to restore himself to a state of health and vigor, if he but clear his mind of abnormal fear, and then make a fair, square effort to redeem himself.

There are two specimens of humanity for which I have no earthly use. One is the man who, though now strong and vital, yet plunges into dissipation and excess with the certain knowledge of his unmanly fate. The other is the man who, though knowingly debilitated and enervated, makes no effort to get away from his life of dissipation and wrong practices. As a matter of fact, there is no hope for either of these unfortunates But for him who acknowledges his errors, who may come to me and say, "I have paid the penalty of my past follies, but I am THROUGH with my life of dissipation, and I am going to make a manly effort to restore myself," to such a man, I carea not what his physical condition may be, I can say in all truthfulness, "You, my friend, are on the right road to new strength and new manhood", for he really is, and there is no doubt about it.

I make a little appliance that I call a VITALIZER, which I designed to aid just such men who seek manly strength. I am not offering this VITALIZER here for sale, but merely suggest that you, reader take this opportunity to learnall about what this little appliance is doing today everywher e throughout the world; then, if in the future you want to use one yourself and will so write me, I will gladly make some liberal proposition whereby you may have one to try. The VITALIZER is fully described in one section of the free book which the coupon below entitles you to.

The VITALIZER is made up in a very light form weighing only several ounces, and you wear it on your body all night. It generates a great, soft, pleasant FORCE which I call VIGOR, and which flows in a continuous stream into your nerves. organs, blood and muscles while you sleep. I am satisfied in my own mind that I have access to a great POWER in this little VITALIZER which in the future will be more and more relied upon all over the world in the treatment of debilities and nerve weaknesses.

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The little free illustrated book of special private information, referred to above, is meant really to be a self guide for all men through the years before and after marriage and onward to a ripe old age. It is written in perfectly plain language, entirely free from technical terms, so that any one may easily grasp the full power of its good advice from two or three careful readings. It attempts to point out a safe road to new manhood or new manly strength, and as such is dedicated to mankind generally. One part of this book fully describes my little VITALIZER referred to above.

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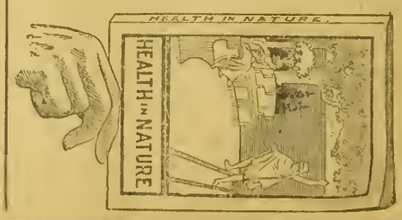

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er, the finding of time for rest and recreation, as well as the right use of money expended for the household, depend in a large measure upon the skill of the housekeeper and her efficiency as a manager and as a worker. It would seem that principles that have proved of use in the scientific management of commercial industries might have application to the business of housekeeping.

"There is undoubtedly a waste of time, energy and money, resulting from imperfect organization, or from the absence of organization of the work of the household."

Mr. Gilbreth again, speaking before the American Home Economics Association at Lake Placid in 1912, has suggestively outlined the two basic plans of management of all human business, in a way which has significance to the work of woman. He says:

In all organized work there are two plans of management. The first of these represents what is variously known as military, or traditional management. Under this plan each man is responsible to one man only above him, and is in charge of all below him. Thus it is the custom for any man to come in contact with only one man above him, the line of authority being single and direct. Traditional management has been used for centuries in military organizations and political organizations. The division is by men, or by grades of men, rather than by functions.

Under the military plan the worker receives orders directly from eight different foremen. It has been said that no man can serve two masters and this is true even in scientific management. But under scientific management the worker does not serve eight masters, nor eight functional foremen, but, on the other hand, he receives help from eight different foremen or teachers. In this way his case is not very different from that of the student who receives instructions from eight different professors, in eight different studies.

The military or traditional plan of management is outgrown in industry—it is also being outgrown in the home. The woman must have more sources of management knowledge—there must be more available sources of personal efficiency counsel, such as business and industries are now organizing for themselves.

Lectures on domestic science and home efficiency have increased by the hundreds; in fact, interest in domestic science courses and lectures was a forerunner of the efficiency idea. Next in importance, perhaps, has been the development of the pure-food movement. It has been brought home to the American woman that family efficiency is dependent on healthful cooking and on knowledge of food values. Efficiency in buying has been further stimulated by the formation of such organizations of club women as The Housewives' League, Consumer's League, etc., which try to obtain closer co-operation and less waste between the producer and consumer, and in the social and economic sense are working toward the same ideal of more scientific management of the home.

As evidence of the great interest in bringing the home to a more scientific basis there have been innumerable articles and speeches from experts on the "budget" plan of effecting home economy. The methods followed by governments and corporations have been noted, and the same methods adapted to the handling of home finances. Instead of guesswork and slouchy accounts, the home-maker is being shown how to proportion her income to the various departments of operating expense—rent, food, shelter, and clothes—and by business discipline to keep within the "appropriations."

IMPROVED EQUIPMENT.

The increasing demand among householders that hand labor shall be replaced by machinery, just as it is done in the factory, has created an immense market for the manufacture of labor savers and devices for the home. Some one has suggested that there is a new egg-beater born every minute! Certainly the number of devices and apparatus is greatly increasing—quite beyond the bounds of reason. It is quite certain that women overbuy in household equipment of the cheaper kind, and neglect to buy important and efficient equipment of good quality. There are a great many splendid time and labor-saving articles for the home which are comparatively unknown, but which deserve wider use and appreciation.

WHAT THE SCHOOLS ARE DOING

The domestic science schools are now turning their attention more to the practical side of their work, making it rather the application of practical knowledge than the art of "teaching teachers to teach teachers."

This is evidenced by the large number attending summer classes at Teacher's College, Columbia University; and one of the most significant of all tendencies is the number of actual housekeepers who are attending school in spare time trying to bring more science and intelligence into the management of their homes.

Out of one class of forty at Teacher's College, it is authoratively stated "that twenty-five were either housewives, or were taking the course expecting to use this knowledge in their housekeeping. A few out of that number were teachers, too, but were working out as a sort of a side issue efficiency problems while they kept house. The number of housewives attending this institution is increasing—those that come for but one course or two, as they are able—hoping to become enlightened on some of these difficult household problems."

More than 200 persons took brief courses for home use in some household science subject last year in the School of Household Science and Arts of Pratt Institute, Brooklyn.

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THE PROBLEM OF THE FARMER'S WIFE

Typical for the increasing attention to the needs of the home-maker among universities is the work at Cornell and the University of Wisconsin. Wisconsin offers courses to housekeepers, first, in connection with the Farmer's Institutes, of which forty-four are held every year throughout the State under the direction of the Board of Agriculture. Then, there are short courses lasting from three days to a week, held under the auspices of the Agriculture Extension. In these, the farmers have lectures and demonstrations. Every year, beginning the last week in January and lasting through the first week in February, the College of Agriculture holds a two weeks' short course for farmers and farmers' wives. The attendance last year at the Women's Course in Home Economics at the University of Wisconsin was between 600 and 700.

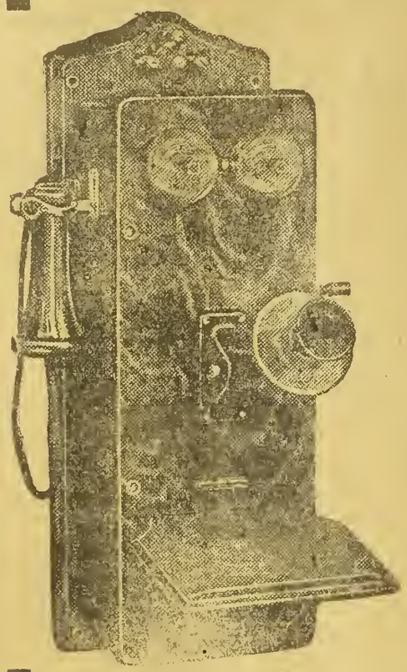
Most significant of all, perhaps, is this now fast-increasing interest in the rural woman's problems. It has been remarked many times that while governments—both State and National—spent actual millions upon decreasing the toil and increasing the results of the man's work on the farm, nothing has been done for the farm woman. The farm kitchen is still in the archaic wheat with the cradle scythe—but the barn is full of wonderful new machinery! The cooking is no better, while the cooking utensils are practically unchanged.

As a matter of fact it was the Western agricultural colleges, trained to be alert for the modern and the scientific, which were among the first of all educational institutions to give welcome place to domestic science courses. The buxom corn-belt farm girls learned how to "balance a meal" before the pampered daughters of New York and the East knew there was such a thing. The practical side of life has always appealed to the mid-Western rural folk, and they were not slow to use their opportunities.

We may, therefore, look for a science in the farm kitchens as well as on the farm fields, in the work of the vigorous generaeion. Already the new Secretary of Agriculture has announced an intention of giving serious thought to the problem. It will be a great social blessing, for it is true that farm women have suffered a greater share of insanity that any other class of women, due to but one thing—monotony; brainless effort—unused mental faculties.

In a degree the same problem of monotony and aimlessness which scientific management has had to deal with in the shops is one of the most serious which the application of efficiency has to deal with for home women. It cannot be denied that the task of stimulating women in individual homes—where there is no competitive spur, no organization, and no required discipline and accounting—is a big one. Cynical editors of great women's periodicals openly say that women over thirty-five are hopeless—they can't be budged by any idea or prod; that only the younger generation is responsive. But the women under thirty-five are counted by the million, and they have the next generation in their keeping. To win them is to establish the new home-making—the life for woman freed from demeaning house drudgery—the opportunity to give thought and care to the wider range of interests which it is now certain will be a woman's future sphere. She will follow the old home interests out into wider life where they have scattered, and she will be as she always has been, faithful first to home and family interests, once she has found the key to her own personal development to meet her greatly changed enivronment. And that key I firmly believe to be the application of Emerson's twelve principles of efficiency.—Christine Frederick in Every Woman's World.

Independent Systems Constantly Growing



The number of municipal, government and independent local telephone systems in Canada is constantly growing. The independent telephone movement, in spite of tremendous opposition, is a huge success. If your locality is without telephone service, write us and we will tell you the steps to take to organize an independent telephone system.

We are the largest Independent Telephone Manufacturers in Canada. We carry complete stocks of guaranteed telephone materials, and can make shipment within 24 hours after receipt of order. Our telephones are superior to others in design, material and workmanship. Send for Free Trial so that you can test and compare with others.

Ask for No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4 describing our magneto telephones is free on request.

Let us quote you on your year's supply of dry cell batteries

Canadian Independent Telephone Co. Limited

1820 Duncan Street, - - Toronto

Also Manufacturing Agents for the Magnaphone Co. under Geo. R. Webb, Canadian Patent No. 123367, No. 142513, No. 142514, No. 142537, No. 142621, No. 131145

The First Convention P. E. I. Women's Institute.

(Continued from page 734.

cellent programme, and those taking part in the same, for their valuable addresses.

Whereas the Prince of Wales College Hall has been placed at our disposal for the convention: Resolved, that we extend to Dr. S. N. Robinson our appreciation of the kindness in opening its doors to us and in other ways adding to the pleasure and convenience of those in attendance. (Sgd.) A. Ethel Dunback, Chairman; E. M. Wright, J. W. Kier, and W. W. Crosby, Committee.

In the absence of Miss Carrie Holman, the president of the Prince County branch of the Canadian Handicrafts Association, Miss Helena McDonald read an interesting letter in which Miss Holman expressed her sincere appreciation of the good work of the Institutes and wished it abundant success in the future, Miss Holman's letter was listened to with marked attention and enthusiasm, and was of a nature to inspire the members with an adequate appreciation of the enormous amount of good which may be the outcome of their efforts.

At the close of the meeting Mrs. Wright expressed her appreciation of the excellent work which Mrs. Dunback and her assistants were doing and moved a vote of thanks, which was unanimously carried.

A Remarkable Operation.

Charles Pickney, Melbourne, Yarmouth, the well known breeder and exhibitor of Devon cattle successfully underwent one of the most, if not the most, remarkable operations, ever performed by medical science in the Peter Brigham hospital, Boston, a few days ago. For some months past Mr. Pickney had been suffering from what was supposed to be paralysis. As the disease grew worse he was advised to get away for treatment. He went to Boston and entered the hospital, where a most rigid examination by means of the X ray and other devices was made, but nothing could be found. They advised an operation and he consented, with the result that Dr. Harvey Cushing, assisted by Professor Councilman, the great pathologist, have made the mark of a new era in medical science.

An incision was made near the spine and the fifteenth vertebra was removed, but no obstruction was found. This was replaced and the same treatment was given the fourteenth and so on up to the sixth and still nothing was discovered. Fearing that the continuance of the operation along these lines would prove fatal, that process was stopped and a probe was brought into use which located an obstruction at the fourth vertebra. On removing this section of the spine a small tumor the size of an olive was found pressing against the spinal cord. This was taken away and now Mr. Pickney is on the complete road to recovery.

EVERY FARMER SHOULD KNOW

how to make the most money out of his land. If your Fall Wheat crops have been diseased and poor, there is a seed dressing that will ensure you a better field at trifling cost.

CORVUSINE D.G

prevents ground rot, assists germination and is an excellent smut dressing. Corvusine is NOT poisonous, birds and animals will not touch it, and it has none of the dangerous features of bluestone and other obnoxious chemicals. 1

WRITE FOR PARTICULARS OF THIS WONDERFUL SEED DRESSING TO

McArthur, Irwin, Limited - Montreal, P.Q.

GOODS SATISFACTORY OR MONEY REFUNDED, INCLUDING SHIPPING CHARGES.

EATON'S

FREE DELIVERY
WE PREPAY SHIPPING CHARGES ON $10.00 ORDERS AND OVER

WEEKLY MAIL ORDER BARGAINS

YOU CAN SAVE QUITE A BIT BUYING NOW

FOR THIS WEEK'S SELLING WE HAVE SECURED SOME VERY SPECIAL BARGAINS THAT SHOULD TEMPT ONE AND ALL TO BUY. WHEN YOU CONSIDER THE BIG SAVING YOU CAN SECURE ON ANY ONE OF THESE ITEMS YOU WILL READILY UNDERSTAND OUR ADVICE TO ORDER EARLY. WE EXPECT A RUSH OF ORDERS, AND, AS THE SUPPLY IS LIMITED, THE EARLY BUYER WILL BE FORTUNATE.

THIS DAINTY
MESH PURSE
WITH LONG CHAIN
29c

USUALLY SOLD AT A HIGHER PRICE

28-F75. By making a very fortunate purchase of these dainty **Finger Mesh Purses** we are able to offer you one of the best bargains possible for this class of goods. This is a very serviceable article, and extremely neat in appearance. The frame is 2-inch, and the long chain and purse is silver-finished. Send along your order for one of these purses, and you will be delighted with the great value you receive. **A bargain price, each.. 29c**

A BARGAIN EXTRAORDINARY

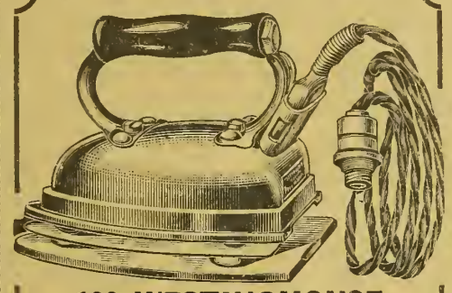
YOUR CHOICE OF THESE THREE STYLES
EACH **79c**

20-F32. 20-F35. 20-F34.

HERE'S A GREAT DRESS GOODS BARGAIN
BLACK CHIFFON BROADCLOTH

79c PER YARD

46-F42. A Guaranteed All Pure Wool Black Broadcloth of French manufacture, having as lustrous a finish as a silk, which it retains to the end, giving exceptional service. An absolutely perfect dye and weave, also it is thoroughly shrunk. **52 inches wide.** Order at once. Quantity is limited. Greatly reduced price. Per yard.... **79c**



100 WESTINGHOUSE ELECTRIC IRONS 2.50
TO SELL AT
A BIG BARGAIN INDEED

10-F12. Every housewife who has the use of electricity should have an **Electric Iron.** It is an appliance that saves a great deal of hard work and discomfort in the weekly ironing. By an unusual special purchase we are offering reliable Irons manufactured by one of the best known makers at a remarkable lowering in price, in same style as illustration, handsomely finished, with nickel-plated top and smooth grey steel bottom, in 6-lb. weight, a good domestic size, runs at small cost on 110-volt circuit. **Special price..... 2.50**

WE HAVE NEVER KNOWN OF SUCH A
PHENOMENAL PARASOL BARGAIN

JUST THINK WHAT YOU SAVE

Space will not permit us to go into detail regarding the saving value on these **Parasols.** All we can say is now is the time for sunshades, and now is the time to buy at this low price. Never before have we offered such a bargain.

20-F32. Colors Champagne, Saxe Blue, Mauve or Tan.

20-F34. Colors Black base with White, or White base with Black.

20-F35. Colors White, Sky, Pink, Mauve, Champagne or Saxe Blue.

As there is only a limited quantity, we would advise ordering quickly, **and be sure to state the color. While they last, each.. 79c**

ANOTHER WONDERFUL SAVING FOR YOU
WOMEN'S LONG LISLE GLOVES
TO CLEAR

23c

WE WOULD ADVISE BUYING FOR FUTURE USE AT THIS PRICE

20-F33. Have you ever heard of such a bargain like this before? Just think! A pair of **Women's 22-inch Long Lisle Thread Gloves** at less price than what you would pay for a pair of short gloves. This glove is of fine lisle thread, with two dome fasteners, and raised points on backs. **Sizes 6½, 7, 7½ and 8. Black only. To clear at half price. Per pair 23c**

THE T. EATON CO LIMITED
TORONTO - CANADA

Canning and Preserving Hints.

Add ¼ currant or rhubarb juice to the strawberry juice for jelly. The flavors combine very nicely.

Boil together until tender ripe tomatoes, okra and corn, with water enough to cover, add salt to taste, and can and seal while hot. This is nice to use for vegetable soup.

When canning tomatoes save some of the juice to put in with the canned corn. It is a perfect preservative and much to be preferred to certain health destroying acids frequently used. Pack the corn closely in the cans, fill with strained tomato juice, and seal and boil 1 hour. Tomatoes and corn spoil more easily when exposed to the light.

C. A. Archibald is planning to devote his undivided attention to his magnificent herd of Shorthorns. And is therefore gradually reducing his Ayrshire herd. When Mr. Archibald first started in the dairy business he was only eight years of age when he drove his first load of milk to Truro. He has driven many loads of milk since then and he now feels that with the high demand for beef cattle he can dispose with the labor incident to the care of a large dairy herd. Mr. Archibald has always stood in the front ranks of Shorthorn breeders in the Maritime Provinces. He has raised and sold many good ones.

Advertise in the Maritime Farmer.

Thought She Would Lose Her Little Girl

From Severe Attacks of Summer Complaint

Mrs. Wm. Hirst, 194 Palmerston Avenue, Toronto, Ont., writes us under date of January 23rd, 1914.

The T. Milburn Co., Limited,
Toronto, Ont.

Dear Sirs:—"Last summer I had grave anxiety for my little girl, who was just one year old in July last. She had constant and severe attacks of summer complaint, and it seemed to drag on her so long despite the many remedies I tried. My neighbors told me she had grown so weak they thought I would loose her. One night while nursing her an old friend of mine happened to come to see me, and after telling her about my baby's lingering illness she asked me to try Dr. Fowler's Extract of Wild Strawberry. I sent a little girl to our drug store and bought a bottle, and after having given the baby one dose I noticed a remarkable change, and after giving her three or four doses she was well again, and began to walk, which she had not been able to do prior to her attack. She is now a fine healthy child, and I owe her life to that kindly advice of an old friend. I would advise all mothers to give "Dr. Fowler's" a prominent place in their medicine chest."

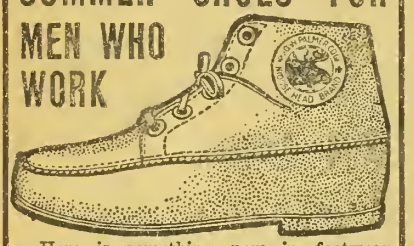
Yours truly,
(Sgd.) Mrs. Wm. Hirst.

When you ask for Dr. Fowler's Extract of Wild Strawberry see that you get it.

It Has Been on the Market for Nearly Seventy Years. Don't Accept a Substitute.

The price of the original is 35 cents, and is manufactured only by The T Milburn Co., Limited, Toronto, Ont.

SUMMER SHOES FOR MEN WHO WORK



Here is something new in footwear specially suitable for farmers, woodsmen, millmen, trackmen, laborers—all those needing strong yet light, cool, easy shoes. These are made on good-fitting right and left lasts from our famous oil-tanned Skowhegan waterproof leather with waterproofed sole leather outsoles and solid insoles.

Palmer's "Moose Head Brand"
"SUMMER PACKS" and "HARVEST SHOES"

are light weight, comfortable, durable working shoes for spring, summer and fall wear. Sold by leading dealers everywhere. If your merchant does not carry them write us, giving his name and address, and we will see that they are placed within your reach. Made 4, 6 and 9 inches high. 19

JOHN PALMER COMPANY, LIMITED
Fredericton, N. B. - - Canada

FITS CURED

Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits—Simple home treatment—25 years success. Testimonials from all parts of the world; over 1,900 in one year.

TRENCH'S REMEDIES Limited
434 St. James Chambers, Toronto, Can.

Dysentery is often serious and often a dangerous disease, but it can be cured. Chamberain's Colic, Cholera and Diarrhoea Remedy has cured it even when malignant and epidemic. For sale by all dealers.

Artificial Breeding of Mares.

The practice of impregnating mares by hand rather than by the service of the stallion is a comparatively recent practice, but one which is growing in favor as those who adopt it become more efficient in the operation. The idea is a simple one. It is this, that in the service of a stallion there is a sufficient quantity of semen to safely impregnate a large number of mares if this semen were distributed. Artificial impregnation then is simply the operation of distributing the stallion's semen among several mares rather than leaving it confined to one. The ease with which mares can be handled makes the operation of artificial impregnation quite feasible, and the demand for the services of the best stallions is frequently so keen that it is found good policy to save the horse's energy as far as possible. The extent to which a stallion may be used is not definitely settled. Many horses are given a cover every two or three hours, some three or four services to two a day or ten a week is growing. . When the object is to save the energy of the horse and to settle from one to two hundred or three hundred mares in the breeding season the practice of artificial impregnatian must be followed.

For the purpose of artificial impregnation certain devices are made. These are an extractor for drawing the semen from the mare which has been covered, capsules or impregnators to contain the semen and transfer it to other mares, hot water boilers, towels, gloves, etc.

In extensive artificial breeding operations other instruments will be required, such as microscope, thermometer, speculum, impregnators if capsules are not used, breeding hobbles and materials for testing and treatment for unhealthy condition of the female organs.

When one is going to do artificial breeding either on his own mares or for customers he should arrange to have an umber of mares on hand at the barn. Then one mare, preferably one with a foal and in good health, is given the natural service. The others have previously been examined and the condition of their organs noted. Mares that are diseased, as indicated by unhealthy discharges, should be set aside for further treatment. Those whose cervix (mouth of the womb) is grown over should be opened up and everything made ready for quick, accurate work. The details of the operation when capsules are used are well described by the "American Breeder" as follows:

BE CLEAN AND QUICK.

Every breeder should have a provision for boiling water and a place in which to wash his hands, and a good number of clean towels. This preparation is absolutely necessary whether artificial breeding is done or not. No mare should be opened up until the hands have been thoroughly washed with soap and water, and rinsed in sterilized (boiled) water. Do not use any antiseptics or grease during breeding operations of any kind. The hands should always be washed before being inserted into the next mare, whether it is for the purpose of examination or inserting capsules. A number of small towels should be on hand and they should be sent to the laundry after being used once. This will not be very expensive for the towels are small.

An old wash boiler can be used for boiling the water. Another large vessel with a cut-off valve in it should be located within easy reach so that the hands can be rinsed under the stream without much waste and not contaminate the water. All

TAYLOR'S
SOLID LEATHER SHOES

Mr Consumer
See that the next pr. of Shoes you buy thav e the name TAYLOR stamped on the Sole.

Mr. Retailer
If you want to increase your Trade keep a stock of the TAYLOR solid leather Shoes.

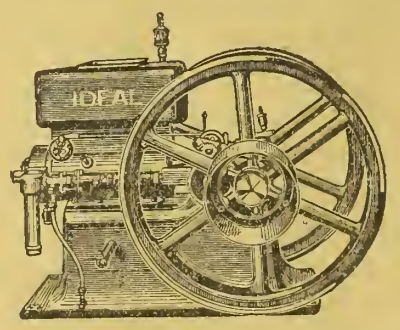
The Red T Brand of Boots and Shoes that we have put on the market are made of **Solid Leather** and on the **latest style** of **Lasts.** Ask your dealer for the

RED T BRAND made by

The Robert Taylor Co., Limited
Halifax, N. S.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



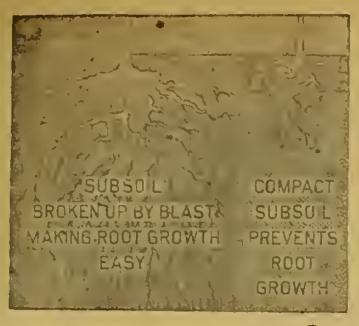
Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and
Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.
A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.



The above cut clearly demonstrates the advantages to be gained by planting trees in holes exploded with C. X. L. STUMPING POWDER. The ground is so pulverized that the roots can immediately expand in search of nourishment.

Also used for clearing land of stumps and boulders, ditching and subsoiling.

Write for Booklet.

BLASTERS WANTED

Many farmers prefer to hire blasters. Demand exceeds supply.

Write for information.

Canadian Exploives, Limited,

Montreal, P. Q.; Victoria, B. C.

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Land Agency or Sub-Agency for the District. Entry by proxy may be made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required in every case, except when residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead Price $3.00 per acre.

Duties—Six months residence in each of six years from date of homestead entry (including the time required to earn homestead patent) and 50 acres extra cultivation.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price $3.00 per acre.

Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land.

W. W. COREY,
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—58783.

If you are a housewife you cannot reasonably hope to be healthy or beautiful by washing dishes, sweeping and doing housework all day, and crawling into bed dead tired at night. You must get out into the open air and sunight. If you do this every day and keep your stomach and bowels in good order by taking Chamberain's Tablets when needed, you should become both healthy and beautiful. For sale by all dealers.

of this preparation is necessary for natural service breeding. No breeder can expect to have the best results without making examinations.

All the mare owners present are instructed to hold their mares and assist each other during the breeding operations. One man should hold the mare's head while a neighbor holds up one front foot. When the breeding work starts they should lead their mares up close to the work and have the mares take their turn rapidly. It is best to have a box with a few capsules in it near the door where the neighbors can examine them; then they will not interfere with the clean capsules.

Ask those present to do their visiting after the breeding is done so as not to interfere with the rapidity of the work when it is started.

The semen extractor is sucked full of boiling water and squirted out several times; then it is rinsed in boiling water and laid in a galvanized pan 40 inches long, eight inches wide and six inches deep. This pan has been scalded and is now full of sterilized (boiled) water at 100 degrees. A bowl, preferably of earthenware, holding about a half a gallon, should also be scaled out and placed in the pan in which the water should be kept at 100 degrees. If the one who handles the stallion is to do the breeding he should thoroughly wash his hands, then put on a pair of white cloth gloves (that can be bought for ten cents) which have not been used since being boiled. He should have several pairs of these so as to have a clean pair each time.

AVOID SUNLIGHT.

The helper (who may be a visitor) is instructed to thoroughly wash his hands and bring the semen extractor and the cup, both full of warm water at 100 degrees, when the stallion makes the service. The one doing the breeding can remove the white gloves, take the cup containing the warm water, which has kept it warm, and throw it out so as to catch the semen in case any is spilled or withdrawn. If it is caught in the cup the extractor is quickly emptied and sucked into it. Then proceed with the breeding. If no semen is withdrawn the water is emptied out of the semen extractor and the operator then proceeds to get the semen from the mare. After the semen is sucked into the extractor the long point is quickly removed; a plug is inserted into the extractor, which retains the semen. The extractor is then inserted into the vagina of the mare, where it is sure to retain the proper temperature. More failure in artificial breeding have been caused by not keeping the right temperature than from any other causes excepting the presence of disease.

The helper (whose hands are washed clean) is then instructed to hold the extractor in the vagina of the mare. A number of capsules have been placed on a clean towel and a portion of the towel has been thrown over them to keep them free from dust. The caps have been removed and the operator holds the capsule in a shaded place while the helper fills the capsule half full. If the semen should come too fast it can be sucked back into the extractor and cut off. The helper then should put the extractor back into the mare while the operator quickly places the cap on the capsule and closes his hand about it so as to keep it warm and away from the direct rays of the son. Breeding can be done successfully even on a very bright day, provided the direct rays of the sun do not strike the semen.

The operator should wash his hands before breeding the next mare, so as not to carry infection from one mare to the other. If a doubtful mare is bred with a capsule she should be bred last. The mare upon which the natural service is to be made should be a mare with a colt by her side, if ipossible, because she is usually healthy and free from disease. She should also be gentle. The helper should be instructed how to insert the extractor into the mare so as not to cause the mare to be excited. If the semen is taken from the uterus there is very little necessity for rebreeding the mare which has been served. If the semen is caught in a bowl or taken from the vagina, then it will be necessary to breed that mare also with a capsule.

The Natural Temperature Semen Extractor practically does away with the chances of the semen getting too hot or too cold. Most breeders who have failed have cooked the semen. The semen should never get below 95 degrees or above 101 degrees. There is no reason why practically every breeder in the country cannot make a success of capsule breeding if he will follow these rules. A little thought on the subject will save the ordinary breeder hundreds of dollars in money, give him and his breeding stock a better reputation and be an advantage to his customers.

BREEDING WITHOUT CAPSULES.

If the breeder does not care to use capsules and prefers to use the instrument known as the artificial impregnator, he proceeds in very much the same manner as for capsules, but instead of transferring the semen

ECONOMICAL----Heats the house well without burning all the coal you can buy.

McClary's Sunshine Furnace

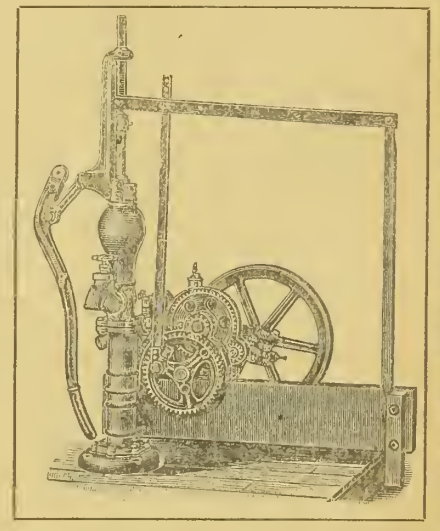
30

Gives steady, even heat on least fuel.

See the McClary dealer or write for booklet.

THIS LITTLE ENGINE

is designed to take the place of the man at the pump and anyone who watches this outfit pump water for ten minutes will never again be willing to work the pump handle. The operating cost is very small and a splendid feature is that this engine can be easily connected to "any old pump." The ladies often start it to pump a single pail of water. They rest while it works.



The Outfit Complete as shown sells for $70.00. The engine alone $55.00. Immediate shipment from stock.

The A. R. Williams Machinery Co., of St. John, N. B., Limited,

15 Dock St. ST. JOHN, N. B. 34 Nelson St.

BRAS D'OR LAKES, CAPE BRETON

Canadian Government Railway's New Publication: An Excellent Folder.

Railway publications rank high in publicity literature, and the Canadian Government Railway's Cape Breton folder will take a foremost place in the 1914 productions.

Bras d'Or, or "Arm of Gold," suggested a design for the cover, and one which the combined skill of artist, engraver and printer have successfully carried out in the reproduction by the quadricolor process of a beautiful sunset scene of the Bras d'Or Lakes near Baddeck.

Last year a landscape artist prepared for ; the Railway a realistic topographical map of this beautiful section of Nova Scotia embellished with typical inserts of sea bathing, trout, tuna and sword fishing, and miniature views of Mulgrave, Sydney and Baddeck. The painting has been prominently displayed in Toronto, Montreal, Ottawa, Sydney and at the present time is on exhibition in an important throughfare in Boston. Wherever shown it has created a wonderful interest, resulting in numerous enquiries and actual ticket sales to this glorious summer country.

The make up of the Bras d'Or folder permits an exact production of this painting, the six page centre spread being entirely used for this purpose. The descriptive portion of the folder is profusely illustrated in half tones of very fine screen, and tells the reader how to reach Cape Breton, and just what he may expect to find there.

"The Cape Breton of today is a land of summer loveliness, a vast island wherein are other isles innumerable. Its shores are washed by the billows of the Atlantic, and by the Gulf of St.Lawrence. The shining waters of the Bras d'Or Lakes divide it in twain, and provide a spacious water way through the interior. There are too, numerous rivers, streams and fresh water lakes. To this variety Cape Breton owes much of its charm; nothing is monotonou nothing tame, and on every hand the scene is calculated to fill the mind with emotions of the keenest pleasure. No pen can adequately describe the scenery around the Bras d'Or."

The Strait of Canso—an ocean bye way—Mulgrave, Port Hawkesbury, Mabou, Inverness, St.Peters, Arichat, Whycocomagh, Baddeck, Grand Narrows, The Sydneys, Mira Bay, Louisburg, the possibilities of the development of the Islann, its agricultural outlook, its attractions for the devotee of the rod in ocean, lake and stream, and for the yachtsman and hunter, are briefly described. A list of hotels with their accommodations and rates, is also included, altogether making perhaps the most interesting publication the Canadian Government railways has as yet produced—and they have done much excellent work in this direction.

A free copy can be obtained by writing the General Passenger Agent, Moncton, N. B.

Advertise in the Maritime Farmer

from the extractor to the capsule the impregnator is used to extract the semen from one mare and carry it to others. In either method of cleanliness, exactness of temperature and healthy mares are necessary to insure success.

Frequently mares are brought and returned to a stallion which are not healthy in their genital organs. Some mares have a sticy, yellowish discharge, others have a white discharge which is not natural, others seem to be healthy but do not get settled. These latter may have the mouth of the womb closed by a growth or the womb may be diseased. When the womb is cloased it may be opened by inserting the hand and forcing down the growth. Most stallion men frequently do this operation. If there is no growth some other treatment may be required. In cases of unhealthy discharge the nature of this should be determined by the use of litmus paper. This can be had at drug stores and is blue in color. When brought in contact with an acid substance it turns red. The idea then is to use this paper to find out if the mare's discharge is acid or not. To do this hold a piece of the paper against the neck of the womb. If it turns red the womb should be flushed out with a gallon of warm water, which has been boiled and reduced to 110 degrees and had added to it four teaspoonfuls of baking soda. If the paper does not turn red in a discharging mare the womb should be flushed out with a gallon of boiled water to which has been added eight teaspoonfuls of common salt before boiling. To flush out the womb use a hose made of pure gum rubber about three-eighths of an inch in diameter and five feet long, a funnel to fit the hose and a large cup holding one gallon of water. The water used in flushing out mares should be about 110 degrees, as it will cool a little in passing through the rubber tube. No water should ever be used in a mare at less than a hundred degrees.

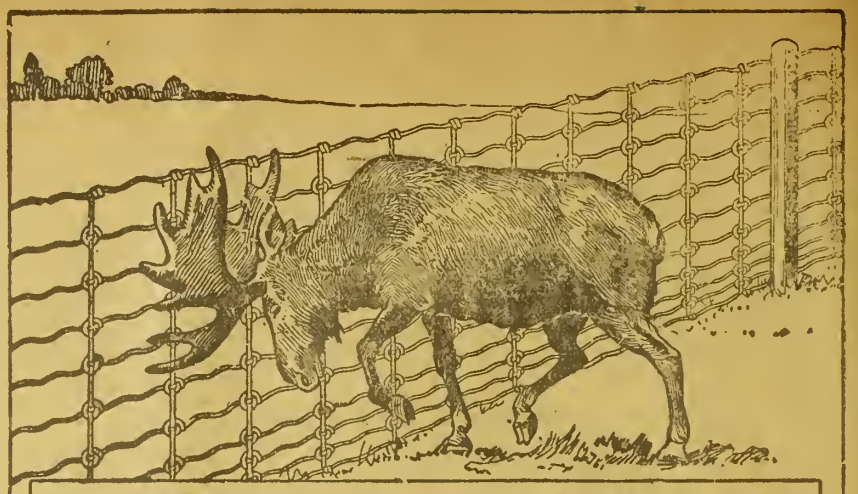
Before the uterus is flushed out the hose, funnel and gallon cup should be put in the container and boiled in order to destroy all infection. This should be done before each treatment, so as not to carry aoy infection from one mare to another. The hands should be washed; finger nails trimmed.

A gallon of fluid should be prepared at the proper temperature for each case. A helper should be instructed to pour the fluid in the funnel, holding the fluid well up so as the hose is filled with fluid the end to give the desired pressure. After of the hose should be bent sharply so as to make a cut-off and not allow air to be injected into the womb. Insert one finger into the uterus over the front end of the hose and let the fluid flow into the uterus. Fill it full, but in case the uterus should be unduly large one gallan is not enough to fill it, siphon the fluid out before the hose is empty by lowering the outside end of the hose, keeping the finger over the point of the hose to keep the membranes from clogging it. In the event that only the vagina is effected it alone should be irrigated, but this is not often found. ...

IODINE AND YEAST TREATMENT

Breed the mare in about an hour after treating her.

Mares which do not respond to the above treatments may require something to give a healthy condition to the lining of the womb and for this purpose flushing with an iodine solution has been recommended. This is made by adding a teaspoonful of tincture of iodine to the gallon of warm water as before. After flush-



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For a fourth less than the price we pay, we could get hard-drawn steel wire. But that kind, though used in most other wire fence, hasn't the *life*, the springiness, the strength we insist on for Maritime Wire Fence.

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So we make this fence of extra-heavy hard drawn steel wire of nine-gauge. Constantly we test it for quality. And so we *know* this fence has *more* strength than it probably will ever need.

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Yet the price of Maritime Wire Fence is no higher than you must pay for ordinary fence. But the life of the Maritime Fence is far longer—and the fence surely reliable.

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On this extra-quality wire we put a smooth, even heavy coat of galvanizing. We put on more than enough—that's our way. You gain by the longer life of this better fence. And we lock laterals and upright wire rigidly, yet springily, with a cross-leverage lock that simply CANNOT let go under the hardest strain.

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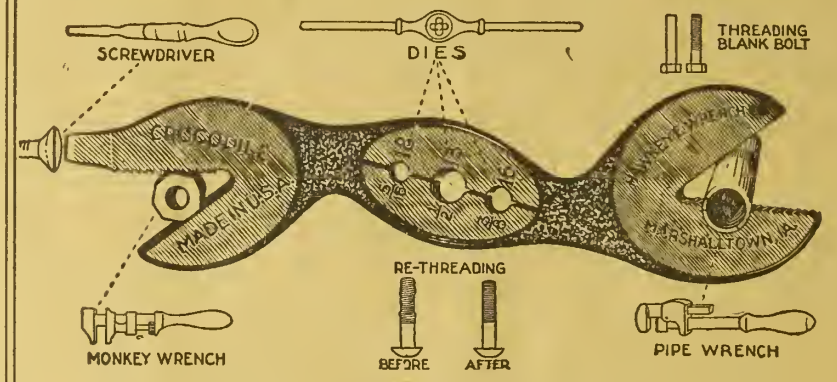
You can bank on the strength of this fence Make the test for yourself and your neighbors. Then get the agency—it will pay you well. Address

NEW BRUNSWICK WIRE FENCE CO., Ltd., Moncton, N.B.

MARITIME WIRE FENCE

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wreuch, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

ing with this leave for three weeks and then use the salt solution once a week for three weeks and breed he again. This treatment is recommend ed for mares that abort.

In some cases of mares failing to get with foal, what is called the yeast treatment is given. This is as follows:

Mix an ordinary two-cent cake of yeast to a paste with a little warm water, and allow it to stand for 12 hours in a moderately warm place, then stir in one pint of freshly-boil-ed luke warm water, and allow it to stand for eight or twelve hours. The mixture will then be ready for use. After flushing out the passage with warm water, inject the entire solution of the yeast cake into the vagina with a large syringe. Make the solution when the animal is first coming into heat, and make the injection from one-half to one hour before breeding. This treatment is not infallible, but favorable reports are often heard concerning it.

Where Mothers Fail.

I have read with interest the story, "The Lord Giveth," and will say from the point of view of a farmer's wife with thirty-five year's experience that the story is no fancy sketch or outburst of some discontented wife, but only a very common one—and one that thousands of farmers wives here in the United States could dupli cate from their own experiences, and that without exaggeration.

But this is not as it should be, and husbands are not altogether to blame for such a condition. If I may venture an opinion, I must say I think our educational system is greatly at fault, as far as our girls are concerned. It has so happened that Ihave held the office of either clerk or director in several of the school districts in which we have resided for a number of years, and so have kept in touch with schools and school girls.

I hope that my observations are quite peculiar, and that they would not apply to other places than those I have seen. But I am sorry to say the school girls I know are almost without exception much more interested in what they wear than in school work. While the poor teacher is trying to drive a few practical ideas into their unwilling intellects, they think only of having a "good time."

Some may thus in time acquire a fair idea of arithmetic and algebra, but none could mend a pair of stockings decently if their lives depended on the task. Some are quite well versed in physiology, but could not wash np the breakfast dishes and put the kitchen in order if they were given the entire forenoon in which to complete the task. Very few of them could wash and iron their own frocks. And what is sadder than all, they would think themselves very much imposed upon if they were asked to do so much for themselves. However, they see no reason why mother should object to putting all her time to just such tasks for them.

And believe me, there little heads are well filled with silly and all too often unclean "love stories"—stories that give them a very false and foolish conception of life and its duties. I believe this condition of things is largely responsible for many of the unhappy marriage and divorce cases that we have to our shameful credit.

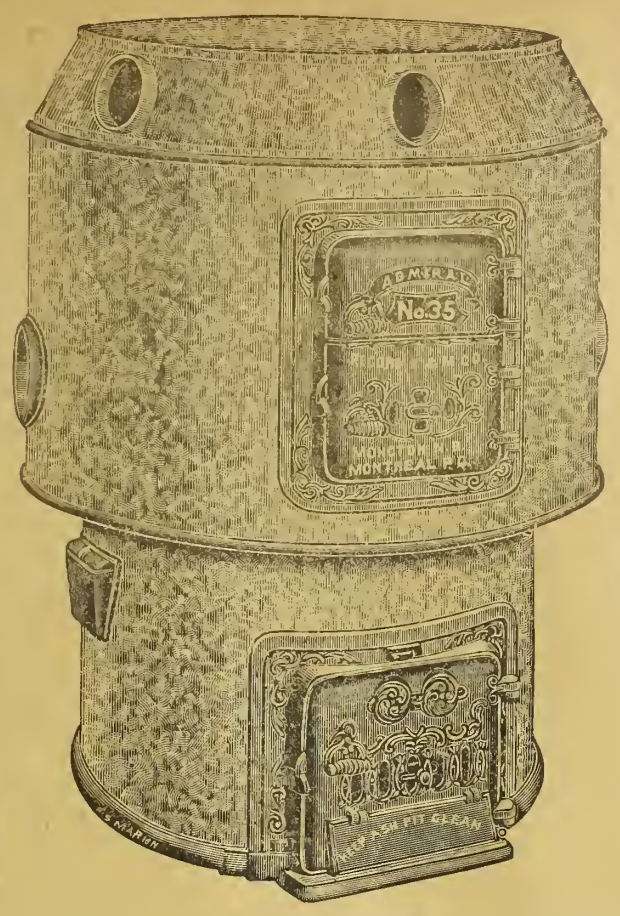
What we need more than anything else, beyond the cleaning out of the liquor traffic, is a general house-cleaning in our literature and music (?) so-called. Music is the language of purity, and to most Christian people it is actual sacrflege to see it applied to such senseless and often "smutty" things as many of the present day "popular" songs advertise.

Dear sisters, what ever else we do or do not do, let us try to teach our daughters the duty and sacrifice of wifehood and motherhood.Every girl should be made to no that marriage is a life of beautiful sacrifice, so far as women are concerned, whether they know the multiplication table or not. If we can do this they will not be so blindly eager to assume the responsibilities for which they are so sadly unfitted.—Mrs. Winnifred Ash ley, Idaho.

The Editor of The Maritime Farmer while in Dorchester last week took occasion to visit the Penitentiary farm. Our genial friend Mr. Andrew McPherson, the farm manager, was not at home at the time of our visit but in company with one of the guards we went around the farm and through the stables.

The farm crops are looking well and the general condition of affairs show that Mr. McPherson is making good as chief of the Agricultural department of the institution. In the stable we saw some nice pure bred and high grade short horn cattle and in the piggery near by are a lot of handsome Yorkshires. Warden Pipes and his assistants are keeping matters in ship shape in and around the institution.

A visit to East Court Farm the steading of Mr. John Retson, Truro, found the farm crop and Ayrshire stock in prime condition. George Retson, a brother, purchased a farm a year or two ago at Brookside abaut a mile distant from East Codrt and he too is breeding Ayrshires and Leicester sheep. Together these enterprising young Scotchman form the firm of Retson Bros., whose stock is also well known to visitors to the Maritime Fairs. Another brother to these young men is Mr. Will Retson, the painstaking herdsman at the College Farm, Truro.



Good For Wood and Hard or Soft Coal

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Flues do not clog up with soot. Large double feed doors specially adapted for wood.

Record Admiral Furnace

The ADMIRAL is a leader in hot air furnaces, designed to give the greatest amount of heat out of fuel with the least amount of labor or attention.

Write for catalogue of furnaces, heaters, stoves.

Record Foundry & Machine Co.,
Moncton, N. B.

Parents Take Warning.

How many parents fall into the habit of thus deceiving their children, by indiscriminately promising to give them the things they ask for, with no honest intention of abiding by their word. It is so easy to stop a child's teasing in this way, so easy to put them off until that "more con venient season," which never comes.

And so, too, with the repeated threats of punishment which parents make—which is only the negative side of their promises—and then fail to carry out. It is difficult to conceive of any method better calculated to karden a child in wrong-doing and make him proof against correction.

There is one kind of promise which ought never to be exacted or given, and that is death-bed promise. It is selfish on the one hand, and foolish on the other. Of all times in the world, the hour of death is the last time of alj—when the emotions and effections of human nature are at their highest tension, while the understanding and abeyance—for the making of solemn and binding vows. Such promises, however sincerely given, are usually soon repented of and broken, and it is better, therefore, not to make them.

Aims and Purposes of the Handcraft Guild.

It is with keen regret that Miss Hunt and I are both unable to attend your convention. I feel there is no more advanced work being done in Canada than the formation of Women's Institutes for the mutual benefit and co-operation of women in their numberless duties and interest. We should be very proud that the Island is in the foreground in this up-to-date movement. Without doubt Women's Institutes, when they will have fully developed, will be a power in the country. For all the really vital questions in a community must be taken up by women: health and anitation in the home, proper food and clothing for the family, education and recreation for the young—and for the old too for that matter, for we never outgrow the need of education and play. We of the Handicraft Guild feel that this is an opportune time to bring before you the aims and work of our society. From the last annual report of the guild let me read its aims "The Canadian Handicraft Guild is an incorporated Association organized to encourage, retain, revive and develop handicrafts and ; home art industries throughout the Dominion:

To prevent the loss and deterioration of these crafts; to preserve knowledge and skill possessed by new settlers; to aid new comers during tne early trying days of their settlement in the new country, while providing them for a market for good handiwork:

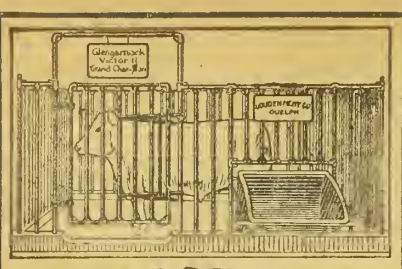
To encourage industry and thrift in the homes of the people making their work profitable and honourable by means of exhibitions of the products of their skill, thereby increasing contentment in their homes and augmenting the assets of the Dominion;

To educate the public to the value of good handiwork by holding and taking part in Exhibitions at home and abroad and by other means thought desirable;

To send out among the workers teachers and supervisors to keep up the standard af excellence;

To keep records in order to prevent the extinction of any arts or crafts."

The headquarters of the Guild are at Montreal where a shop is maintained for the sale of work. Last year something over $8,000 was paid to workers. There are five branches of the Guild, at Vancouver, Edmonton, Winnipeg, Ottawa and Summerside. Our branch has been organized for five years. This last year we paid $71.55 for work which seems perhaps, a small amount, but we have not yet got in touch with the women throughout the province, and this we hope to do through your aid. We have offered special prizes at the Seed Fair for original designs in rugs, and we have brought out a



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Bulls, Cows, Calves and Hogs

Comfortable, Permanent, Secure

THE best animals in the country are stabled in LOUDEN pens, because the owners appreciate the convenience and protection secured, and the animals the comfort and freedom so necessary, when they are continually shut up.

Louden pens are constructed of the best tubular steel, and dust and germ proof malleable couplings, finished in aluminum. For quality, strength and service they lead.

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You can easily make up an order for Plain Parchment with your neighbor.

Buying 1,500 one pound sheets you have your wants filled at 59 cents per ream. These prices go into force on and after February 10th, 1914. All goods shipped parcel post.

The Maritime Farmer
SUSSEX, N. B.

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Gents,—I cured a valuable hunting dog of mange with MINARD'S LINIMENT after several veterinaries had treated him without doing him any permanent ggood.

Yours, &c.,
WILFRID GAGNE,
Prop. of Grand Central Hotel, Drummondville, Aug. 3, .04.

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everywhere to ride and exhibit a sample 1914 Hyslop Bicycle with coaster brake and all latest improvements.

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DO NOT BUY *a bicycle, pair of tires, lamp, or sundries at any price* until you receive our latest 1914 illustrated catalogue and have learned our special prices and attractive proposition.

ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you **Free Postpaid** by return mail. **Do not wait.** Write it **now.**

HYSLOP BROTHERS, Limited
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book of vegetable dyes which may be had from Miss Hunt, Summerside, for fifteen cents a piece.

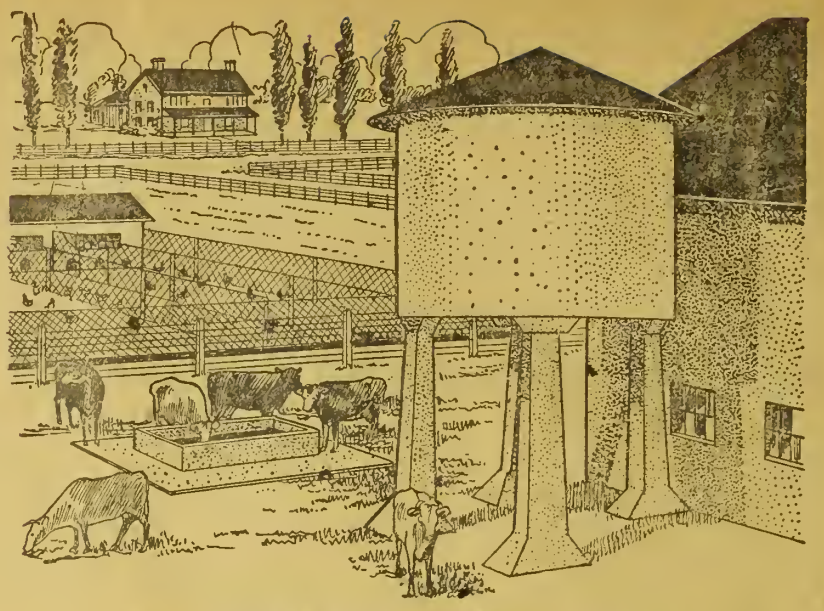
The special aim in our branch of the guild is to encourage weaving of all kinds and hooking of rugs, not to sell them for the profit of the makers—though this is part of our work—as to bring into the home the satisfaction of doing original work, and to encourage the use of the home made things in the home. Wealthy people are ready to pay any price to get hand work for furnishing their homes, and yet here on the Island, where the best homespuns and hooking can be done, how many of our homes are furnished with machine-made carpets, curtains, etc. If you will look at the sample of homespun work here I think you will find the colors and designs much better than you will find them in the shops, and again the colors are fast as only vegetable dyes have been used. Now that we have learned that bare floors, either hardwood or painted or varnished soft woods are more sanitary than the heavy carpets we used to see everywhere it is a comparatively easy matter to make pretty, simple rugs to add to the beauty and comfort of the room. Let me urge that you make your own designs and have them simple. Nothing could be uglier or more unsuitable than the usual mat designs one buys in the stores. Ferns and maple leaves often growing out of the same branch and roses decorating stumps of trees. One's eyes should not be drawn to the floor of the room by the brightness of the colors on it, nor does one want to step on bunches of flowers much less on animals spread out on many of the rugs one sees. All decorations of the room, rugs, coverings, curtains and paper should not be of soft inconspicuous colors.

Mrs. Kier gave at the Seed Fair in Summerside last Spring, a most instructive and interesting paper on color and designs on rugs. She accompanied her talk with demonstrations of colors and combinations and suggestions in design that proved most helpful to all who heard her. Already we have sent a great many rugs to the shop in Montreal for sale and they tell us that from no where in the Dominion do they get such good hooking as they do from us. In fact one of our rugs was chosen to be sent as a gift to Queen Mary on her Cornation. I might also mention that the lady who furnishes and decorates all the big C. P. R. Hotels in Canada told me that she could never get enough of our rugs. The only criticism they made is sometimes of the designs and that is always when there is evidence of a design not being original at all or being copied from such complicated wall paper or other unsuitable pattern. This is not a fad, this demand for hand made work, there is the best of reasons for it, the work is better for it the articles wear longer, does not fade and when vegetable dyes are used the colors are soft and a beautiful tone. And how much more pride and interest one takes in the furnishing of one's house when every detail of the work has been carried out in the home and one has not just gone to town, and in the confusion of numberless samples, finally manages to choose something which never looks the same after it has come home. I have spoken principally of hooking, because at present it seems to be the chief handicraft carried on by women. It seems most unfortunate that weaving has become almost a lost art on the Island and yet in Quebec it is a most flourishing industry. What little I have seen of the Island work it is quite as well done as any of these samples we have been sent from Montreal. Here we have curtains, bed spreads, table covers, couch covers, catalogue rugs, practically everything that is necessary for furnishing the home outside the furniture itself. In this respect I should go back to the good old times when a girl's "hatching chest" was gradually filled with such things, in preparation for her marriage, less was spent then on the back and more for the comfort of the home.

We are opening a Shop in Summerside of Handicraft work and hope in time to fill it with work made wholly by Islanders. I hope any of you when visiting Summerside will look in at our things. We also hope to have at the Confederation Celebration a display of handicraft work made on the Island. If any of you have any work that you would care to show we should be grateful for the loan of it. Kindly write to Miss Hunt or myself and we will arrange about exhibiting it. It is most desirable that we should have as good a showing as possible at the Celebration, as it is expected that a great many visitors will be here at that time. Now that I have given you the aims and purposes of the Handicraft Guild, it would be a great satisfaction if your Institutes would consider taking up the work. Should you do so and wish for any help from the Guild either in arranging for meeting with you or for sending an exhibit of work kindly have your secretaries communicate with Miss Hunt.

My faith in the value of this work is my justification to you for taking up so much of your valuable time and I sign myself with many thanks for your attention.

The foregoing is a letter written by Miss Carrie E. Holman President of Prince County, P. E. I. Branch of the Canadian Handicraft Guild, and read at the First Annual Women's Institute Convention, Charlottetown, P. E. I.



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are just as necessary as the animals that drink from them. The farmer's best interests are being served when his stock is insured a plentiful supply of clear, clean water from a trough that is permanent and sanitary.

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Do your bees pay their keep? If not it is your fault. Use modern appliances, and make them the most profitable stock on the farm. We carry a full line of Beekeepers' Supplies: Hives, Honey Extractors, Packages, etc.

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Also White Wyandotte Cockerels of good size and color.

Also Pure White Pekin Ducks and Drakes bred from birds specially imported from the States.

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Dominion Department of Agriculture.

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Animals must be of right type, in good breeding condition and of the following ages.

Stallions, three to five years.
Bulls, not under one year.
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All stallions will be purchased subject to veterinary inspection and bulls subject to the tuberculin test.

Breeders in Eastern Canada having CANADIAN BRED male animals for sale, filling the above requirements and registered or eligible for registration in the Canadian National Live Stock Records, are requested to communicate with the Live Stock Commissioner, Department of Agriculture, Ottawa.

The purchases of stallions and bulls will be made during the current spring months. The purchases of rams and boars will be deferred until the autumn.

Communications must state age and breeding of animals offered and price asked.—60271.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
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For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

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One Pure Bred Ayrsbire Cow 5 yrs. old (Fresh milch.)

Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

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High Class Holstein Cattle and Yorkshire Pigs

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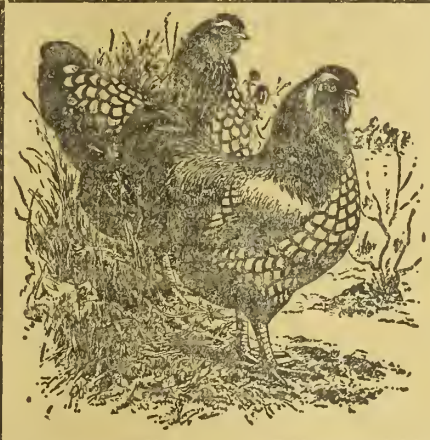

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The Magnolia Poultry Yard's stock of Silver Laced Wyandottes were winners of first breeding pen at the Amberst Fair in 1913, among strong competition. This is only one of the reasons why you sbould buy this stock. The work is personally supervised by the owner, and the stock this spring has never been in better condition. Some of my customers have reported 100 per cent. hatches from eggs purchased from me this spring.

Write for information and get your pick of the stock now.

The Magnolia Avenue Poultry Yards
E. KYLE, Prop., Sussex, N. B.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.
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100 POST CARDS, POSTPAID. 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Two six H. P. gasoline engines, both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R J. Pictou Co., N. S.

WANTED.—Man and wife wanted immediately. Man to do barn work, wife to keep house for 3 or 4. Also experienced man and wife to look after farm. Scotch preferred. Apply giving full particulars to L. E. Y., care of Maritime Farmer

LADIES WANTED—To do plain and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

OXYGENOPATHY IS THE BEST PATENTED Oxygenic device marketed. Exclusive territory open in your district. If you feel you can handle a good article, one that pays, write for information to J. R. COTE, Kingston, Ont.

FOR SALE—(1) Meadowbrooks Milkman 41830; (2) Helena of Bloomfield 38034. (3) Eva of Bloomfield 38035; (4) Irene of Bloomfield 38033. No 1 calved May 17, 1913; No. 2 calved Aug. 22, 1912; No. 3 Sept. 16. 1912; No. 4 Sept. 14, 1912. Price $200 f. o. b. station. Reg. and Transfer in name. HY. McDONALD, French River, Pictou Co., N. S

BARRED PLYMOUTH ROCKS—An opportunity to obtain Lady Morley Stock. Lady Morley laid 292 eggs in one year. The only sworn statement verifying a world's record. We have six cockerels hatched in March and of extra size from this strain. The dam of their sire laid 283 eggs in her pullet year. Price $5.00 each MORLA POULTRY YARD, Arcadia, N. S.

FOR SALE—Holstein Bull, Registered Vol. 17, No. 17730 "Sir Tensen Faforit" calved August 26th, 1913. Sire "Sir Mercena Faforit Lad" No. 9015, Dam "Lady Tensen Canary" No, 16494. Beautifully marked, mostly black, growing fast. $150 my price, but make your best offer for cash. I have no place to keep him longer. J. S GIBBON, Riverside Farm, East Riverside, Kings Co., N. B.

Apple Orchard, Dyke Land

76-acre valley fruit farm; 19 acres in orchard bringing in large yearly income; estimated to be 2000 bbls. this year; 15 acres in dyke meadow; cuts 45 tons hay and produces large crops of potatoes; pasture for 10 cows; 10-room house, large basement barn, carriage, wood and apple houses; all in good repair; located in village, few minutes walk to R. R.; borders river affording fine trout fishing; this farm would be cheap at $10,000 but owner has property in another section to care for; price if taken now only $8000, part cash, easy terms; photo of fine bldgs., all details and travelling instructions to see this and other good farms throughout the Annapolis Valley, page 84, "Strout's Farm Catalogue 37", choice selections of real bargains at wonderfully low prices throughout N. S. and the N E. States; write today for your free copy. Address FARM c/o Maritime Farmer Office.

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in every town and village, to take orders for the best Made-to-Measure Clothing in Canada.

Samples ready for shipment July 20th. Magnificent Samples.

CROWN TAILORING CO.

Dept. E. TORONTO

Practical Care of the Dairy Bull.

(Continued from page 721.)

bulls that are well along in years that might be added to this list, notably Glenwood's Mainstay, that is still in active service at 15 years of age. and King of the May in active service at 11 years of age. Nearly all of the daughters of each of these bulls have made their records as heifers and have not been retested. However, a daughter of Glenwood's Mainstay is now under test at Mr. Marsh's, making over 800 lbs. fat, and she was sired when her father was eight years old. King of the May has had but two mature daughters tested but his best daughter, Langwater Dorothy, with 781.65 lbs. fat, was sired when he was five years old and the next best daughter, Langwater Hope, with 773 lbs. fat, was sired when he was five years old.

These figures should be conclusive proof of the value of a mature sire and well worthy of careful study by breeders of dairy cattle everywhere.

Some one wil at once want to take the opposite side of the argument and say that some young bulls have also sired great cows, but if they die young no one can tell how much better cows they might have sired if they had lived. If middle aged and still alive, no one can tell how much better daughters they may yet sire.

The Proved Sire Worth $1,000.

From calfhood on, give your bull the best of fed. care and exercise, and do all that you can to help further the movement now being pushed to see that no young or midle-aged pure-bred bull is allowed to go to the slaughter house until he has proved that he is a failure as a sire. Trade bulls with your neighbors if necesary to keep them alive, and when a bull has proved to be a sire of remarkably good cows consider him worth at least $1000 to the dairy industry of your comunity. See that he is kept alive and in active service as long as he is usable. No other one thing will more largely tend to the betterment of dairy production of our cows than this good care and preservation of our best dairy sires—C. L. Hill in Hoard's Dairyman.

The Cow is Not Always at Fault.

(Continued from page 725.)

While the cows are on the pasture little attention is paid to their feeding so long as the grass is abundant, but in adition to the grass other feed can be given with benefit. I have for years practiced giving my cows some ground grain in addition to pasturage and I am sure I have been well repaid in the increased quality, and quantity of the milk. It is from liberal feeding that a large part of the profit of the dairy comes. If one has cows that are only paying their way, or perhaps not quite doing that, it will be well to try all reasonable means to increase their production. If this is done I am confident it will be found that in most cases the capacity for production is much greater than has been suposed.

Cows that have been regarded as hardly up to the average may develop into superior animals and the apparently poorest one may prove to be well worth keeping. This, however, will not be the universal experience. Some cows canot respond to even the best directed efforts to make them more productive. They are lacking in capacity to such an extent that they are hopeles subjects for a profitable dairy and the sooner they are made ready for the butcher the better tho interests of their owners will be served.—John Underwood.

AYRSHIRE STOCK FOR SALE

Pure Bred Ayrshire Stock or Legible for Registration. Call and look the stock over. Long distance Phone at farm

1 cow, 2 years and 7 months, just fresh; 1 cow, 3½ years, due with second calf this fall; 1 cow, 7 years, grand breeder; 1 cow, 12 years, bred by Turner, Hamilton, Ont.; 1 heifer, 2 years and 3 months, now bred; 1 Heifer, 7 months; 1 heifer, 4 months; 1 heifer, 2 weeks; 1 bull, 2 1-2 years; 1 bull, 1 year; 1 bull calf, 4 months.

We price this stock as follows:

Heifer Calves $15.00 when dropped, $2.50 per month thereafter for feed and care till they freshen
Bull " $10.00 " " $2.50 " " " " " " "
Prices of mature cows based on production basis.

Call or write.

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Stables 10 Minutes walk from Station. All Trains Stop.

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For a growing Poultry Supply Business, a good opportunity for a man interested in poultry desiring a steady income. The business at present in good paying condition and growing to such an extent that the owner needs assistance, prospects for future very bright. Books and all particulars of the Company open for inspection, correspondence invited.

Address Box 27, - - Sussex, N. B.

St. John Market Report.

GRAIN—Wheat, $1.00; Oats, 55c; Peas, $1.00; Barley, $1.00; Buckwheat, $1.00.

FEEDSTUFFS— Bran $3.00; Shorts $1.60; Middlings, $1.50; Oil Cake, 3.50; Linseed Meal, $2.50, 3.00; Cottonseed Meal, $2.00; Gluten Meal. $3.75; Gluten Feed, $2.50; Corn Meal, $1.60.

GRASS SEEDS.— Timothy, $3.50; Common Red Clover, $3.50; Mam. Red Clover, $4.00; Alsike. $1.50.

LIVE STOCK — Butchers' Cattle, $40.00 to 65.00; Milch Cows, $35.00 to 45.00; Sheep, $5.00 to $6.00; Lambs, $4.00; Hogs, $9.00 to 11.00.

DRESSED MEATS.eeef (carcass), 7c to 13c.; Beef (retail) 18c to 25c; Veal, 7c to 10c;.

HORSES—Drafters, $200.00 to 350.00 Roadsters, $150.00 to 400.00; Carriage, $300.00 to 500.00.

DAIRY PRODUCTS — Creamery Butter, 26c to 27c; Cheese, 20c to 25c.

POULTRY and POULTRY PRODUCTS—Fowl, 21c to 22c; Chickens, 20c to 22c; Ducks, $1.00 to 1.50; Geese $1.00 to 1.25; Turkeys, 20c to 25c.

FRUIT—Pears, $5.00 to 6.00; Plums 25c to 40c. Strawberries, 10c to 14c; Currants, $1.50 to 2.00; Honey, 20c to 25c; Maple products, 12c to 18c.

MISCELLANEOUE—Hay, $14.00 to 17.00; Straw, $5.00 to $10.00; Wool, 18 to 25c; Beef Hides, 12c to 13½c; Calf Skins, 15c; Sheep Skins, 25c to $1.00; Lamb Skins, 25c to 40c.

VEGETABLES— Carrots, $2.00; Potatoes, $2.50; Beets, $1.00 bus.; Cabbage, 50c to 1.00

"Meadowlands" Scotch Farm

Clydesdale Horses & Shorthorn Cattle

We have for sale 3 pure bred Shorthorn Bull Calves, milking strain, 3 and 4 months old. Also 1 Bull Calf 11 months old, from good milking dam. He is a red roan and will make an extra good herd header.

MORRIS SCOVIL & SON

Meadowlands, Gagetown, N. B.

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It will pay you to get more information about this machine.

Hall Manufacturing Co., Ltd.

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Agents wanted.

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Heavy Team Horses 1250 to 1550 in fine condition.

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Chas T. White & Son,

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Only $1400 Cash Required
75-Acre Valley Fruit Farm

Fine orchard 450 apple trees, variety small fruits; apples sold here last year for $3.50 per bbl. which insures big yearly income from orchard alone; 40 acres in level tillage; bal. in wood and pasture; only 1 1-2 miles to depot village; house of ten rooms with piazza; large barn, carriage house and stable; maple shade; owner with other business interests in town for a quick sale will include 4 head cattle, horse, all farm tools and machinery; only $1400 cash required, bal. easy terms; for photo of bldgs., all details and traveling instructions to see this and many others throughout the Annapolis Valley, see page 84, "Strout's Farm Catalogue 37", choice selections of real bargains at wonderfully low prices throughout N. S. and the N E. States; write today for your free copy. E. A. Strout Farm Agency, Wolfville, N. S.

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Theory Versus Practice in Soil Analysis

Why Chemical Analysis is Not Always Reliable and How Farmer May Make His Own Tests

By A. C. Hartenbower in Twentieth Century Farmer

TWO farmers were overheard a few days ago arguing the question of the actual worth of a chemical analysis of soil; one was insistent that such an analysis by an approved chemist would give him a direct clue to the adaptability of his soil for producing certain crops, while the other was equally insistent that there was nothing to such an analysis Which one was right? Is it true that chemical analysis of a soil has some definite value to the general farmer? Or, in other words, can such analysis serve as guides to the fertilization of soils in order to increase their productivity?

The history of the making of chemical analyses of soils is interesting because it shows how agricultural ideas in this line have changed during the last fifty years When Chemistry was first considered in its relation to agriculture the idea gained ground that it would be a comparatively simple matter to determine with accuracy the exact requirements of any soil. Conditions appeared to warrant that idea. The first thought was by analyzing the plant and determining the amounts of the essential plant food elements that were used in its development under different yields and conditions, a good idea could be formed of the power of any soil to produce crops. Then by having an analysis made of the soil to determine the elements that were present and comparing that with the analysis of the plant, the farmer could tell definitely how much his soil lacked in any one or more elements for producing any certain crop. The idea sounded good. It rapidly became considered that the farmer, by having his soil analyzed, could determine exactly what it needed in order to give him maximum crops. He could add one or more fertilizers in accordance with the needs of the soil as shown by the chemical analysis.

Practice and Theory Differ.

But practical experience in this respect, as in many other things connected with the farm. did not bear out the theoretical ideas. Farmers noticed that when they had analyses of the different types of soils on their farms made the actual crop-producing power of the soils was not always what might be expected from the indications of the chemical analyses of those soils. The heaviest producingg soils often showed up poorer when chemical analysis were made than the less productive one and, what semed more odd, was the fact that oftentimes the lowest producing soils contained such large amounts of plant food thet they could produce crops almost indefinitely if the plant food alone was decisive. The investigators saw that they must carry on more extensive experiments in order to arrive at any practicable conclusion.

Today it is well known that there are two kinds of plant food in the soil, viz: available or usable plant food, and unavailable or unusuable plant food. The amount of each of these kinds helps to determine the productivenes of any soil. When a man sends a sample of soil to be analyzed he should remember that the chemist will be unable to tell with any accuracy, the condition in which each kind of plant food is present in his soil. The results of the analysis may show that there is a great sufficiency of all of the esential plant food elements, and still he will be unable tn produce the crops that bring him profits. Unavailable, or unusable plant food is almost worthless until it has been changed to an available, or usable form.

Must be Available.

A crop demands for its development food that is capable of being disolved in the soil moisture, or, in other words plant food that is soluble, and thus can be carried by the soil moisture into the plants. There may be thousands of pounds of plant food, and still if this is insoluble in the soil water it is useless as far as crop production is concerned. To summarize: The chemist in this case can only determine the total quantity of plant food present, not with accuracy the amounts of each of the available and unavailable plant foods present.

It is wei known that the amount of available, or usable, plant food in the soil is determined largely by the physical condition of the soil. In soils that are in poor physical condition the amount is low, and vice versa. The chemist in his laboratory does not know the physical condition of the soil which he analyses. It may be cloddy or in such other condition that it would be impossible to grow a crop on it, and stil the analyses would show up well.

Personally, I think that in most cases, for the general farmer of the middle west and southwest with his generally fertile soil, a mechanical or a physical analysis of his soil has greater actual value at the ppresent time to him than has a chemical analysis. The amount of each of the different groups or sizes of soil particles, together with a consideration of the amount of organic matter present would give any crop gromer in those sections a better idea today of his soil's power of production than a mere chemical analysis.

When Analysis is Valuabble.

A chemical analysis of a poor soil, however, that is in good physical condition may have value. The principal value lies in the fact that when certain chemical element is woefully deficient or extremely low in any soil the chemist will be able to tell that. In this way, of infertile soils that are not infertile because of poor physical condition the chemist can give the farmer an idea as to what mineral plant food is necesary. Moreover, if the amount of all of the essential plant foods is shown to be high from the results of the analysis the farmer may so change the analysis, the farmer may so change his system of cultivation by including fall plowing, etc., as may render the unavailable plant food available.

Another point must be considered in determining the productivity of any soil, and that is the character of the subsoil which underlies it. Most soils are rendered productive for certain crops because they are underlaid with extremely desirable types of subsoil, desirable either from the chemical or physical standpoint. The amount of plant food drawn up from the deeper soil layers and subsoil many times makes a soil a good alfalfa producer, for example. In judging of the value of any soil from a chemical analysis alone, no idea can be formed of the effect that the subsoil may have on the crop-producing power of the soil. With out this a one-sided idea is necesarily formed.

One of the factors most deficient in soils in the central west and the southwest is decaying vegetable or animal matter—that is, organic matter. Many of our farmers who are not receiving the crop yields that they feel they should receive from their fields make up their minds to have chemical analyses made rather than to look into the amount of organic matter in their productive and unproductive soils. On many farms the plowing under of the small amounts of green crops and the crop residues would change conditions and oftentimes render relatively unproductive soils productive.

Test Your Own Soil.

If the farmer is desirous of determining in what plant food element or elements his soils are deficient, the most practical and best method to use is to make a simple field test. Such a test is easily and cheaply made. Any farmer can do it, and from the results obtained determine his needs, if any, in plant food. In making such a field test the farmer shonld lay off such small plots as he will need and apply different plant foods and combinations of the four most commonly deficient plant foods, together with different amounts of them. Nitrogen, phosphorous, potassium and calcium (lime), are the plant foods most often deficient. Two or three of the plots should be untreated, or kept as check plots. To one plot, for example, nitrogen could be applied; to a second, phosphorous; to a third, potasium, and to a fourth, lime; to a fifth, a combination of nitrogen and phosphorus, etc., until the different combinations, together with a fertilizer embracing the four plant food elements named have been tried, such a simple test would give the farmer a direct clue to the element needed to bring up his crop production in any were needed, on the soils on which the test is made. Why not try such a test?

To summarize: A chemical analysis of a soil may show the deficient elements when the plant food content is low, but it cannot be taken absolutely as an accurate guide to the plant food requirements of any soil It is better for the farmer to make a simple test of the fertilizer requirements of the different soil types found on his farm

Successful Dairying on Eastcourt Farm

John Retson
Proprietor East Court Farm, Truro, Nova Scotia.

While in Truro a week or two ago, we availed ourselves of the opportunity to visit East Court Farm, the steading of Mr. John Retson, one of the popular firm, Retson Bro., Ayrshire Breeders.

We found Mr. Retson just as we like to find every farmer we visit—busy—he was clearing new land to make more and better pasture room for his fine Ayrshire herd.

East Court Farm is located about one mile from the Nova Scotia Agricultural College, Truro, and directly across the road from a portion of the Colege farm.

Mr. Retson was born in Ayrshire, Scotland, and was the eldest son of Mr. George Retson, of Gardrum Farm, who was a wel-known farmer and stockman.

About thirteen or fourteen years ago Mr. C A. Archibald, Bellevue Farm, Truro wrote to a friend of his in Scotland, asking him to get him in communication with a good stockman, who would be willing to come to Canada, and assist in the care of his Shorthorn and Ayrshire herds. Mr. Retson was on his way to Canada. He assisted Mr. Archibald for eighten months, and at the expiration of that time went to Ontario to take charge of Mrs.W. E. H. Massey's Dentonia Park Farm, herd, where he remained for two years From Ontario he went with Mr. Geo. Wiliam Ballon, Pine Lane Farm, Middleton, N. Y., where he spent one year as herdsman and a second year as the manager.

He then went back to Scotland for six months, during which time he formed a connection with Mr. Alex. Hume the well-known Ayrshire importer and breeder, in the business of importing Ayrshire cattle from Scotland to Canada. Mr. Retson handled the purchasing end of the business in Scotland, while Mr. Hume looked after the sales end in Canada. They made two importations. The first importation resulted in financial success. The second importation arrived in Canada at a time when there was a slump in cattle prices owing to the off season in crops and to avoid selling at a possible disadvantage, Mr. Retson purchased East Court Farm and set up business for himself as an Ayrshire breeder. He had known all about East Court during his stay at Bellevue and his brother Will, who had been herdsman on the College Farm, Truro, for the past twelve years, had kept him in touch with the condition of affairs in Nova Scotia. The second importation in 1908 consisted of thirteen head purchased in Scotland on the producing records of their ancestry. With these, a manure fork, a shovel and two buckets Mr Retson arrived at East Court and from this beginning has sprung up the East Court herd so well and favorably known in the tests and at the various Maritime exhibitions.

He was joined in the business by his brother, George Retson, who had spent one year with Mr Alex Hume and another year at the Government Farm, at Truro and thus the firm of Retson Bros. was founded. Another brother, Jim Retson was with them for awhile, but on account of ill health he returned to his home in Scotland, where he and another brother are employed as district representatives of an organization somewhat similar to the Canadian Cow Testing Association.

In the fall of 1913 Geo. Retson purchased a 100 acre farm at Brookside, about a mile distant from East Court, and to it he transferred his share of the live stock and there he breeds a nice line of Ayrshires and Leicster sheep. The breeding at East Court and Brookside are along the same line and the stock of both farms is still known to the general public as the Retson Bros herd.

East Court Farm consists of 160 acres on a two-slope ridge. The slopes face to the north west and south east. The former is a sand loam the latter a clay loam with natural drainage. A magnificent panamora spreads out to one's gaze in all directions where the surrounding country may be seen for many miles in all directions. Of the 160 acres, 80 are cleared for tillage, the balance in rough pasture and gradually it is being cleared. In the pasture fields the surface is rich in vegetable mold.

The rotation followed by Mr. Retson is as follows: Oats, potatoes or turnips, oats seeded with 8 lbs. clover and 10 lbs. timothy per acre. Hay, and in sections where a second hay crop has been cut if the time is not available to plow for grain growing purposes it is top dressed with stable manure and allowed to grow hay for another year

While at East Court we were shown a field on which Mr. Retson is conducting a rather interfesting experiment. One-half of the field was plowed last August, immediately after the grass had been removed and seeded down with buckwheat. The buckwheat made rapid growth and when it was nearing the flowering stage, late in the fal it was plowed under. The other half of the field was also plowed and topdressed with stable manure and this spring the whole field was seeded with oats on the same day. At the time of our visit the blade on the plot where the buckwheat had been plowed down was far superior in point of growth and richness of color of leaf to the weaker are not so highly colored blade on the manure treated plot. We will try and give our readers the results at harvest time and in the mean time we ou hear from others who have had experiences along this line.

Before coming to Canada John Retson had owned, fitted and shown the champion bull at the Kilmarnock and Fenwick shows for four consecutive years.

The East Court Ayrshires looked well at pasture at the time of our visit. In the herd are representativs of the Clerkland, Gardrum, Glen Shamrock, Glarclaugh and Dalmustumock families. Mr. Retson plans to have his cows freshen in the early fall so that most of the milk is made during the winter season The cows are dried off during the latter part of July and the first of August until they again freshen about the last of September and October. In this way there is very little work to be done in connection with the dairy during the busy haying and harvesting season

Since last December Mr Retson has sold eleven head of pure brrd Ayrshirs—all to Nova Scotia parties at fairly remunerative figures. He finds that there is a big demand for purebred stock.

A careful record is kept of all farm transactions and operations so that leaks in the revenue are easily detected and quickly remedied. Records of each and every cow's performance at the pail and in the test is kept.

Mr. Retson plans to do as much of the farm work as he can without the aid of hired help. He plans his work so that he is not over rushed at any time. When he finds that a busy season with a lot of work is at hand he hires a man while the rush is on.

Mr. Retson is well satisfied with Nova Scotia as a country in which to live. He is making good and he and his wife and lusty young son are a happy, contented looking trio.

What is Your Profit on Your Oat Crop?

C. O. Cormer, of Purdue University writes:—

"Statistics for the last ten years show that the State has produced on the average 30 bushels of oats per acre The average price for the same period has been about 35 cents per bushel, the average gross returns per acre being $10.50. We know that many farmers are raising 50 to 60 bushels per acre right along while many more are raising less than the 30 bushel state average.

Cost of Production.

"Fair estimates show that it will cost in the nelghborhood of $5.50 per acre to grow a crop of oats, not counting anything for land rental. In fact, the statistics gathered in 1905 from farmers over the State give the average cost of producing an acre of oats as $5.53. If we add to this sum $5.00 for rent of land, the production cost amounts to $10.53 per acre. We readily see that the returns are entirely used up in paying for raising the average crop. Some are certainly making a profit, while many more are certainly losing money when they raise this crop under present conditions.

Causes of Poor Yields.

"There are several causes for the low yields of oats in Indiana, principal among which are unfavorable seasons, poor soil treatment, and poor seed. Oats is naturally a cool weather crop and any season which is hot and dry will not produce a very large crop of oats of the best quality. The soil treatment and cultural methods for oats on the average farm fall far short of what they should be. Anything seems to be considered good enough for oats and they are managed in a slipshod way.

Preparing the Ground and Seeding.

"The ground should be put in a loose, level well pulverized condition, with no clods as large as one's fist. After the ground is properly prepared, care should be taken to properly distribute the seed. There are ways in which the seed can be distributed on the ground as uniformly as with the drill but there is no way in which all the seed can be sown to the same depth, except by the use of th drill. In a dry season the plants, from seed lying near the surface, will be quickly affected and will produce less than those starting from a point lower down in the soil. However, this article is intended to discuss the seed factors particularly.

High Yielding Variety.

"Among the causes of low yields which the farmer can overcome, is the use of a variety poorly adapted to the climate in which it is being grown. The Station variety tests covering a period of nine years show that the average yield of the ten highest yielding varieties is 12.3 bushels more than the average of the ten lowest yields. This difference is sufficient to pay for nearly half the cost of producing a crop.

Faning the Seed

"Experiments have shown that fanning the seed results in an increased yield of from one to three bushels per acre. The advantage comes in the removal of a large amount of dirt, chaff, and sticks, which if left in the seed clog the drill work or fail and prevent the proper distribution of the seed. Another advantage [illegible] which is not great in labor or money, is the removal of a large number of weed seed. [illegible] can be largely cleared out by weeds and the quality considerably injured after harvest by weeds causing heating moulding and discoloration of the seed Weeds contribute much to small returns from growing oats

Treat for Loose Smut.

"Another cause of low yields and one which can be cheaply prevented, is the infection of the seed oats with loose smut. The yield is frequently diminished as much as 20 per cent. Fifty cents worth of formaldehyde and one dollar in labor will treat enough oats with which to sow 20 acres. How can we treat the oats? Mix one pound of formaldehyde with 50 gallons of water. This is enough to treat 50 bushels of oats. Spread the oats out in a thin layer, moisten with the formaldehyde solution by means of a sprinkling can and shovel over horougnly, making sure to distribute the moisture to every kernel. Then pile up and cover with a canvas and leave for four hours. The oats is then ready to spread out to dry, after which the seed may be sown. It is well to thoroughly disinfect the sacks, bins, and drill to prevent reinfection.

Rate of Seeding.

"Frequently low yields are caused by too small an amount of seed per acre being sown. Station experiments show that the best yields are, on the average, obtained from sowing from two and one-half to three and one-half bushels of oats per acre. The average of four years work at the Indiana Station to determine the best rate to seed oats shows the use of three bushels per acre to have produced three bushels more than that produced by any other seeding.

"When the farmer has sought out the most prolific variety, prepared the seed in every way to guard against a poor stand and disease, and has properly attended to the soil and seeding, he has done what he is naturally expected to do in raising oats, and then he may expect to get profitable returns."

Labour Saving Haymaking Methods

Editor the Maritime Farmer:

We notice at this season, many articles in the different farm papers, on the best methods of curing hay. Some of these methods are practical and and many of them call for so much hand labor as to be out of consideration by the average farmer. No other crop grown on the farm is so dependent on the weather for its food value as is the hay crop. It matters not how carefully we cultivate, seed and manure the ground, if we have a wet haymaking season it will be hard indeed to house hay of the best feeding value.

I do not attempt to dispute the fact that the generally recommended method of cocking hay will make the best quality, that is the small amount that we may be able to handle by this slow process, while the hay is at its best. I think it a better plan to practice a system by which we are able to house the entire crop in good feeding condition, rather than a small portion of it in ideal shape and the greater part left so long that it is past its best feeding value and impossible to make it into even fair feed. It is all right to do all farm work the best possible way, if you have the time and necesary help; if not, plan to use fast working machinery.

Every farmer should have at least a hoisting gear of some sort for unloading. This is not an expensive method of handling the hay in the barn. Then if any considerable acerage is grown a six foot mower is slow enough.

We use such a machine and find a side delivery rake and hay laoder almost indispensible. We mow every morning and haul in evrey afternoon that weather permits. Five or six acres of good average hay can be handled a day with two men and a boy.

We do not let the hay lie in swath very long. A team is started even before the mowing is finished if the weather is hot and the hay tossed up in neat small windrows, there is a lot of heat in the earth at this season and the hay will cure fast enough without any more exposure to the sun. The folowing day we start the loader as soon as the mowing is finished. Timothy and other grass will make all right without turning unless cut very green, in which case we run the side-delivery rake as often as necessary to toss the windrow over. Clover, usually, has to be turned several times. By this method we can house good hay that will feed out green, and we are not nearly so liable to get caught in a rain as if we coiled and left it one day longer. Cut one day and haul in the next is a safe and rapid way of handling this crop. If a rain threatens in the morning we either haul in or coil instead of cutting, depending on the condition of the hay. With a side delivery we can make hay much more quickly than by using the dump rake, as by the former the hay is tossed up lightly and left resting well up and loosely on the ground presenting a very neat apearance, resembling a roll of carded wool. In this position it catches much more wind and dries faster. It is also handled easier by the loader and if care is taken in the raking the loader will gather the windrow up so clean that it is impossible to tell where they lay formerly and if the builder is careful no second raking is necessary.

Many farmers object to using a hay loader for the reason that they find it hard to level the loads from it. These men, I think, must either try to load too fast at first, or else do not use it long enough to get thoroughly acquainted with the machine. A fast walking team will certainly hustle a man some if kept steadily at it; but there is no reason to drive a man too hard. One man is plenty on the load. A second is liable to get a fork tine in him if the ground is rough and the wagon rocking much. However, a resourceful man will soon learn how to construct a frame on the wagon, suitable for his purpose and, with patience, in time he will be able to build hay very fast.

A neighbor of mine uses a specially big rack-like frame about as wide and high as a medium sized load. One man drives and builds the load, or what little building is done, which only amounts to stopping the team occasionaly to level it down. Two teams are used and while not very large loads are hauled they are loaded very fast. I have known this man to put up anywhere from 80 to 100 tons of hay in 10 days, with one man and a boy, or three hands in all. It was an unusually fine season, but this quantity could not be handled in double the time by hand with this number of men.

There are few more necessary implements used on a farm than a hay loader. A side delivery rake is also a good second, but not absolutely necessary. Considering the nature of the hay crop and its liability to damage it is most important that we have implements to rush work with when the weather permits. While this may seem an expensive machine to many farmers few indeed there are, who have not lost the worth of one many times through damaged hay t hat the loader would have helped them save.

To the man who grows any quantity of hay from year to year, it will soon pay its cost in wages saved, besides being always on hand where required and not liable to leave on short notice.—W. M. Lea, Victoria, P. E. I.

COMMERCIAL FERTILIZERS

Phosphoric Acid.

If the element phosphorus becomes deficient in the soil, the total supply can be increased only by making an actual application of some kind of material containing phosphorus.

It is well to bear in mind that about thre-fourths of the phosphorus required for ordinary grain crops is stored in the seed or grain, while only one-fourth remains in the straw or stalks. Consequently, when corn or wheat is sold from the farm thre-fourths of the phosphorus required to produce the crop leavs the farm in the grain.

When the crops are fed to animals, especialy to growing animals or milk cows, from one-fourth to one-third of the phosphorus contained in the feed is retained in the bones, flesh and the milk, while about three-fourths is returned in the manure.

The total phosphorus content of the soil on any given farm may be increased by the purchase of stable manure, or by using manure made from purchased feeds, especially from grains or other concentrates, as bran, oil meal, or gluten meal; or we may purchase steamed bone meal, which is made from the bones of cattle, etc. Slag phosphorus from the steel works, if the slag contains sufficient phosphorus to make it valuable, or natural rock phosphate deposits in certain places, where this mineral is benig mined and ground in large amounts. It may be noted that the original stock of phosphorus naturaly in the soil is ground rock phosphate.

Potash.

Potassium, like phosphorus is a mineral element contained in the soil, and if the supply in the soil is deficient it can only be increased by a direct application to the soil of some material. As a matter of fact aside from peaty swamp lands and some very sandy lands the potassium, contained in most soils is practically inexhaustible.

Peaty swamp soils are frequently exceedingly deficient in both available and total potassium as compared with normal soils, and where the supply of farm manure is limited, commercial potasium salts may be applied to such land with very great profit Potassium sulphate and potassium chlorid (frequently, though incorrectly, called muriate of potash), are the most economical and satisfactory commercial potassium fertilizers. Kainit is sometimes used, but it contains only 10 per cent of potassium, while potassium sulphate usualy contains 40 per cent, and potassium chlorid contains about 42 percent. of the element potassium.

The Phosphoric Acid and Potash Supply.

The amounts and availability of these two mineral elements of plant life vary greatly in soils. It is evident that the lands from which crops have been harvested for a series of years, and those which have been devoted to pasturage, must contain less of these minerals than they did when first reclaimed from a state of nature and this is true even when the most painstaking effort has been made to return to the land the refuse material an manure resulting from crops and animals, for it would be imposible to return al that has been removed, since there would be no object in harvesting crops or keeping animals unles their edible or comercial parts were used or sold. Therefore, no matter how economically the native supply of these elements have been made gradually available, the time must come, sooner or later, when the native supply will be so diminished as to require additions from outside sources, if full crops are to be maintained.

Husbanding the Mineral Plant Food.

The problem which should first arrest the attention of the husbandman is, how much phosphoric acid and potash must be carried in the soil, and how much may be taken out without reducing the reserve below the profitable standard. And it requires no little skill to solve the problem. This is followed by a question equally difficult How best to make available, how to capture and hold the mineral matter, which it is proposed to remove? Shale drain tiles or plants which are able to thrive on "tough" food and to transform it into that which is "tender," or better implements of tilage, one or all, be used to force the harvests from the "face sweating, stubborn glebe?" How far shall we go in our endeavors to make the dormant minerals soluble ?

If they are made solubble by tillage and other means, they pass but a short way into the soil before they unite with bases, and again become insoluble. Shall the effect be produced, only so far with tillage as will give the plant opportunity to set free its own mineral food by the action of its roots; that is make the material in the soil available? The question is not answered when we dodge behind the word "available," for however, available the food may be, if there are not suitable roots and rootlets, or enough of them, to take advantage of the food prepared, or if the rootlets are not made comfortable, the full power of the soil canot enter into the plant

Most soils cary a vast amount of phosphoric acid and potash, much of which, under careless or even ordinary tilage, appear to be nearly or entirely useles.

For a supply of the mineral constituents of plants, both home and commercial sources are open. The home suply is found in the soil and the refuse material of the farm, which later may be augmented by purchased animal foods.

Cultivating.

The next thought is to tickle the soil with tilage, and see if it will laugh with fatness; if it does not apply something which will awaken it more effectively. If by the use of comparatively cheap subbstances such as the lime and gypsum, which we referred to, in our last isues, the phosphoric acid and potash can be ousted and made available more cheaply than they can be bought for the land, then these cheap substances should be used, for they usualy not only set free plant food, but also improve the physical character of the soil, and sometimes serve as regulators of soil moisture.

Since phosphoric acid and potash leach out of good soils in only extremely small quantities, it would seem at first thought that the presence of a living plant would not be necesary to conserve them, as in the case of nitrogen; but if these minerals have been made available by tillage or by amendments to the land, and if not used, they tend to become unavailabie again as time passes.

Why Does the Laying Hen Have a Red Comb?

Poultry keepers have long known that hens' combs do not always present the same appearance; a considerable increase in size takes place when the period of laying approaches. Mr. Geoffrey Smith, a British investigator, has been making precise measurement on young and adult hens, at different times and he shows that the comb increases practically to double the size or more during the period of laying, without a simultaneous increase in the weight of the hen. Mr. Smith found that the increase in size in the hens' comb was due to a fatty deposit, and he gives the following explanation:

During the time of laying the blood is charged with fatty substances, which accumulate in the ovary, where they enter into the composition of the yolk of the egg; the excess of these substances is deposited in the comb, and thus contributes to the accentuation of secondary sexual characters.

A. E. Adams

Secretary United Fruit Companies of Nova Scotia, Ltd., Berwick, N. S.

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And Co-operative Dairyman

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CREATING COMMUNITY SPIRIT.

The most important factor in making a success of life is for the individual to have a clear understanding of what we are here for. Civilization is a matter of evolution. First we had the savage state in which man lived for his own and to destroy all others. Then the state of live and let live; but now we have arrived at the state of live and help live. Our idea is that a man is to make the most possible of and for himself and the community in which he may live.

I have known some men who were said to be successful, but they had made their success at the expense of the community. Our idea is the Acadian: "There the richest was poor, and the poorest lived in abundance."

In modern times how can a man give expression to his obligations to his community? By improving himself and his home, showing an interest in the roads, the schools. and the churches. Some may not think tuat support of the church is indicative of a man's interest in the community, but we have noticed some prosperous communities and on inquiry found that the people had a peculiar religion and they all had it and it was not a Sunday affair but an every-day religion. During the Russo-Japanese war the Japs went to their death as no other people ever did. Why? That was their religion. We have heard the praises of the farmer-soldier sung; but it is said the Russian peasant (a farmer) does not make a good soldier. Why? He owns no home and has no religion.

Some years ago I heard a financially prosperous man say, "I can't be religious myself, I believe in supporting the church and helping other people to be religious. A church in my community is worth a judge on the bench and a dozen policemen,"

The modern school idea is to train the pupil to use himself. Roads are to facilitate transportation to market, to school and to church. A community is measured then by the character of its people, their homes, their roads, schools and churches. The problem, then, in a country community, is to show a farmer that a school will be helpful to him on his farm; that the church has a religion which, if he gets it good and strong, will help him to raise a bigger crop of corn and there-by he can have a better home.

In order to avoid jealousies that might arise between neighbors, each must be convinced that the succese of the one is not at the expense of the other, but will be helpful to the others. The first step then, in creating a community spirit, is to get the preacher and teachers imbued with the idea, that it is their duty to help the farmers in their district.

At one particularly good farmer' institute the first man to greet me was the minister. I learned that he had a large congregation and I learned that he circulated the petition for the first farmers' institute. That minister did not himself undertake to teach his congregation farming; but he knew that to be good church members they must be good farmers, and he took the lead in securing agencies that would be helpful to them on their farms.

Teachers may complain about parents not taking an interest in the school, but if the farmer finds out that the pupils are figuring on how much it cost, him annually to maintain fences on the farm or what the profit is on his old brindle cow, and if he is feeding her a balanced ration, or if their flock of poultry is profitable or not, then he will begin to take an interest in the school and begin to think of methods by which he can help that school; and finally he must be made to feel that the condition of his farm and home is an index to his mind and character, and that a failure to make the most of himself and his farm injures the value of all the farms in the community.

A CREED FOR THE COUNTRY BOY

I believe that the country which God made is more beautiful than the city which man made; that life out of doors and in touch with the earth is the natural life of man. I believe that work with nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do, but how you do it; that opportunity comes to the boy on the farm as often as to the boy in the city; that life is larger and freer and happier on the farm than in the town; that my success depends not upon my location, but my self; not upon my dreams, but upon what I actually do; not upon luck, but upon pluck. I believe in working when you work and playing when you play, and in giving a square deal in every act of life.

NECESSITY OF UNDERDRAINAGE.

It is a matter of common observation that at a certain depth pelow the surface the subsoil is full of water, supplied by rain or melting snow which has soaked through from the surface. The upper limit of this saturated area is known as the "water-table." Ordinarily plants will send their roots down till they reach this water-table and no further. This is becouse the roots can grow and thrive in earth which is merely damp, but not in earth that is full of water as to exclude air. This fact has an important bearing on the question of underdrainage.

In spring after the melting of the snows of winter, the water-table, on poorly drained lands, is very near the surface, but, with tne oncoming of dry weather, it is rapidly lowered, too rapidly in fact, for the growth of roots to keep up with it. The plants sown in spring are thus apt to be left high and dry, with shallow root systems, and largely dependent on whatever rain may fall during the summer months for their supply of moisture. If, however, there be sufficient underdrainage, either natural or artificial, the water-table will be much lower in spring, while the plants are germinating, and the roots will grow down to it, and in this way occupy a much larger feeding place. Hence the resulting crop is larger and finer and better able to resist drough.

Unless the surplus water is removed by drainage, it must be brought to the surface by capillary attraction and then evaporated. As evaporation absorbs heat, this process reduces the temperature of the soil and leaves the land cold and raw. Drained lands, therefore, are warmer than undrained, and as, moreover, they are more quickly put into workable condition in the spring, the crops on such lands are the first to ripen and the most likely to escape frost in the fall.

That underdrainage pays handsomely in earlier' bigger and more hardy crops is not only demonstrable by theory, but has been amply proven in practice. The most enthusiastic advocates of underdrainage are those who have done most of it.

WHAT COLLEGE FOR THE BOY.

"Shall I send my boy to college or keep him at home?" This thought is uppermost in the minds of many fathers just now. Every normal father desires the welfare of his children, but he knows that some boys are spoiled by being sent to college, whereas other are just as surely spoiled by being kept on the farm. How shall he decide?

There is one sure, safe test—watch the boy! If he shows decided interest in definite direction, give him a chance in that direction. Many a boy cut out to be a merchant, or a lawyer, or a doctor, fails because his parents force him to take up something else. Many another fails at these and other "clean hand" work because he should have been a farmer. Why? His heart is not in the work.

Every normal boy is fitted by nature for some one thing better than for anything else. This is the father's cue. If he has the stuff in him he'll find a way to higher training. The boys who go of their own choice to college and work their way wholly or in part almost invariably do better than those who follow a flower-strewn road prepared by their parents.

Farm boys who do not show a decided "bent" had best attend an agricultural college, whether they work their way or not, because they will there be in contact with farm subjects and farmers' sons. Furthermore, tne modern "farm college" gives a decidedly broader, more practical general course of study than do those colleges which give a little veneer of dead language, "arts," and science which rubs off with the first contact with the world. The farm college every time for the farm boy, except the one determined to be a lawyer, a doctor, a clergyman or something else as definite!

How a "Cost Department" May Transfer a Farm

The following little story written by Mr. Bramhil, a senior student at the O. A. C., and published in the Christmas number of the O. A. C. Review, illustrates the value of a cost department so nicely that we reproduce it herewith in full.

"From a financial standpoint, Dad had been a failure all his life. He was one of the pioneers of the country, was reeve of the municipality for years, and no new policies were ever introduced without consulting dad. He had three sons and two daughters. One studied law, the other medicine; my two sisters were married off, and I the youngest, was left home on the farm. Long before I was 10 years of age my feet were so tough that I could go in the oatfield bare-footed. I was a lazy little rascal, my father said, and my greatest ambition was to learn to run an automobile and become a chauffeur for some rich young lady. Dad was determined I should stick on the farm, but mother said I looked like a young cherub, and she was sure the Lord meant me for the ministry. Mother's will prevailed as it usualy did, and accordingly I was sent into town to the high school, dad declaring that it was a shame to waste good money on such an idle little scamp.

"Three years at high school succeeded in smothering the last spark of affection for the farm. I received a week's suspension for stealing apples, and dad determined it would be useless spending any more money fitting me for the ministry, so I was left to shift for myself. I picked up the city paper, and saw an advertisement: "Wanted—Cost Clerk in manufacturers' office." I applied for the position and received a letter asking me to call at their office in the city. I showed dad the letter but he shook his head, and reckoned that a cost clerk must be a shark of some kind. Mother said she knew that Sonnie wouldn't do anything wrong, and that if I could once get a start it would only be a few years before I would be president of the concern. Mother triumphed again and acordingly my trunk was packed, and with tears of blessing, I was sent off, my canvas telescope well packed with cake and apples.

In the City Office.

"Fearful and trembling I stepped into the office of that large manufacturing concern, and was shown into the manager's office. He asked me a few questions, and finding I did not know anything, decided to hire me. I did not sleep much that night. Before six o'clock I was awake and excited over the novelty of my coming duties.

"Half an hour before the appointed time I was down in the office. When the stenographers came down they started to flirt with me. I turned crimson, and wondered what mother would think if she could see me among these bad girls. I imagined I would have to get out the balance sheets, dictate letters, and consult with the directors as to the ways and means of increasing the efficiency of the plant. Imagine my disappointment when I was made to hunt through the dusty files for old repports and letters. By night time I was dusty, dirty and tired, and had not such a favorable impresion of office life. I managed to stick to the job, and after a month of hard, dirty work, was put on one of the ledgers. I stayed at this all winter. Often at night my head would swim and my back would ache, and in my dreams figures would appear in an endless confusion. When spring opened up, I used to sit in that stuffy office and long for the green fields at home.

Back to the Fields Again.

"Meanwhile things were gong badly on the farm. Dad had raised a mortgage to build a new house. Then three of our horses died, and along came an off year in crops. Dad's health broke down. He could not meet his payments, and the farm was to be sold. This nearly broke mother's heart, and I was sumoned home. It was 16 months since I had been out in the clear open fields. Everything seemed to take on a new life. The calls of the barnyard seemed like sweet music after the discordant noises of the city. The day I sugested to dad that he give up the active management of the farm, and turn it over to me. Dad laughed and mother cried, but finally they decided to let me try it.

"That first week on the farm I did a good deal of thinking. Other people had made money on the farm; why hadn't dad? He used to work long and hard, but it was really mother who kept the house with her butter and the chickens. I decided right there and then that what dad needed was a cost department. I didn't know very much about farming, but somehow or other it seemed to me our 10 cows wern't producing enough milk for the food they consumed, and our steers were long, bony brutes, hard to fatten. A few years before, a farmers' institute chap had lectured in the schoolhouse on dairying, and warned everybody of the profits to be made in that business. Dad thought his opportunity had come and crossed our good Durhams with Jerseys. As a result our cows were a bunch of nondescript mongrels of all shapes, sizes and colors. Now this is where Dad made a great mistake. The dairy business is a specialized business, requiring men of a certain temperament and training. The farmers in our locality were not suited to that business, and attempts to introduce it generally resulted in failure.

Expensive Cow Boarders.

"I got out a pencil and did some figuring. Our cows averaged 2,900 lbs. of milk a year. At 15 cents a gallon this gave $43.50 a cow. From a report of the agricultural college, I figured out the average cost of feeding these cows for one year was $57.10. It did not take a Pierport Morgan to see that dad's profit was on the wrong side. You will wonder why dad did not go into the receiver's hands long before. For the simple reason that the cows charged too little for their board, dad waited on them himself and had mother and the kids to help. I decided right then and there to clean out the whole bunch of scrubs and work into some good Shorthorn cows of a dairy strain.

"Next I investigated the feeding of the steers. Dad used to let his steers grow along till about two and one-half to three years old, and then fatten them off for market. I figured out that the steers which dad sold for an average of $75, had cost $65 to produce That left a profit of $10 a steer for 3 years' labor A butcher would quit business if he couldn't make 20 per cent on his selling price, and his labor would only be a matter of a few hours. Dad only received a little over 10 per cent. for three years' labor. In a report of the Dominion Experimental Farm, I found that up to one year of age it cost $5.50 to produce 100 pounds of flesh; from one to two years it cost $6.05, and from two to three years, $7.05. I figured out that a yearling steer weighing 1000 lbs., would cost $55, and at eight cents a pound, would bring $80, leaving a profit of $33 for one year's labor. A two-year-old weighing 1,500 lbs., would cost $85, and at eight cents would sell for $120.00, or a profit of $35.00 This meant a return of $2 for the extra year's labor, and the privilege of hearing your steers bawl every morning for a year. I saw where dad made his mistake and determined to shove the young calves right along and get them into the market at from 12 to 15 months.

Calf Rearing Methods.

"I still continue to raise the calves on skim milk by restoring as nearly as possible the qualities contained in new milk. As a substitute for the milk fat I use flax seed meal. It contains a high percentage of starch and has a high rate of digestibility, with a nutritive ration nearly the same as whole milk. The milk is always fed sweet and warmed to about 95 degrees F. I let the calves nibble at rolled oats at about three weeks of age and give them just about all that they will eat. I also get them used to alfalfa hay as early as possible. It is surprising how soon a calf will learn to eat. The calves are kept on milk for a couple of months, and gradually worked into a ration of ensilage, chopped oats and barley, and plenty of alfalfa or clover hay. By forcing the feed I find it an easy matter to produce a 1,000 lb. steer at 12 to 15 months.

"I have now all the farm organized on the cost system basis. My 10 Shorthorn cows of a milking strain last year averaged 8,000 lbs. of milk, and gave me a net profit of $500. I made a profit of $300 on the steers and the hogs, sheep, poultry anr orchard gave a profit of $700. This made a total net profit for the year of $1,500, which is not bad for a 100 acre farm. In five years I have paid off the mortgage, improved the buildings, equipment and herds, and I now have an option on another 100 acres, and intend to increase farming operations, ever keeping in mind the importance of a cost department on the farm."

SOCIAL CONDITIONS OF FARM LIFE

In treating of this subject it seems quite necessary to bring it before you under several sections such as:

1st. The conditions that have gone by. The old friendly spirit of former days is dying out and there is more of a tendency for families to live to themselves.

It was quite customary twenty-five, thirty and more years ago for people to drop in on their neighbors for a friendly chat, for an hour or so, or for even a day of social intercourse. The babies and youngsters would be weighed and what fun that was for we juniors, when some particularly unruly child was being weighed. This was one of the scenes in our old home for there was always a standard for the weighing and a child of some age to be compared with those of the neighbors. But this weighing was only a side issue of the programme. Conditions for growing best crops and stock was a topic of much concern. Whose cows were doing best? Who had the best sheep and best pigs?

Co-operation in working was more common than at present. Plowing frolics, frolics in clearing fallows or new land. Barn raisings and many other kinds of work was performed by getting the people of a district together. And at these frolics, farm, social and political topics were always discussed

Then people began to copy the manners of socialism of their town and city folk, with the result that since "Charlie went a courting and brought a wife from town,", it is quite impolite to go visiting without a special invitation, and when some of us who go for a friendly call do so in a realy old-fashioned way, it is almost said that such people go poking into other people's business.

What a terrible rut, some people who think that only they are the one great IT, have gotten into.

But let us deal more with present day duties. Not long ago a preacher, in his sermon, told how in many cases, Christ was being organized right out of the Church, and it is just as true that sociability is being organized right out of farm life.

II. Time and Place.

The time must suit the habits of the people. Some might manage to meet in the afternoons, to nearly all, the evening would be most suitable; and for the place, either in the home or in public buildings, in cold weather, and some favorable outdoor locality would be ideal in the summer season.

III. How.

Discussions upon various topics and readings, dialogues, etc., all of which would help draw people together..

Under this sub-section, discussions could be ppepared, interesting addresses upon "How to Improve Farm Life." What breeds of stock, crops, etc., are best suited to our locality. Are the breeds of stock that are best suited to our conditions best suited to our market conditions? Many, many other topics can be thought of.

In debates we could mention various phases in politics; the duties of farmers in relation to politics. Should farmers enter parliament? Most decidedly I say no to this.

Then there is that great question of Women Suffrage. And again the present agitation, reprocity. Reciprocity, it seems is only sociability between nations. If sociability is best for farm life why not best for nations?

Then in regard to the recitations and readings. It is realy shocking to find how very few either country or city, can make a creditable showing in this accomplishment.

Another phase in improving social conditions, is that very few, probably not more than one present of the people in rural districts can lead or carry on a business meeting of social or religious matters Even the Normal graduate seems practically helpless in regard to the mode of procedure. And, let us not forget the soothing effect that music has upon many minds. It is uplifting if of the right kind. In our various moods, various tunes, quick or slow music, balance the strained nerves. Only a few days ago, a hard working man, who serves the public, said that many times when he becomes bothered by some disagreeable customer and when other things are not going just right, he goes to the gramophone, puts on a certain record, and by the time this one tune is played his mind has assumed its normal condition.

Vocal music has its bebneficial effect also.

In speaking of the gramophone it seems only right to mention this wonderful piece of mechanism in playing a part in sociability, either on the farm or in the city. A good gramophone is a great help in an entertainment. But let us not overlook the fact by using one of these talking machines, that our own arts may be allowed to remain undeveloped. Surely it would be better to develop home genius than to bring in too much outside accomplishments. Then there is that other wonderful machine, the telephone. Now almost indispensible to country life. It is valuable in many ways and a curse besides

IV. Effects.

Well, if we would let the proper effects affect us our farm life would become so uplifting and pleasant that we would soon discard the usual methods

(Continued on page 776.)

HORTICULTURE.

Plant Lice on Currant and Gooseberry Bushes.

Every year appeals are sent in to the various agricultural experiment stations concerning deformed leaves in the spring. The fresh tender leaves are wrinkled, curled and otherwise stunted and distorted by plant lice that have over-wintered on the bushes in the egg stage, thus being ready to attack the new growth as soon as they hatch in the first warm days. As their life histories has not been worked out, during the season of 1913 the Department of Entomology of the Maine Station paid considerable attention to the group of plant lice or aphids that attack the currant and gooseberry. They were found to be particularly difficult to study from the fact that a single collection frequently contained as many as four species with their innumerable progeny harmoniously feeding in mixed colonies on the same stem and leaves. Thus it was no easy matter to isolate the different species for the purpose of rearing the successive generations.

In all eight species were found to be present in Maine. The worst of these, a grayish species, we have called the "white cornicled currant aphid"* on account of the milk white color of the two tubes near the tip of the body. As these insects reproduce rapidly the colony soon gets too numerous to be sheltered by a single leaf so it scatters to infest the growing shoot and under side of fresh leaves. A thriving colony will distort the stem seriously and cause the misshapen foliage to cluster in a dense protecting mass. It occurs on both currant and gooseberry.

Associated with the species just mentioned is the "green aphid of the gooseberry,"** a pale aphis found on the gooseberry, much to the detriment of the bush.

A third plant louse comon in Maine upon currant in spring is probably the same as one found on sow thistle and lettuce during the summer† Like the species previously discussed, this aphid winters on the currant in the egg stage, the spring generations feeding upon the sap of the growing leaves. The colections I have made from the flowering currant have been mainly from the under surface of the leaves which their presence causes to curl and cluster though not in such a dense mass as those infested by Aphis varians. They are sometimes also found on the stem.

During the last of June winged and wingless females and young can still be found upon the currant. The winged females apparently take flight to lettuce, sow thistle and probabbly to related plants, although I have not succeeded in making the transfers live under control conditions.

It is interesting to notice that another curant and gooseberry species‖ is indistinguishable from a lettuce aphid and is probably a summer migrant to that plant. It is an alert, glistening bristly species. The apterous viviparous females are green and without any markings. The winged viviparous females have the abdomen heavily marked with irregular black transverse bars.

With two species of plant lice migrating back and forth from currant to lettuce it is thus apparent that it is advisable to clear out lettuce in the vicinity of this fruit before late summer, care being taken to leave on neglected lettuce stalks about for the development of aphis This is as much for the sake of the lettuce as the currants for although these green plants lice are not poisonous, most of us prefer our salad served without them.

It is no uncommon thing to find currant leaves puffy with reddish or yellow blister-like deformations. These are the home of Myzus ribis, a delicate little aphis not so serious in its work as varions because it attacks directly only the leaves but still troublesome enough to interfere with the proper functioning of the leaves, cause premature ripening of the fruit, and as one currant grower in the State puts his complaint against the species: "though the fruit holds on, the plants are hurt to a certain extent and look very anoying."

The stem-mother, or form hatching from the over-wintering egg, attains its growth in Maine about mid-May. This insect is very pale green with green spots in two longitudinal rows on the dorsal surface. Like the other apterous forms and nymphs the stem mother is rather thickly beset with capitate hairs shaped like minute pins, with points attached to the body.

The immediate progeny of the stem-mother are apparently partly winged and partly wingless, since I have taken colonies as early as May 20 containing the stem mother surrounded by nearly mature apterous forms and individuals with wing pads. The apterous females and young of this species are ordinarily pale clear lemon though sometimes nearly water white. and these small pale insects would have to be very numerous to be found if it were not for the telltale danger signal of reddish puffs which give evidence of their presence.

In life it is distinguished from the species next discussed by being characteristically lemon and being more flatly appressed to the leaf. The two species are frequently intermingled upon the same leaf and are very likely both confused under the name ribis.

Collections of Myzus from gooseberry and curant in Maine show two closely allied species. The differences though rather slight and for the most part relative seem to be too constant to admit of interpreting them as varieties of a single species.

I have never taken any lemon yellow specimens of the second species.‡. The apterous viviparous females are greenish water white and longitudinal median and lateral lines (three in all) of vivid green. The winged female is very pale green with three vivid longitudinal lines as mentioned for the apterous form and a few blackish transverse markings on caudal half of abdomen.

Collctions of woolly aphis§ curling the leaves of English elm, Ulmus campestris, were made in Maine during the summer of 1913. The life history of this species as worked out by European entomologists has been found to include a migration to currant and the gooseberry bushes upon the roots of which the summer generations feed. ...l migrants are produced which return to the elm and the insect over winters on this tree in the egg stage. We have as yet no record of this insect as occurring upon gooseberry or currant in America, but the summer stages will no doubt be found to infest these plants here as in other countries.

Aphid Control.

In recent years tobacco extracts have rapidly taken the place of other sprays for aphids. It should be remembered that this is a contact insecticide and kills only the insects actually touched. It is, therefore, necessary to be very thorough in the spraying.

Formula—Tobacco Decoction.

Tobaco stems or tobaco dust ¶—2 pounds.

Water—4 gallons.

Put the tobaco in the water, enough to cover, which may be either cold or

A Healthy Demand

THERE'S always a healthy demand for bread and pastry made with

REGAL FLOUR

Your family know a good thing when they taste it, and they know things made with Regal are invariably good. There's no time like the present for trying it, for the sooner you'll reap the advantages of using a superlatively good and absolutely uniform flour. Buy a barrel of REGAL from your grocer to-day. Your money back if you're not satisfied with it.

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BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies. Boston, Chicago and New York

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THIS YEAR (1914) AT

KENTVILLE, N. S.

OCTOBER 7, 8, & 9

Kings, Hants and Annapolis Counties

Fruit, Farm and Garden Produce; Live Stock, Poultry, Apiary; Fancy, Domestic and Educational Work.

Fruit Growers and Farmers should not miss the Greatest Fruit Show in Canada. Write for Prize List.

W. M. Carruthers, Sec'y, Kentville, N. S.

hot. Place over the fire and when the water has reached the boiling point remove some of the fire and allow the water to simply simmer for fully an hour, when the liquid is ready to be drained off, diluted to the above proportions and applied. Boiling violently drives off the nicotine.

If whole-leaf tobacco is used, prepare as above, using one pound of tobacco to each four gallons of water.

No lime or other alkaline substance should be added to the tobabcco while cooking. Apply at once, or within a few days after making, if possible.

Certain reliabble extracts such as "Black Leaf," "Black Leaf 40," and "Nikoteen" are on the market and can be secured through local druggists..

Directions for use come with the products There is nothing to do in the preparation of these extracts except to stir the contents of the can before pouring out any quantity of dilution.

Tips of branches bearing leaves which have been curled by aphids can be dipped into a pail of tobaco decoction long enough for the solution to penetrate. Such a method as this is of course only applicable for a few treasured plants and bushes.

Sometimes underspraying is a necessity, and for this purpose a sprayer should be fitted with an upturned elbow and a nozzle of the Vermorel type so that the under sides of the leaves can be reached.

* Aphis varians Patch.
** Aphis sanborni Patch.
† Rhopalosiphum lactucae.
‖ Macrosiphum lactucae.
‡ Myzus dispar Patch.
§ Schizoneura ulmi (fodiens.)
¶ Refuse from cigar factories.

—Maine Agricultural Experiment Station, Orono, Maine.

Inspection of Potatoes.

The Department of Agriculture of the Province of Nova Scotia has issued a circular dated June 5, 1914 which reads as follows:

Dear Sir:—On April 22 1914, the Board of Agriculture of Bermuda passed certain regulations prohibiting the importation of potatoes unless accompanied by a certificate that such potatoes are free from powdery scab or other dangerous potato diseases. I enclose an extract from these regulations which will be of interest to those catering to this trade.

Regulation 4, Section 3;—"No potatoes will be permitted to be imported to these Islands from the Province of Nova Scotia in the Dominion of Canada unless such consignment is accompanied by a Provincial or Federal certificate that such potatoes are free from any suspicion of any contamination from powdery Scab or Black Wart and each package shall have plainly marked thereon or on a label affixed thereon or attached thereto the number of the certificate under which it is so certified."

Regulation 6;—"When a barrel or a package is found to contain over one-third of any of the following classes of potatoes, the inspector, or assistant inspector, shall order that it be sorted and again be submitted to him for inspection after all potatoes of the classes mentioned have been discarded:—

(a) Small potatoes, that is, potatoes under one inch in diameter.

(b) Potatoes in a diseased condition.

(c) Potatoes that are not the type or variety they are represented to be.

Discarded potatoes of these classes shall not be sold or used as seed potatoes."

In order that the Nova Scotia growers continue shipping potatoes to Bermuda, it is necessary for the Provincial Government to undertake inspection of all potatoes destined for this market. This will necessitate the appointment of an expensive and a highly trained inspection staff, as a single mistake on our part would forever close to us the Bermuda market. To help cover the heavy expenses which such an inspection entails, it has been found necessary to impose a small inspection fee.

While those interested in this matter will naturally desire that the inspection fee be kept as low as possible it must be remembered that the work is undertaken solely in the interest of the growers and that even a large fee could not begin to cover the total cost. The sum suggested is that of three cents per bushel, which we submit for your fair consideration.

If you are interested in this matter, the undersigned will be glad to hear from you.—Wm. H. Brittain, Provincial Entomologist, Truro, N. S.

Fourth Dominion Conference Fruit Growers.

The Minister of Agriculture has called a Conference composed of delegates from the various provincial fruit growers' associations to meet in Grimsby, September 2nd, 3rd and 4th, to discuss subjects of vital interest to the fruit growing industry of Canada. It is expected that certain standards of packages, grades of fruit and methods of transportation, etc., will be recommended for adoption for the whole country. The object of the Conference is largely that the Minister may come in direct contact with the representatives of the fruit growers and shippers, and discuss with them methods whereby the fruit growing industry may be developed in the best possible way.

Delegates have been appointed from the Maritime Provinces as follows:

Prince Edward Island— Murdock McKinon, A. E. Dewar, Theodore Ross, Charlottetown.

Nova Scotia—S. B. Chute, S. C. Parker, Berwick; F. W. Bishop, Paradise; Prof. P. J. Shaw, Truro; W. W. Pineo, Waterville; A. E. McMahon, Aylesford Manning Ells, Port Williams; W. H. Brittain, Truro.

New Brunswick—C. N. Vroom, St. Stephen; A. G. Turney, S. B. Hathaway, W. B. Gilman, Fredericton.

Pollinating Apple Varieties.

The interesting experiments at the Washington station with apple pollination continue to be of keen interest to growers everywhere. The station at Pullman has been engaged for several seasons in the study of orchard pollination to determine what varieties of apples are self-sterile and need fertilizing by others. Much of the work was done in local orchards, but the latest report includes several orchards at Opportunity. The important point is that of the 19 varieties tested Rome Beauty and Baldwin were the only varieties which gave any promise of being able to produce a crop without cross pollination. These set much less fruit than when crossed. Ben Davis and Wealthy were found slightly self-fertilized. Greening, Spy, King, Delicious, Wagener, etc., failed to produce any fruit from self-pollinated blossoms. In most cases the station finds that varieties which blossom at the same time will cross polinate successfully and as a rule set more fruit than the same varieties when self-polinated. This matter of pollination in the orchard has received too scant notice at the hands of eastern growers. Strawbery growers have profited by the knowledge for years, but apple growers have taken only a mild interest in cross pollination.

That Barrel of Apples.

"I wish to speak to you about that barrel of apples I bought day before yesterday," said the kind-looking old gentleman.

"You'll have to see the clerk who sold them to you," the grocer answered very snappishly. "I don't know anything about them."

"But I desire to say to you personally that—"

"Now, look here; I can't be bothered over every pound of sugar or pint of cider or barrel of apples that my clerks sell. Just see the young man who waited on you. He's around somewhere."

"Yes, I see him there at the back of the store; but I really thought that it was my duty to tell you about it. You see—"

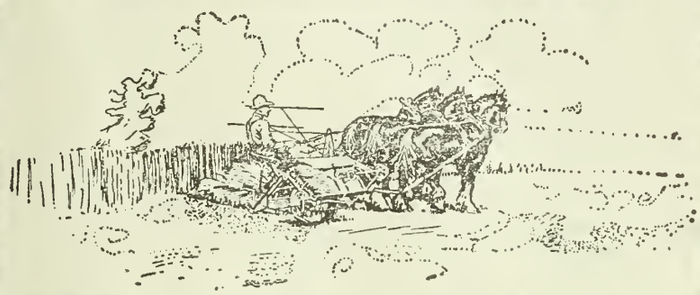
"If I stood around listening to everybody who comes into this store to complain that they've bought something they didn't want, or that they've been slighted, as they think, by the clerks, I wouldn't have time for anything else. You'll please excuse me. The clerk will hear your complaint and if there is anything that we can do you may be sure it wil be done. But we can't take back a barel of apples after they have been out of the store two or three days You can surely see that if we did our business in such a way—"

"My dear sir, I don't want you to take back the apples and I haven't any complaint to make. I merely wished to tell you that I found the apples at the bottom of the barrel to be just as big as the ones at the top. I believe in the principle of giving praise wherever it may be fairly given and I stepped in to order another barrel but I see you're too busy to bother with such a trifle this morning, so I wil be going.

Grates are extra durable. Coal grate is duplex. Wood grate is the most modern type.

McClary's Kootenay Range 50

will take extra large pieces of wood---just remove back end lining. Ask the McClary dealer to show you.



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A Simple and Reliable Binder which is Easy to Handle and Easy on the Horses—The most Convenient and Lightest-Running Binder on the Market to-day. -:- -:- -:- -:-

Strong Steel Frame thoroughly braced and Trussed.

The Double Truss Main Frame keeps Drive Wheel true.

Drive Wheel is very strong and equipped with Traction Lugs.

Steel Grain Wheel; substantial and strong, protected by Divider, does not run down grain.

The Cutting Mechanism is effective under all conditions.

Floating Elevator, front and rear; handles any volume of Grain.

Easily Adjusted Reel — one Lever does it all,—70 adjustments.

Elevator Chain runs outside of all Sprockets—reduces friction and wear.

Effective Divider— Folds for Transport.

Convenient Operating Levers within easy reach of driver.

Perfect Knotter; always ties and always ties tight.

Three Discharge Arms ensure positive discharge of the sheaf.

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DAIRYING.

Excitement Bad for Dairy Cows.

While dogs save many steps in getting cows from the pasture they usually do more harm than good. Where there is one dog that will drive stock quietly and peacefully there are ten which will get them too much excited. If we could measure in dollars and cents just what it costs to get milk cows excited, few of us would have a dog on the farm, at least for getting the cows.

Last summer I was talking with a neighbor farmer and discussing dairy problems in general. He kept a dairy of about twenty-five cows and arranged his work so that he churned once daily. One thing he could not understand, he said, was what made such a variation in the churnings from day to day. With the cows on the same pasture and getting the same general treatment, he said some days his shurnings would be five pounds less than on other days.

At first I could see no obvious reason why there should be such a variation from day to day. Then he invited me to go with him to the pasture to see his cows. On the way I noticed he had to drive them along the road for a short distance and past a corn field. As it was along in the afternoon and about chore time, he decided to drive the cows to the barn. The dog was with us. In going past the corn field they were inclined to try to get into the corn and each time the dog was used to shase them out. The cows were afraid of him,, and would run to get out of his way whenever he barked.

I suggested to my friend that his dog was what caused the variations in his churnings, but at first he disputed the point. I told him some days the cows would go along the road and not try to get into the corn and that on these days he would get normal churnings; that on the days he dogged his cows out of the corn there was a faling off. While he didn't believe there was anything in my explanation, he said he would test the matter. He strung some wires along the road which would head off the stock, and kept the dog in the barn at cow time.

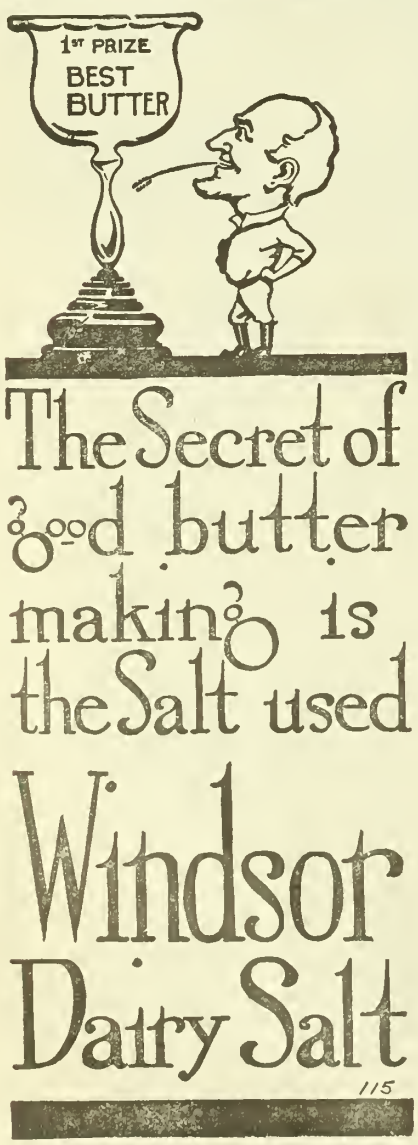
A few months later I was talking with him again and asked him how he was coming with his churnings. I was not surprised when he said there was almost no variation from day to day. There never was more than two pounds difference, but before it would vary as much as six or seven pounds. It was an object lesson to myself as well as to the other man. He gave up using the dog as he saw he could well afford to take the time either to get the cows himself or let his hired man take the time to do it. When the cows had been dogged, resulting in a loss of five pounds of butter in his case, the cost of the excitement was close to a dollar and a half in butter.

Dairy cows, especially the best ones, are exceptionally nervous animals. Secretion of milk is largely a nervous prpocess, we are told, and it is only natural to suppose that fright or excitement will prevent normal working of the organs that secrete the milk. Sometimes a sudden fright will temporarily check the flow of salvia in our own mouths; on the other hand, influences such as the odor of or even thinking of something good to eat will cause "our mouths to water." The same things which will retard the flow of salvia in our mouths wil retard the secretion of milk with the cows.

Where the barn adjoins a pasture, cows will usually come of their own accord at milking time, if they are given a few handfuls of grain at each time. They learn to look for it and beb regular in coming for it. It will be far sheaper than depending upon a dog.

I believe it pays to feed the grain at milking time rather than before or after. I know one dairyman who makes it a practice to give each cow her grain just before she is milked. This makes a few extra stepps but he says he knows it pays him mighty well for the extra time required. Before a milker sits down to a cow he gives her whatever grain she is to have so that she can be eating it while he is milking her. Then when he is ready for another cow he does the same thing. This keeps the cow quiet as she is much more concerned in her grain than in stepping around out of the way

One thing which should beb discouraged and not alowed is rough handling of the cows. While it is provoking to have a cow kick over a pail of milk, it wil do little good to kick her or pound her over the back with a milking stool. It only gets her excited and makes a bad matter worse. When a cow kicks there is generally a cause, which may be sore teats. An application of a good healing salve will heal the wounds and be the dest remedy for breaking the practice. A milker's finger nails should be short so that they will not irritate the teats.—Walter J. Lawrence.



Keeping Herd Records.

Lea & Clarke, Victoria, P. E. Island, write:—

We have been doing considerable official testing the past winter, both in the R. O. P. anr R. O. M.

"A 3-year-old, "Ruby Nig", gave 16.555 lbs. milk in the year and 750 butter, freshening again at 4 years she gave 564 milk and 25¾ lbs. butter in seven days.. We think this is the largest official records for both year and week made by any cow of the age, any breed, in the Maritime Provinces, the yearly record being one of the best for that age, in Canada.

"Miss Rooker Posh" gave 402 milk and 16.½ butter in seven days and since Nov. 9th to the end of June, has given over 10,000 lbs. of 3.5 milk. This heifer was just 3 years, 3 months old at beginning of the test.

"Beauty Rooker" made 326 milk and 15¾ butter in seven days and is now nearly 9,000 lbs. milk since Nov. 17th, averages over 3.5 fat aged 2 years, 10 months.

"Nellie Rooker" gave 299 milk and 12¾ lbs. butter in seven days. under 3 years and only five days after calving; she is over 8,000 milk to end of June, and tested from 3.6 to 5.0 percent. fat these heifers have four months yet of their year to milk and baring accident will make very large records. They, with many other good ones, are sired by our Ida Rooker's 2nd Vale, one of the very best breeding bulls in Canada, as his get are almost all (both grades and pure breds) show heifers of high quality and invariably better producers than their dams. He has now four daughters in R. O. M. and wil soon have several more also several with the herd to qualify in R. O. P.

We have recently purchased the entire herd of high-class Holsteins of J. M. Laird & Son, Kelvin Grove. These are a superior lot, several bred in the noted herd of James Retter, and several from Riverside. Included is a two-year-old daughter of our young bull, that was sweepstekes female at Charlottetown, as a yearling; also Ontario Maid, that won the 40 hour dairy test, same shom. in class of 12 aged cows, after being in milk six months. Other grand untested cows are included that are capable of making big records and will be heard from later. The young things are especially well grown and reflect credit on their feeder. They are sired by an aged bull used for several years in the herd of Harding Bros., Welsford, N. B., and a grand sire of quality stock. He is yet active as a yearling and is included in this excellent lot.

The Dual Purpose Cow.

Kimbell's Dairy Farmer says:—"Taking advantage of the present high prices of beef and the indication that there is to be a beef shortage in this country advocates of the dual purpose cow proclaims her to be the great source of meat supply. Their argument is based upon the belief that this is a beef eating nation, ever will be and it is the farmer's duty to produce beef for the consumer regardless of whether the venture is profitable to him or only to the stockyard interests, the packer and the retailer.

"It is true that the consuming public should have beef. Likewise it was true a few years ago that the cities of the United States should have libraries and it has ever been true that colleges should be endowed. With millions of dollars Carnegie made available the library and Rockfeller and the others have endowed the colleges That the acts of these public spirited men are comendable is beyond controversy. Their names will live throughout history as benefactors of a great nation, Even the instigators of the cry that the American people must have beef are public benefactors, for it would be a calamity were there to be a beef shortage over a long period in this country.

"There is no doubt that there should be beef. The question involved is merely whether or not the general rank and file of farmers on high priced land, operated with high priced labor, resulting in high priced cattle foods, can afford at this time to become philanthropists and furnish to the consuming public meat products regardless of whether or not there are profits in the business for him or whether all, or at least a lion's share of the profit which the consumer is no doubt paying, goes elsewhere.

"This is a suggestion for consideration. Every farmer, before succumbing to the glittering generalties being presented at this time through the columns of so many agricultural papers, pertaining to the greatness of the dual purpose cow, should with pencil and paper make his own determinations as to whether or not under his conditions there really are certain profits in feeding beef cattle under existing conditions.

"It must be remembered that cows present their owners with little crooked leged calves and not two-year-old 1,600 pound steers. To determine whether or not there is profit in producing beef, one should take into consideration the cost of insurance on the cow, interest, taxes, cost of feed in addition to all returns yielded by her and then figure the cost of developing the baby calf into a mature, ripe, marketable steer. Perhaps it will pay, but one should be sure of his figures and quite certain that two years from the time the calf is born the market price of the beef cattle will not have been manipulated as it has been so many times in the past.

"We are prepared to admit that as a stepping stone from extensive to intensive farming the dual purpose cow may be advisable for the general farmer. Furthermore, for the one who would be a philanthropist having in mind the feeding of a hungry people, and providing work for the unemployed regardless of securing profits for himself, even though his efforts make profits for others, the dual purpose cow is better by far than no cow."

Cows That Wear Well.

One of the many advantages reaped from systematic cow testing is the fact that it not only detects cows of indifferent value (saving dairymen the burden of providing for worthless cows, instead of their having good cows to support them), but also it has frequently discovered valuable cows. For instance, a farmer at Ennismore, Ontario, had a small, undersized, native cow, which he intended to sell, not placing much value on her. But cow testing showed that she is one of the best in the herd both for milk and fat production. Don't sacrifice the good cows.

This recalls another cow at Ayers Cliff, Quebec, bought at auction for $28.00 because no one knew her value. Indeed, she was put in with three others as the four poorest in the herd of the man who was selling out. The present owner believes in cow testing, and has refused $100.00 for her; she gave 322 pounds of fat in 7 months.

The men who have built up herds that average 8,000 or 9,000 pounds of milk per cow are just those men who

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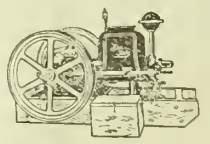

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Mail the coupon at the bottom for the book that tells you why.

If you are interested in a Separator learn about the *Empire*—or, if your herd is small the *Baltic*, the smallest of which sells at $15.

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know, through having proved it, that cow testing pays. Your cows may be like fancy china, of very fine appearance, but they may not wear well. But the tested cows, that do produce, that do wear well, may bring you in sixty or seventy dollars each during the 7 months' factory season.

A Big Difference.

A factory patron may think and even remark "I guess my cows average about as high a test as Brown's, so it doesn't make any difference whether I have them tested or not."

Let us examine that a moment. If a man is content with only a fair yield per cow, where is general improvement to come in? Surely we are not going to remain satisfied with what a neighbor's medium cows manage to produce! Will that not kil all ambition ?

If it is found that in another section the average yield per cow is 150 or 250 pounds of milk higher, should not the endeavor be made to raise the standard of production for each of the poorer cows ?

Again, the yield of milk may average the same at two different factories, but the average yield of fat may be four to six pounds more. So if there are only 200 cows sending to the factory, there would be a difference in the output of over fourteen hundred pounds of butter in one month.

So it does make a difference what a patrou's cows test. Why view with complacency any "average herd, some cows of which give only a small yield of milk testing only 2.9 or 3.1 when the herd might quickly be graded up and have each cow give 5 or 6 pounds more fat per month ?

It makees a big difference to you personaly as a live, up-to-date, progressing dairyman, a difference in the capacity and value of your herd, a difference in your support of the factory, and a difference in the possibility of increased output of your factory at a lower cost.

It will pay you well to test each cow.

Men Well Satisfied.

Speaking of his experience with cow testing for three years one farmer near St. Hyacinthe, Quebec, recently expressed himself as very well satisfied. He had good reason to be, for in June this year his 9 cows averaged 1,203 pounds of milk each, a total of 10,830 pounds. Three years ago the average was only 823 pounds, the total only 7,411 pounds.

In other words, his income from the nine cows was thirty-four dollars greater in one month this year.

Instances very similar to this may be found in every county where cow testing has been taken up intelligently Near Listowel, Ontario, is a herd of 16 cows that gave on the average 2700 pounds of milk more per cow than 3 years ago. The adition of four hundred and thirty-two dollars per year to one's income, without increasing the number of cows, is a substantial and tangible result of intelligent weighing and sampling.

Again, at Wooler, Ontario, is a herd now giving 8,307 pounds of milk per cow, an increase of almost 3,000 lbs. per cow.

Record forms for milk and feed, and a herd record book, will be supplied free on application to the dairy commissioner, Ottawa.

Where the Money Slips Away.

A cow that will produce 5,920 lbs. of milk and 205.8 lbs. of fat in the year and make an annual net profit of $28.14 is worthy of a place in a good herd. A cow that produces only 2,690 lbs. of milk and 89.3 lbs. of fat, netting her owner a loss of $3.16 a year is not worthy of a place in any herd.

Both of these cows with the records we have given are found in the same herd in Peterboro Co., Ont. The one is a profitable animal, the second is a losing proposition. And yet their owner has no way of detecting where his money was going until he took up cow-testing.

Other cows in the herd returned net profits as follows: $22.44, 26.34, 17.94, 8.69 and 2.29.

Think of it! Waiting on a cow for 365 days and only getting $2.29 for your trouble. Is it any wonder that Mr. C. F. Whitley is firm in his belief that cow-testing is the most important and most needed work in conection with dairying in Canada ?

The Man and the Cow.

In the literature sent out regarding May Rilma, the Guernsey cow that has broken the world's record, the American Guernsey Cattle Club gives due credit to the man who has handled and fed her, Albert Van Tuinen. It was a remarkable achievement for a cow to produce 1,073 pounds of butter-fat in a year, but even the best cows could not do it without the proper care and attention. The dairyman has a right to share the celebrity of his charge. The milk from the farm where May Rilma is kept retails for 12 cents per quart, and it is figured that she therefore bbrought in a year's income of $1.200, an income many a man would be glad to earn. Out of this, of course, must be deducted her care, etc., in figuring the profit she brings her owner.

About Shipping Cream.

When shipping cream to creameries, set the separator so that the cream tests about 30 per cent. The creameries prefer cream of this richness, because it is just about right for butter making purposes. When you ship cream testing 40 or 50 per cent. you lose a certain amount of butter fat by the thick cream sticking to the inside of the can, and you run a risk of receiving a smaller test. With very thick cream testing is a little more difficult, the reading is apt to be charred and the slightest mistake in weighing the sample makes a bigger difference in the reading than when the cream tests around 30 per cent.

Of course. the mistake may be in your favor, but the risk isn't worth it.

A Cow That Paid.

"Can I afford to invest in pure bred dairy stock?" a visitor to the Guelph Winter Fair asked J. L. Stansell, Elgin, Co., Ont.

For answer Mr. Stansell got out pencil and paper and figured out just what he had made out of a three-year-old heifer he had at the fair. Here are his figures.

450 lbs. butter at 30c a lb., $135.
One bull calf, $150.
Prize money, $130.
Skim milk and manure, $20.
Total, $435.
Less keep, $50.
Profits, $385.

In addition, this heifer of Mr. Stansell's calved twice within a year, and her second calf, a heifer, Mr. Stansell would not sell for less than $150.—In Farm & Dairy.

Stock Notes.

Milkmaid 4th, owned by A. McRae & Sons, East Royalty, P. E. I, dropped another beautiful heifer calf a few days ago. The Milkmaid family is adding every year to its fame. Last year Milkmaid 4th qualified for the Record of Preference although in her 15th year. Her daughter, Milkmaid 7th, holds the Canadian record and the daughter of Milkmaid 7th has completed a test which will place her in the forefront of the Canadian Ayrshires. The official record has not yet been received by McRae & Sons. This daughter has also dropped a very promising calf so that McRae & Sons are building up a family which is making their name known al over the world.

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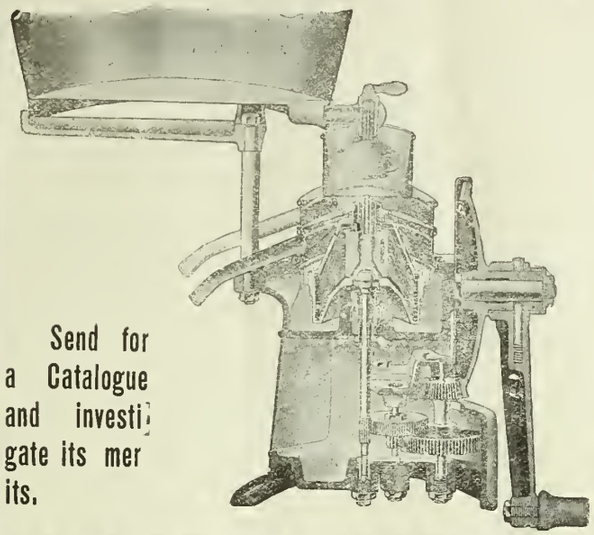

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will be found in the homes of the wealthiest, as well as in the most critical and exclusive musical institutions. Every Piano shipped under a ten-year guarantee. We have a handsome illustrated art catalogue for you. It tells all about the construction of the **Sherlock-Manning Piano** and shows the various designs. If this book does nothing else, it will prove to you beyond a doubt, that for external beauty and genuine intrinsic excellence, the **Sherlock-Manning** is second to none. Write today for catalogue J. addressing Dept. 6.

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Try an ad in the Maritime Farmer—It will pay you

LIVE STOCK.

Why he Chose Berkshires.

Peter Brodie, the noted breeder of Berkshire pigs. of York, P. E. I., started breeding operations about twelve years ago by purchasing a purebred sow from Snell & Lyons, of Ontario. This sow proved a good investment and won twelve 1st prizes and one 2nd prize in her show ring career of eight years.

Mr. Brodie says:—"The reason why I selected Berks was that I considered them the best pasture hogs and because they can stand hot weather well and are docile and easily fed. I imported four purebred boars from time to time as I do not believe in cross-breeding and inbreding. A young sow should not have her first litter until she is 15 months old and I prefer to breed the young sows to old sires."

Fitting Weathers and Lambs for Exhibitions.

Fitting live stock and showing at the fairs demonstrates the possibilities in well bred and well selected animals, when brought to the highest condition by proper feeding and fitting. Showing superior animals is the best kind of advertising a stockman can employ.

Careful selection of the wethers to be fitted is the foundation upon which all the work of feeding and fitting depends. The individuals for the show ring should be rigidly selected from the offspring of choice ewes of good breeding and milking qualities mated to rams of pronounced merit.

Feeding for the show must begin early and at no time should there be a lack of suitable feed and pasture to keep the sheep growing and thrifty. Care is necessary in getting them properly started on feed. The wethers should be kept gaining gradually and never crowded.

The value of various grain rations for fitting yearling wethers was studied at the Wisconsin station in experiments covering two periods of three years each, the wethers being shown at the International Live Stock Exposition and judged both on foot and on the bblock. During the second of the two year periods bran was added to the grain rations to lessen the difficulty of keeping the wethers on feed. The wethers were kept on grass pasture without additional feed from about May 20 to August 1, when grain feeding began. Until November 1st they were turned to pasture every day the weather permitted. The roughage fed during the trial, in addition to pasture consisted of hay, cabbage and roots.

The wethers fed peas, oats and bran were awarded first place in the carcass competition between the various lots each of the three years of the second period and were also awarded the largest number of individual prizes at the show. Though peas were comparatively expensive, they produced firm flesh of high quality and also made good gains. They are therefore highly recommended for show fitting when when fed in combination with oats and bran.

Barley, oats and bran ranked second in the carcass competition between the lots, and also in number of individual prizes awarded in the open classes.

Barley and oats stood third in point of prizes won at the show and also ranked third in the carcass competition. This ration produced the lowest gains of any fed during the second period.

Corn, oats and bran and corn and oats produced the largest and most ceonomical gains, but, with a few exceptions, the wethers fed this ration were inclined to be soft and over done. Carcasses from the lot fed corn, oats and bran were never awarded prizes in the regular carcass class.

Whole oats fed alone are a most excellent feed for sheep which are well advanced in flesh, but, as a rule, for sheep being fitted for fat classes they are too bulky to insure the desired finish.

Show wethers must be carefully trimmed so that they will appear at their best in the ring. After the last trimming, neat fitting blankets are put on to protect their fleeces.

It is more difficult to fit the wether lambs than yearling wethers. The lambs are taught to eat grain and clover or alfalfa hay as early as possible by means of a lamb creep. Abundant exercise and plenty of green feed help to keep them in good growing condition throughout the fitting period.

For a few days before the trip to the show the sheep should be fed less green feed, and the total amount of feed given at the last meal before the shipment should be reduced about one-half. During shipment and after arrival at the show careful provisions should be made for their comfort.

To Stop Cow from Sucking Herself.

I once owned a cow that sucked herself. She was the best cow I ever owned (and I have owned more than one cow). She was too good to go to the block. I tried everything I knew or could hear of, all to no purpose. She could get around any of them, except one that was cruel. It punished me to see my favorite cow punished so cruelly. A little sawed off, crooked legged bony shanked, Welsh boy, came to help me with the dairy work. He said: "I fix dot foolish cow, I makes him thinks some uder things but dot foolish bizeness."

He buckled an old horse collar around her neck "wrong side to" as he expressed it. The bulge or shoulder pad toward the head, but the wise cow was not to be cheated out of her favorite beverage. He took two collars and sewed them together and put them on her; that got her tag. To my knowledge she has not sucked herself from that day to this. When she goes to the stanchion we take it off. When she came out we put it on.

I have tried it on more than one cow one collar usualy does the work, but if one won't do the work, try two. They are light and will not anoy the cow very much, just makes her thing that something funny has happened, and shakes her head in disgust, snorts a little and blows her nose for spite. If they tend to iritate the skin on neck wrap them in a soft cloth.—Dairyman.

To Eliminate Flies Keep the Stables Clean.

If live stock owners kept their barnyards and stables clean, so as to prevent the flies from breeding in the manure and filth, it would be much easier to keep this pest under control. Time spent in this way will be paid by the increased comfort of all animals. The fly canot be controlled about the barns by merely removing the manure. All yards should be graded to prevent the formation of puddles, where flies and mosquitoes will multiply. If the puddles cannot be drained or filled, a little kerosene poured upon the water will kill the imature mosquitoes. The windows of the stable should be properly screened. This will keep out the flies, add to the animals' comfort and lessen the amount of feed necessary to keep them in good condition. Ordinary mosquito netting tacked on the windows wil suffice, but light frames covered with fly screening, which cost only a trifle more, are better. If well taken care of they will last for years.

Screen doors for a stable, while more inconvenient than screen doors for a house, will be found useful to exclude the flies. Screens on the doors and windows of the milking stables will keep out the flies, as well as sesure light and ventilation. Burlap, which is used so often, darkens stables and hinders the circulation of the air. If the manure is not hauled out at least once a week, it should be stored in screned enclosurers where the flies will find it difficult to obtain admission.

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THE BANWELL-HOXIE WIRE FENCE CO., Ltd., Winnipeg, Man.—Hamilton, Ont.

Several fly repellants to be brushed or sprayed on animals may be bought at $1.25 a gallon approximately. They are successful to a certain extent, but usually they keep the flies off only a few hours. Often they are used to keep the flies off the cows during the milking time, or are used on the horses during the noon hour when they are resting and eating, if there are no screens. These preparations are applied to the hair by brushing or spraying though only a thin coat must be given. One gallon wil give many applications to one animal. If the number of animals to be treated is not large, it is usualy cheaper to buy a commercial preparation. If there is a large number of animals, a fairly satisfactory mixture made be made at home.

The following preparation has been recommended as an inexpensive one, and as satisfactory, probably, as the commercial mixtures; coal tar dip, any kind, one pint; one-quarter bar ordinary laundry soap; one pint of oil—fish, linseed or kerosene; fiften pints hot water. This should be mixed thoroughly to form an emulsion and should be applied as a thin coat by a brush or a spray.

Stockmen will Show Market Types at Fairs.

To illustrate types of profitable and unprofitable farm animals, the Wisconsin Live Stock Breders' Association is preparing an exhibit to be sent to the county fairs throughout the state this fall.

The exhibit wil consist of representative specimens of the kind of animal that put money in the farmer's pocket; and also give examples of the sort that give no return for their feed. Beside a blocky, flat backed beef steer will stand a rangy, scrawny scrug and the prize ewe will scornfully keep company with a thin, neglected sister of unknown origin. The whole purpose of the exhibit is to imppress upon the breeders the type of animals that it pays to fed.

Prominent in the profitable and unprofitable animals' exhibit will be "Mack" the famous Percheron gelding owned by Armour & Company and known as the "Ideal Horse." Although he is fifteen years old and has seen nine years of hard service on the streets of Chicago, "Mack" is absolutely sound and has not a single blemish. He is said, by horsemen, to be a fine example of a gelding that brings high prices on the city markets and that is best able to withstand the strain of working on paved strets. He stands 16.2 hands high and weighs about 1800 pounds.

Letters from country fair officials have been pouring into the offices of the Live Stock Association, assuring the association that they are anxious to have the exhibit and will give it a prominent place at their fairs.

Black Teeth in Pigs.

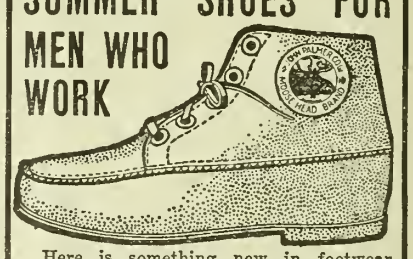
As regards the detrimental effect of black teeth in young pigs, I may say that during my 20 years experience as a swine grower I have never drawn teeth from a pig. I will admit that I may sometimes have erred in this respect. However, whenever I had an animal of this class that did not thrive I found the trouble to be back of its teeth. I have examined a number of authorities on this subject and I find that the majority of these, when dealing with the ailments of swine, make no reference to black teeth.

Dr. MacIntosh, Professor of Veterinary Science in the University of Illinois, says that "the majority of the profession do not consider black teeth to be a disease which is capable of causing death. In the majority of cases they seem to do no harm to the animal's health. If it is discovered that a hog has a decayed tooth and is suffering because of it, it should be removed. I can advise swine breeders not to trouble themselves if they notice their pigs having discolored teeth."

Dr. G. A. Waterman, in his work entitled "Practical Stock Doctor," says, in substance "many pigs have black teeth. These usually drop out of their own accord and cause no injury. Some teeth, however, when being pushed out by the succeeding tooth, adhere on one side and either point outward and cut the lips and cheek or point inward and cut the tongue. The irritation occassioned by this prevents the animal from masticating its food properly and it does not thrive. When this is the case, the tooth should be removed."

I may add that I have discussed this subject personally with a number of veterinarians and the opinion is almost unanimous that black teeth of themselves cause no injury to the young pig Dr. Waterman's view comes the nearest to the popular idea of any that I have read or heard expressed by a veterinarian.—W. F. Stevens, Alberta.

SUMMER SHOES FOR MEN WHO WORK



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Three year course.

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Cutting and Curing Alfalfa Hay.

For general purposes it is advisable to cut alfalfa hay when about one-tenth in bloom. The earlier it is cut after blooming starts the better will be the quality of the hay for cattle and hogs. When cut for horse feed, it is perhaps better to let the crop stand until from one-fourth to one-half in blossom. It is not always possible to judge from the stage of blosoming the proper time to cut the hay crop in order to secure the maximum production and at the same time the best quality of hay. It is usually a safer practice to be governed in time of cutting by the development of new shoots from the crown of the plant. When new shoots start to develop and have reached a growth of an inch to two inches the hay should be cut. It frequently happens, due to unfavorable weather conditions, that alfalfa is checked in its growth and blossoming is retarded. When the weather again becomes favorable, these young shoots will start from the crown of the plant and the alfalfa should be cut regardless of the stage of blossoming.

Alfalfa hay is easily injured by rain and care should be taken to cure the crop if possible without getting it wet. However, a rain or two does not necessarily ruin the crop. It is a good practice in putting up alfalfa hay to cut it in the morning of a good curing day, rake into windrows with a side-delivery rake in the late afternoon. allow it to lie in the windrows over night, and bunch with a rake the next morning after the dew is off. The hay should be ready to put into the stack or mow by the second afternoon. The hay should not be allowed to cure too long in the swath, for too many leaves will be lost in raking and handling the crop and the leaves are the most valuable part of the plant. Besides, when the alfalfa is raked before the leaves are entirely cured, they continue to draw moisture from the stem and thereby insure a more uniform curing of the crop. It is not profitable under certain conditions to attempt to cure alfalfa hay in the cock except where rain is inevitable. The hay should then be put into small cocks that will shed a certain amount of the water and that will permit the hay to dry out rapidly when the weather clears.

Alfalfa hay is sometimes baled direct from the field. It is possible to handle alfalfa in this way during the drier portion of the summer, but it is most impossible to secure hay of the best quality by this method. Hay cure in the field dry enough to bale will lose a great many leaves in handling, while hay baled when it contains sufficient moisture to handle without loss will usually mold in the bale unless extremely dry weather follows. It is very seldom possible to bale the first cutting of alfalfa from the field. The safest practice is to stack or mow the hay in a barn or hay shed.

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This iron, stamped with the Acorn trade mark is guaranteed by this company to give the best of service. We stand back of every sheet that goes out.

In one month last year we shipped out over 60 carloads of sheets to farmers in Ontario alone—which goes to show that the farmers know a good thing.

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DR. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A. 95

Packing Sheepskins.

Following is a good method of packing sheepskins for despatch to market:—

Three battens (3 in. x 1 in.) should be placed longways of the top, and three on the bottom to keep them flat, and fasten them with three bands of hoops. To save freight fairly light wood for the battens should be used. Skins should be packed dry and flat, in pairs, pelt to pelt, with the bellies slightly folded in to keep the package as square as possible. Ears and tags should be carefully removed before packing. If the ears are left on and folded in they often, owing to heating, damage the pelt. The advantage in packing the skins flat is that the most valuable portion, viz., the middle, does not get injured by hooks, & c., in the handling. When the skins are folded in the middle, as is generally done, they are often torn by the hooks, and this, of course, lessens there value, whereas, when packed flat, even if they are slightly torn at the edges, no great harm is done. Presses used by shippers for packing skins in the manner proposed should be large enough to hold at least 4 cwt. bales. The brand and number of the bale should be placed on one of the battens.

RED ROSE TEA "is good tea"

THE HORSE.

Umbilical Hernia.

Subscriber of Albert Co., has a horse colt, about 6 weeks old, ruptured in naval. It may have been that way when foaled but did not notice anything wrong until about 2 weeks ago, and the enlargement seems to be increasing.

Please advise what treatment is necessary to overcome the trouble, and should it be attended to at once or left until the colt gets a little older or the weather colder?

Ans.—A rupture of this kind is technicaly known as umbilical hernia and is often seen in foals. It frequently disappears by the time the animal is a year old; previous to that time the enlargement may be blistered, some cases recoverong from that treatment; if, however, it persists beyond that age stated, a good surgeon should be employed.

A good blister is made as follows:
Red iodide of mercury, 1 dram,
Vaseline, 1 ounce.

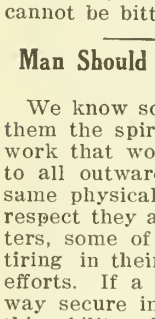
Mix well before applying. This may be left on and allowed to peel off. Keep parts oiled after the third day. Clip the hair off the surface on which it is to be applied. Keep the animals' head tied, so that the blistered parts cannot be bitten.

Man Should be Kind to the Horse.

We know some horses have born in them the spirit and stamina to stand work that would kill others endowed to all outward appearances with the same physical characteristics. In that respect they are not unlike their masters, some of whom seem almost untiring in their physical and mental efforts. If a breeder could in some way secure in all the colts he raised this ability—determination or grit or whatever we may call it— his colt would sell above all others and his fame as a breeder would become widespread. We can breed in that direction, but to often the individual with a "yellow streak" wil crop out, a horse that wears out early in life. It seems to be a matter of disposition, which the breeder cannot in all cases control.

But not all rests in the horse. Some men seem naturally able to get more out of the same horse than others. One man will take a horse on an all day's drive and bring him in without a wet hair on him, eager for his oats, to all appearances having enjoyed a day of light exercise instead of hard work. Another will take the same horse over the same route, water at the same troughs, feed at the same places and in the same way and bring in his horse at night too tired to hold his head up, and seemingly not caring whether he has oats or sawdust for supper. The difference is of course in the men, the natural horseman, no doubt easing his horse unconsciously when he is tiring and always working him at the gait to which he and the conditions are the best suited. The "horse killer" urges his horse forward at the exact time he is practically winded and generally, but unconsciously too, adds burdens, when the horse's efforts should be eased. The difference in results follows.

There are some things any man can do to increase the efficiency of his horses, and at the same time look to their comfort. The horse gives everything, asks nothing. Economy if not humanity, demands that we feed him enough so that he can do the work asked of him ; that we water often; and that we give him rest. To aid the horse in his work we can in the first place see that the load is properly placed. This depends of course on the size and shape of the wagon-bed and wheels. Every driver can tell when his load is properly balanced and distributed. Then we can see that the harness fits, that chafing does not take place. And we should know what is a day's work and not expect more. We can prevent lunging ahead and "throwing" backward, yanking, yeling, and other aggravations that work on the nervous system of a horse and thus tire him. We can warm our horse up slowly and cool him off the same way, and water often, especially in hot weather. If we put forth no efforts to see that the horse works under good conditions we have no right to expect and demand good, efficient service.



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Crooked Foals.

Some foals come into this world so wobbly and misshapen about the legs that it would seem almost impossible for them ever to straighten up. Most of them do, however, manage to come right, though it takes some of them far longer than others to do so. As a general rule there is no cause for alarm, even if a foal is so crooked in his legs, as to promise deformity, but when the pastern joints are so long and weak that the youngster breaks back onto the ground with the bottom of the ankle joint, it is well to give some support. This may be done by fitting a piece of moderately stiff leather around the leg and lacing it up so as to give the required support to the joint too weak to bear the strain. In such case line the boot with wash or chamois leather and observe carefully that it does not gall or abrade the leg anywhere.

It is quite a trick to fit one of these boots to the leg properly, and hence when a foal fails to straighten up off the ground it is best to seek the aid of the veterinarian. Sometimes all that is required is to feed the foal a little warm new cows' milk two or three times a day so as to increase its strength more quickly. That is usually preferable to boots or any other similar contrivance, but there are times and cases where artificial aid is required. A little phosphate of calcium added to the milk or drinking water is also beneficial to foals, as it is to children. Sound, plump oats bruised and the shucks sieved out are also great helps as soon as the foals are able to eat and limewater never comes amiss. When feeding cows' milk to weak foals never forget to ad limewater at the rate of three or four desertspoonfuls to the pint. It helps to keep the stomach right.

After foals born with crooked legs have straightened up and their hoofs have hardened they should be matched most carefully and any tendency of the feet to grow uneven prevented. A touch or two with the rasp on the feet of a foal wil often keep him from going unsound and make a valuable horse of one that unattended aright, might readily have degenerated into a valueless nuisance around the farm.—John Mason.

To Break a Colt of Kicking Habit.

A colt is less likely to kick when first hitched if it is thoroughly ground broken, that is, driven on foot by the trainer with a pair of long reins. These reins, 20 or 25 feet in length, may be made from 1-2 inch cotton rope. Splice a good snap in one end of each rein and turn back the other end to make a hand hold. Put on the breaking harness and run the outside rein through the shaft tug, leaving the inside one free. Drive the colt in a circle first one way and then the other, and gradually acustom it to the reins on the hindparts. Colts are much more easily taught to stop, start and turn properly, if handled this way than when hitched to some kind of vehicle the first time the harness is put on.

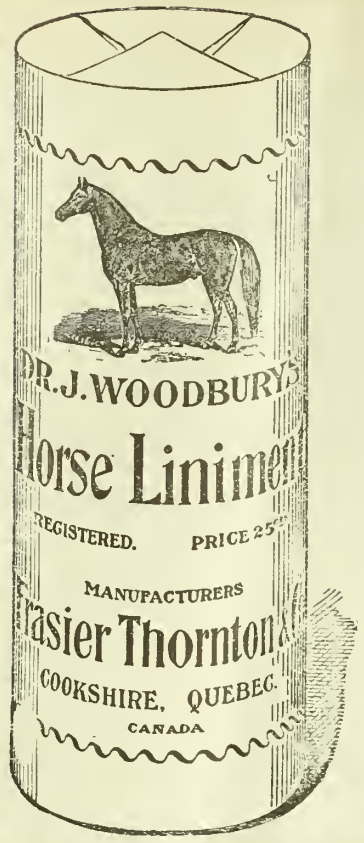
This method does not always suffice; probably the "runing W" is the best means of corecting this vice. To use it, one needs an extra strong cart and a good set of harness. Have a heavy belly-band made with three 2-inch rings securely fastened to it. This belly band may be strapped to the shafts after the colt is in them. Buckle a strap with a ring fastened securely to it to each fore pastern. To use with this outfit get a trip-rope; ordinary cotton sash cord will do. First run the rope through the near ring in the bellyband, down through the ring in the strap around the near pastern, then up through the middle ring in the bellyband, down through the ring on the off pastern and then tie the end of the rope in the remaining ring on the bellyband When the colt kicks a quick pull will bring him to his knees. Unless one works on a soft sod, the knees will need to be protected by pads. Do not hold the colt down too long, or he may get into the habit of sulking. A strong kicking strap is always convenient when a colt is being worked.

Pasturing Colts.

One of our subscribers says that he has raised colts for several years and while his farm is fenced with barbed wire, he has never had a colt cut by wire. He atributes this to his practice of turning the colts in the pasture with its mother when a day or two old. He claims that the colt will run into the fence at some time or other, but seldom more than once. When very young it cannot run fast enough to cause serious injury, but if left in the stable until older it is likely to be seriously injured by running into a barbed wire fence.

Experienced horsemen who raise a large number of colts do not deem it advisable to run heavy and light colts together in the same pasture. The light colts have more life and go in them and literally run their heavier mates to death. Too much runing is not good for the draft colt and where colts are together, the heavy youngsters invariably attempt to follow the lighter foals on every run.

A little longer noon hour during the hot weather, with the harness and other encumbrances removed will assist the horse in going to the field in better shape for the afternoon's work.



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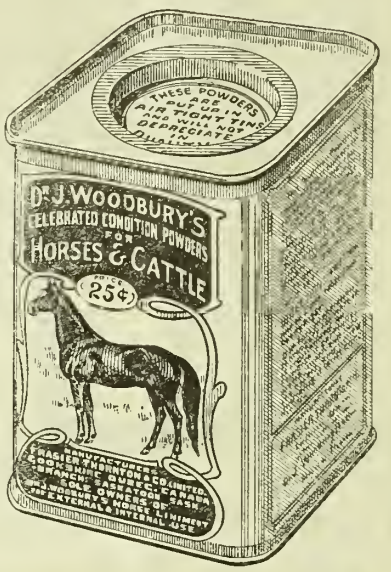
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Prayer of a Horse.

To Thee, My Master, I Offer My Prayer:—

Feed me, water and care for me, and when the day's work is done provide me with shelter, a clean dry bed and a stall wide enough for me to lie down in comfort. Talk to me. Your voice often means as much to me as the reins.

Pet me sometimes, that I may serve you the more gladly and learn to love you.

Do not jerk the reins and do not whip me when going up hill.

Never strike, beat or kick me when I do not understand what you want, but give me a chance to understand you.

Watch me, and if I fail to do your bidding, see if something is not wrong with my harness or my feet.

Examine my teeth when I do not eat, I may have an ulcerated tooth, and that you know is very painful.

Do not tie my head in an unnatural position, or take away my best defense against flies, or limit my range of vision by blinders, so that I am frightened by what I cannot see.

And finally, O my master, when my youthful strength is gone, do not turn me out to starve or freeze, or sell me to some cruel owner to be slowly tortured and starved to death; but do though, my master, take my life in the kindest way, and your God will reward you here and hereafter.

You will not think me irreverent if I ask this in the name of Him who was born in a stable. Amen.—Author Unknown.

Improper Use of Drugs.

Frequently drugs are administered by people without any knowledge of their action. One individual only recently asked what he should give his horse when aconite and nitre had failed to cure. It is always best for one to know the action of the drug before it is administered to livestock. A thoroug study of the symptoms of the animal should be made before any drugs are given. Just because certain drugs have succeeded in some neighbor's horses, there is no reason they will cure yours. To ilustrate—a horse is suffering from colic. A dose of opium would be correct to give if it is spasmodic colic, while if the patient has impaction of the bowels a dose of opium would only pack the bowels all the harder. A dose of aconite should never be given when the heart is weak and slow, for the reason that aconite depresses the heart and will cause death. On the other hand, aconite would be the proper drug to give when the heart was beating full and strong and very rapid. A comon mistake is to give horses sweet spirits of nitre when suffering from frequent urination, as this drug is a diuretic or increases the flow of urine. It only aggravates the trouble in this particular case.

In diseases of the respiratory tract when the high fever has caused constipation one should never use aloes on acount of the danger from superpurgation. Raw linseed oil is preferable as it is much safer.

Horse Notes.

Fewer horses and more horse power is an alteration that might profitably be made on many farms. A good horse is a source of revenue but a poor one dissipates the time, energy and capital of its owner.

When the mare is first put to work or the young foal is being weaned care should be taken to enclose the young one in a safe place. A young active foal oftentimes does itself injury by jumping higher than its owner expects it is able to do.

In choosing farm horses it is well to remember that the labor we employ to direct their efforts is oftentimes valued very high, consequently, it is good busines management to selct the kind that wil convert the skill of the driver into more accomplishment.

During hot weather, when the horse begins to lag, droops his head or pants very hard, he should be stopped at once. It is quite likely that exhaustion from heat and labor has taken place and unless proper treatment is applied the results are often fatal.

Often there are shade trees scattered over the place which appear a proper nuisance when ploughing or cultivating, but during the hot summer they may be of inestimable service, under which to wind the team or men. The sight of a driver reclining peacefully under a shade tree while the team is suffering without protection from the sun is deplorable and if drivers understood how their team appreciated a little shade while being rested, they would be more willing to share it.

Fall fairs call out a number of untrained, refractory colts. When the judge desires to see them walk they will trot, when he wishes to see them trot they will walk on their hind legs or go broad-side to the judge and spectators. All of this is unpleasant and unsatisfactory both to the exhibitor, and to the judge. A little handling, and a little intelligent training will instill in them a knowledge of what is required and the result will oftentimes be more satisfactory to the exhibitor and plasant to the judge.

For Scouring Foals.

An English writer discussing scouring in foals says that when the trouble is due to the dam's milk from the mare getting over-heated, the best treatment is to give the mare half a gallon of barley. If this fails, the scouring is probably due to other and more serious causes. It will be a safe plan to give a dose of castor oil and linseed oil mixed pending professional advice.

The same writer recommends the following substitute for mare's milk for orphan foals:

New milk, one quart; separate milk, one quart; Demarara sugar, eleven ounces; water sufficient to make up to one gallon. A quart of this mixture should be given at intervals of four hours at the temperature of fresh-drawn milk.

Trim the Feet.

Watch the colt's feet. There is always a tendency towards too much growth of hoof and this should be avoided by a judiciouh use of the rasp from time to time. The wall of the foot is the only part that needs attention. It is said that the breaking away ot the wall due to over-growth, and lack of attention is one of the causes of splints, side-bones and ringbones in young colts.

A Reader, Kempton, N. S., writes:—Kindly inform me, through your valuable paper, if it is considered good business jurgment to insure a valuable mare, or are the rates so high as to be beyond value or protection?

Ans.—We believe in insurance on life and property from the viewpoint that it is better to carry it and not need it, than to need it and not have it. We would most assuredly insure a valuable mare. The rates are not abnormally high, varying in price in accordance with the hazardousness of the work at which the mare is employed. Agricultural horses are insured for about $4.00 per $100 value. The drivers range higher, while insurance for horses for lumbering purposes cost about $12.00 per $100.Then there is a policy to cover mare during foaling period. There is also a class of insurance for stallions and foals. Horse importers usually insure their horses for a term of months from time of the purchase until possible date of sale. If it is a wise act for the importer to insure it is well for the farmer to do the same.

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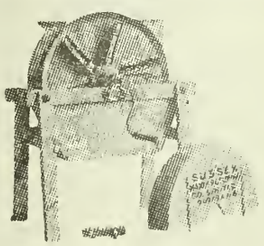

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POULTRY

The Poultry Policy of the Experimental Farms.

The poultry policy of the Experimental Farm System is to conduct experimental work with poultry along breding, rearing and feeding lines ; the encouragement of the farmers and poultrymen generally to improve their strain of fowl; and the development of economy in methods of general management Work along these lines is being caried out at the Central Experimental Farm at Ottawa and at the Branch Farms and Experiment Stations throughout Canada, results of which will be published and distributed at frequent intervals.

New Equipment.

Equipment is being provided to make it possible for the division to carry out this policy. Besides the original plant at Ottawa and its various types of colony houses, brooders, incubators, etc., additional land was added to the plant last year and this year ten acres more are set apart for special experiments with turkeys and water fowl. Modern buildings are being built, a new experimental breeding house is just completed as are also a cockerel house and an experimental feeding and supply house. This year will see the completion of an administration building and before another spring the old permanent buildings that have been in use for twenty-five years will be removed and the plant will be up-to-date in every respect.

At the Branch Farms and Experiment Stations the poultry plants are large enough for one man to manage. Housing accommodations is provided for from 100 to 400 head of laying hens Only two or three of the best varieties of utility fowl are kept and tests are being made to find out the type of house best suited to the climate and conditions as well as the most suitable makes of incubators, brooders and other poultry appliances.

Experiments of a general character, such as breeding, feeding, disease, etc. are being conducted at the Central Plant at Ottawa, where a large staff and equipment is available, while those experiments of a local or a provincial nature, are carried on at the outlying farms and stations.

Among the most important of these experiments are those relating to the breeding. Already a number of egg-laying strains are being developed and just as soon as one or more of these strains are established, cockerls will be supplied to the Branch Farms and Experiment Stations. Each year males bred at the Central Farm from heavy laying strains will be sent to the outside plants and will there be used as breders, and as it is generally recognized now that the male is responsible for the transmission of fecundity, this system should be the means of developing a high producing flock at the Branch farms and from these flocks, cockerels, also pullets and eggs when available, will be for sale. Breeding stock and eggs at present are not being sold from the Central Farm, as both are required for experimental work.

Another very important class of experiments that is being investigated, is that relating to poultry diseases. The annual losses due to chick mortality are very large, and the turkey crop almost threatens extermination, if something is not found to stop the ravages of black head. The investigation of the latter is largely the reason for the acquisition this year of the new park of ten acres at Ottawa.

Housing, incubating, brooding, rearing and feeding problems as well as a host of others are being investigated. In fact anything that is of interest to the man or woman who keeps poultry is of interest to this division. New ideas in management, new "secrets", new appliances, etc., are being tried out and will be reported.

It is not the intention to print bulletins or even large pamphlets, but rather circulars or leaflets that can be published often enough to be fresh. A number of these are now in process of preparation, and will appear from time to time. As usual letters asking for definite information are always welcome and where a pamphlet does not give the required information a personal letter is gladly written.—By F. C. Elford, Dominion Poultry Husbandman.

The Summer Egg Crop.

We have been accustomed in the past to look upon egg production in the winter time as the most important feature of the egg business, but now the high price of eggs and the increasing demand for the same causes us to turn our attention to other periods of the year.

Egg production throughout the year might be plotted in a curve. It starts low down in November and December, rises to its height in March and April, in the natural hatching season and it falls off gradually during July and Aug ust until it practically ceases in the latter part of September and October. The only way to over-come the deficiency in the fall seems to be by the hatching of very early pullets. This is not practical for the farmer. He can, however, improve production in the summer and in the following lines I shall endeavor to show how.

Of course we desire to have pure-bred stock. There is no excuse for anyone keeping a mongrel flock at the present time. The question of stock is not quite so important for summer work as it is for winter work, yet it is important. For the latter it is absolutely necessary that we have early hatched, fuly matured stock, but for the former much of that stock that was not mature enough for winter work, will be available for summer work. It does not as a rule keep over, yet there is much of it in the country.

The most important feature in summer egg production is cleanliness. In many instances it is the presence of filth, insects and disease that drives the hens outside of doors. The houses must be kept clean and cool. The droppings must be cleaned out regularly, and the litter must not be allowed to become damp and sour. Dropping boards should not be used unless they are cleaned off every day. Where no dropping board is used, cleaning twice a week will do, but oftener will be better. It is a good plan to scatter clean, fresh soil around where the droppings will fall, for soil is an excellent deodorizer and disinfectant. When allowed to remain too long the accumulated droppings dry out and become excellent breeding places for lice and mites.

The litter on the floor is of importance. Straw or marsh hay may be used if it can be readily procured, but it becomes dirty quickly. Some use shavings or soil, but these are not very satfactory if it is intended that the grain be fed inside. The house should be whitewashed. It makes the house much more brighter and light is one of the best disinfectants we have. Some object to the dust, but the dust is what is wanted. Lice and mites breathe through pores in their skin, and the most effectual way to combat them is to clog up those pores with dust, oil, etc. This is why whitewash is used on the walls and the oily disinfectants on the roosts and nests.

The drinking utensils, the troughs, the hoppers, the nests should all be kept clean. The nests must be cleaned from time to time and plenty of clean, fresh hay or straw added. Much profit is lost to the farmer by having dirty nests. The hens refuse to lay in them, the eggs are lost. With no litter in the nest many eggs are cracked or broken, their contents smeared over the other eggs, and the nest material made foul and dirty. Such will taint the eggs every time and load them with bacteria which cause early decay.

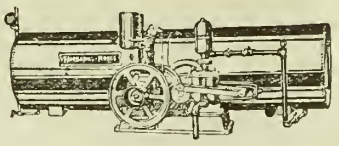
The question of the fed is important. The amount of corn in the ration should be reduced in warmer weathed. More wheat and oats may be used, preferably a little of both if the market prices will allow.

A dry mash should be placed before them. It may be hopper fed and good results obtained. It may consist of varying amounts of several ingredients but one composed of the following will give very fair results: 2 parts bran, 1 part corn meal, 1 part midlings, one-half to 1 part linseed meal, and 1 of beef scrap. It is well also to supplement the dry mash with an occasional wet mash, say from two to three times a week. A meat mash made thus: Boil some cheap meat until it is well broken up; take an ordinary 12 quart pail, place in it about two quarts of corn meal, pour the boiling liquid very slowly over it. Stir till the meal has taken up all the moisture it can, then add about three quarts of bran and stir. It may take more in which case add bran until the whole has a consistency of brittle dough. If the birds have free range (and it is preferable that they should, for no one can get the best results from a bare yard), the use of beef scrap and green food will not be so necessary. If the birds are yarded some provision must be made for green food. Rape is very useful for this. If handled carefully and only the outer leaves removed, it will stay green and succulent for a considerable length of time. As a rule it is wise to supply birds with some shell forming material and grit even throughout the summer months. If they do not need it they will not eat it.

The birds must have water. Watering once in every two or three days will not do. They must be watered daily with good fresh water placed in clean dishes. The dishes are apt to become slimy and ill-smelling. They should be scalded and rinsed out from time to time. The place where the water pail is set is important. it should not be set in a house where all sorts of dirt will fall in. It should not be placed in the sun where the water will become hot. The birds like a cool refreshing drink as well as a man and the water should be placed in a cool, shady place.

Birds do enjoy a shady place in the summer under the trees, in a raspberry patch, in an asparagus patch or in the corn. They seem to enjoy a low, thick, shade the best, and if it is convenient either their house should be moved to the shade, or the shade should be moved to them by planting the above mentioned crops.

Some will say, yes, if we do this our birds wil lay in such a place. They will not lay any quantity if one provides proper quarters without doors. A clean, cool house, well ventilated, free from lice and mites, darkened nests with clean fresh litter in them, brody hens removed and shut up (nothing breds lice so fast as a bunch of



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Direct Importers of Shelf and Heavy Hardware, Bar Iron and Steel, Carriage Woodwork, &c.

Amherst, - - Nova Scotia

broody stuff, fresh water in the clean dishes, and hens continually sitting on the nests), plenty of cooling food, range and green, a nice cool convenient shady nook in which to spend the hot parts of the day. If people will but do this, take pains and have a sympathetic interest in those fowls gather the eggs regularly, discard the cracked and dirty ones, keep the eggs in a cool, sweet place and market them often, they will get more eggs, they will get better prices, their eggs will become known in the community as pure, fresh and as germless as it is possible for them to be.—W. A. Brown.

Chibkens Pay.

There is a class of people who are too prone to say "Chickens don't pay", says an Oregon poultryman. We want to tell you that chickens do pay, if properly cared for, and nowhere can poultry be handled with as large profits as on the dairy farm. The waste and by-products of the dairy farm will greatly reduce the cost of feeding the fowls, and no one feed is better than skimmed milk for chickens of all ages.

There may be some who at some time thought their poultry did not pay them. If so, we can say that they did not give their poultry the same care and attention they are now giving their paying dairy herds. Fowls require proper housing. It is just as esential to give hens comfortable quarters as it is for cows. Keep the floor well littered and feed all grain in this litter to make the fowls work for it. Keep skimmed milk before them all the time in addition to water.

At the present price of feed it will cost a poultryman $1.76 to feed a hen one year. On a dairy farm you can reduce this cost by one-half, if not more, by feeding the waste litter from the barns. This will contain much grains and seeds. In addition, feed the waste vegetables; and you also have the skim milk to mix the mash and for the chickens to drink.

A flock properly cared for will give us ten dozen eggs each year. The average price for eggs in the Sound markets is 30 cents per dozen. Each hen will, therefore, produce $3 per year, which wil leave you dairymen a very handsome profit. The value of 100 hens is about equal to one good cow. Has any one a cow that s doing that well? What will it cost to raise this flock of 100 hens? Nothing! And this is why:

Half the chickens hatched are cockerels. At the age of ten or twelve weeks put these cockerels in fattening crates and feed on a fattening food made of one part barley middlings, one part white shorts and one part fine cornmeal, wet with skim milk so it will be like pancake batter. At the end of from 14 to 20 days you will have a milk-fed chicken that will bring the highest market price of any poultry, and will sell for enough to pay for feeding the cockerels and the pullets to laying age. And when the hens are through laying they can be sold and this added to the profit.

The way to keep the boy on the farm is to give him a personal interest in the farm. The best way to do this is to give him a start with chickens, allowing him all profits from the flock, after paying for al fed2bought for the chickens, and we will assure you that his profits from one hundred hens will clothe him and furnish him with an abundance of pocket money.—Colmans Rural World.

To Shippers of Eggs.

The following instructions to merchants who ship eggs are sent out by the Swift Canadian Co. Farmers may profit by the suggestions:

1. If buying from others, insist on first quality eggs only.
2. Keep in mind the perishable nature of the produce and do not hold eggs, but ship while fresh.
3. Never keep eggs near kerosene, onions, fish or any other strong smelling substence; they readily absorb the odors.
4. Never expose eggs for market to direct sunlight, rain or to extreme heat from any source.
5. Do not wash eggs.
6. All eggs should be shipped in good strong cases, with fillers in good condition, and packed with excelsior flats on top and bottom. Do not use newspapers as flats.
7. Remember that 10 per cent of the eggs produced are wasted due to improper handling.
8. Tag all cases plainly, so as to assure prompt and proper delivery.
9. When shipping, always mail bill of lading, express receipt, and memorandum invoice. Your shipments can then be properly checked and in case a shortage occurs, it will not be ncessary for you to write full particulars after you have received your returns.

Diarrhoea.

One of the most serious diseases that chickens are subject to is diarrhoea. It may be stated at the start, that diarhoea usually results from some error of management, to the feeding of too great a quantity of food, to a poor quality of food, or to foul, filthy drinking water or food. It may also be brought on by exposure to drafts or to extremes of heat or cold.

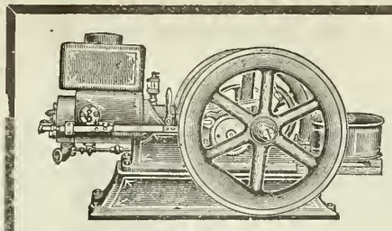
The affected bird has a ruffled apparance, is listless and has no appetite The excrements are watery and of a yelow or greenish color.. When the disease is severe, the droppings may be mixed with blood.

In treating the diarrhoea, the first thing to be done is to remedy the cause. The sick birds should be housed in dry, comfortable quarters While under treatment, the sick birds should be fed entirely on dry food. Green and animal food should not be fed, as these have a tendency to loosen the bowels. A teaspoonful of castor oil or olive oil should be administered daily to each sick bird.

Little Talks on Practical Poultry Matters.

The open-front poultry house still gains ground, but it must be made right. A poultry house 16x25 feet will house a good-sized flock of birds comfortably—100, if they have the chance of outside the greater part of the time; 50 if they must be kept shut up at times for several weeks.

The average hen lays but eighty-six eggs a year. The hen that lays so few eggs in a year isn't much of a hen don't keep too many of her kind. The average hen should not lay less than 125 eggs a year.



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They have many points to recommend them.

Are easy to operate, develop more power at less cost than any other make.

Are guaranteed for five years and are sold at close margin.

Are particularly well suited for farm and general work.

Full particulars in our Free Catalogue.

We want reliable men to sell Sussex Motor Co. Gasoline engines.

THE SUSSEX MOTOR Co., Ltd.
SUSSEX, N. B.

Stationery and Marine Engines, Wood Cutters, Grain Grinders, Gasoline Ice Cutters, Cream Separators, etc.

If you will notice the market reports of some large cities, you will see this item: "Forty cents for strictly fresh eggs; 16 cents for dirties and checks." You are to blame for some of this last—the dirty egs, anyway. Look out for the nests.

Turkeys drink more than chickens, so don't forget their watering pans. Some people believe that a poult should not be given water the first three or four days of its life because they so often notice the turkey hen pushing them back from the water in a stream. She is quite likely ordering them back until she investigates for snakes or turtles lying in wait.

Get Rid of Old Hens.

Now that we have convinced you that it is not wise to keep a lot of cock birds eating valuable grain during the summer, we take up the cry "To the Market with the Old Hens."

Hens over two years old begin to decline in producing power. They rarely lay as many eggs as in their pullet and yearling stages. Providing that they have been marked with a toe punch in the days of their youth, detection of the aged "matrons" will be a comparatively easy matter.

Before the old hens, the surplus young stock and the male birds are sent away to market, they should be kept in a small pen at least two weeks to increase their weight.

A suitable ration for this period consists of three parts corn meal, one part middlings or low grade flour and one part bran, with enough skim milk added to make a crumbly mash. The owner should never forget to provide fattening fowls with plenty of pure water during the warm days. Feed all the birds will eat twice a day and allow access to a supply of cracked corn.

Pointers on Feathers.

The tail and wing feathers of turkeys are used mostly in making dusters.

Feather boas are made from white chicken feathers curled with hot irons.

Milliners buy white chicken wing and tail feathers, and many white turkey feathers, which they either curl or let straight and dye different colors.

Muffs, fans and featherbone also call for the use of feathers.

In handling turkey feathers, an authority says the body plumage should be kept separate and the long wing feathers left by themselves. The tail feathers should also be divided from the rest; it does not take very many of these to weigh a pound.

What dealers call "skirt" feathers are those just in front of the large, stiff tail plumage.

Turkey wing feathers have a special classification.

In shipping, the tail plumage is generally made up into a special bundle.

Pointers are stiff feathers from three to six inches long.

If the feathers are "quilly" (that is, if there are many stiff ones among the body feathers), there is a reduction of price in the market.

Chicago and Cincinnati are good marke ts for chicken feathers, most of the middle states' shipments going to those cities.

It is estimated that five chickens will yield a pound of feathers.

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The Best Ever

issued: Guns, Rifles, Ammunition, Fishing, Tackle, Baseball, Golf, Tennis, Lacrosse, Camping Outfits, all Summer and Winter Sports. We want

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Best Cast Iron and Steel. Perfect in action. Ball Bearing end on shaft.

Write for descriptive circular and price.

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SUSSEX, - - N. B.

FOR HOME AND COUNTY

This Department is devoted to the best interests of the Homes of the Maritime Provinces. Contributors to these columns are leaders in the "For Home and County" movement. This Department is yours. Use it to the best advantage by sending us timely suggestions, short articles dealing with your experiences, and reports of your Institute meetings.

"SUCCESS" :: *By J. Lee Flewelling*

(Continued from last issue.)

Some of the men seemed to be opening large cases, some were nailing, others up, while others were hastening about, with their arms piled full of dry goods of different kinds.

Glancing round, Captain Fownes led the way to the large office in the rear of the warehouse. When they reached this and the door was closed behind them it seemed to shut out all the noise and Charlie noticed that they were in a large and well-lighted office, fitted up with more than ordinary care. Beautiful pictures being on the walls, as well as useful calendars and maps, and the whole office showed an artistic taste in its furnishings.

A man of about 60 was sitting at the office table writing. As they entered he rose and met the Captain with outstretched hand

"Glad to see you, Captain."

"Look here, Penio," said the Captain in his bluff way; "Can you lend me that busy ear of yours for a moment?"

"It is always at the disposal of my friend, Capt. Fownes."

"Well; first let me introduce my young friend here. I know that like myself, you will not judge him by his clothes. This is the son of Dr. Ruddock, who was killed by falling from his horse, up at Marlboro, some five years ago. As he was a physician of some note, and the city papers had a full account of the affair at the time, you doubtless remember something about it."

Mr. Pineo nodded. "Sit down young man.."

Then Captain Fownes, with a vividness that surprised our hero, gave a full account of his life from the time of his parents' death, up to the present. I ran across him at Roundant, and I brought him down in my boat."

"Now, Pineo, I want to know if you can make room for him in your establishment?"

"What can he do?" was the practical enquiry.

"Nothing, and everything," was the reply, that is to say, he knows nothing about the work, but as he told me is willing to commence at the bottom, but says he don't intend to stay there"

"All right—that's where I commenced myself, and that simplifies matters very much. My foreman just told me today that we needed another hand to help in the opening of the cases—one of our men being laid off through illness, and we can put him to work at once, if you wish."

"All right, and thank you. I will take him out first and secure a good boarding place for him."

This he did, getting him taken into a private boarding house a few blocks away, kept by a German, with whom the Captain was acquainted. As he did not know what wages Charlie was to get he arranged with the German to be responsible for his board for the first three months, after that said he, "he will be all right. or he is not the boy I take him to be."

"Dot is all right, Captain. I like de look of de boy myself. I thinks you vont have mooch to pay me."

"Now Charlie," said the Captain, when they were again on the street, "we had better see about some clothes."

"Excuse me Captain Fownes," exclaimed our hero. "I am very thankful indeed for all you have done for me, a perfect stranger to you, but I don't want the obligation to become too great. You have got me the chance to go to work and as the work will be of a somewhat rough nature, I would rather just wear the clothes I have until I am able to get better ones for myself."

"All right, my lad, I like your independence."

"Well, you know where the Albany docks, come and see me now and then, and if I can help you in any way, let me know." Shaking hands heartily, the Captain started for the boat. Well, he thought as he went along I do like that boy, he is so manly and he looks one straight in the eyes when speaking with as handsome a pair of eyes as I ever saw in a boy's head.

Our hero, when he returned to the warehouse, was furnished with a hammer and a nail extractor and put to work opening cases Mr. Brown, who assigned him to the work, told him he was expected to work as expeditiously and carefully as he could and that his wages for the present would be one dollar per day.

Charlie was greatly surprised at getting so much as he only had to pay $4 per week for his board this would leave him, at the onset, $2 extra per week. He soon was able to do his work as well as the other men and he was always careful not to split the boards and to pile them up neatly and the nails he always straightened out, if any were bent and had them ready for use again.

As he was more careful in this respect than some of the other men, Mr. Brown called their attention to this fact and asked them to do better.

As we may readily surmise, this had the effect of giving some of them an ill-feeling toward our friend and they were inclined to show their resentment in every possible way.

They dared show no open hostility when Mr. Brown was near, but made things as unpleasant, in a nasty way, as they could. Hurry up buck, one of them would say, in passing or when there was a chance would shy a wad of paper at his head, or play any of the pranks they could, that they thought would annoy. We may well suppose, that these things were most galling to a high-spirited young fellow.

Things reached a climax, when one day in Mr. Brown's temporary absence at the office, where he was often called for consultation. The boys had been indulging in their usual sneering remarks, to which our hero appeared to pay no attention, but when he had occasion to cross the room to get the nail extractor, which one of the men had taken when his back was turned, one of the men tripped him, so that only an agile spring saved him from an ugly fall

Wheeling, he looked the fellow in the eyes, and said, "don't you try that again, or you won't do it for nothing."

"Oh, my," said the man, a big fellow by the name of Mike Daly. "You wouldn't hurt a fellow, would you?" Please don't."

Charlie passed on, got what he wanted and was returning, when the fellow tried to trip him up a second time. Charlie was on his guard this time, and instead of falling, managed to give the advanced leg a pretty good kick instead.

At this, Daly got mad, and he used some pretty rough language.

Charlie laid down the tool he was carrying and turning to the fellows, who had gathered round at the prospect of a fuss, he said: "Now men, ever since I came to work here, for some reason or other, you have all had a pick at me. I don't intend to put up with it any longer. I have tried to do my work right and treat you all civilly and I shall demand the same treatment from you in the future. This trouble has got to end, just here and now. I shall attend to this man first, he seems to be the biggest man of the lot, and any of you will interfere at your peril'" Our hero was already in his shirt sleeves, as he usually worked that way. Turning to Daly he said: "Take off your coat."

"Never mind the coat, my little bantam," said Daly. "I'll soon cut your comb for you."

"Look out there," and Charlie was at him. A few passes, a quick sidestep, as Mike lunged at him with all his might, and he delivered one under that worthy's ear, that sent him reeling to the floor, where he lay for some little time.

"Don't hit him, wait until he gets up," the others shouted crowding in.

"You fellows just keep back. I'm not the kind that hits a man when he is down, or insults a young felow for no reason under the sun, but that he minds his own business."

"You fellows must stand back and when Daly has had enough, I'll attend to any of you that want me. After a time Daly got to his feet again, though still somewhat dazed.

"That was an accidental blow, you young bantam," he said "you can't do that again."

"You had better wait awhile Daly, you are hardly yourself; say when you are ready."

After a while, Daly, who was game, said: "Come on now you dorned clodhopper, and I'll give you what you want"

As our hero sprang at him, Daly struck a blow that if it had reached its mark, would have ended the bout, there and then, this Charlie skilfully ducked and ere Mike could recover from the impetus of the blow, sent one in with his right that caught Mike this time right under the side of the jaw, and he fell, like an ox, under the blow of the butcher's maul. He was so long in coming to, this time, that the other men had to get water and dash in his face and even then it was quite a time before he made an effort to get up.

Charlie stood leaning against a bale of goods, but keenly alert for what might come. But no more was needed

"Be japers," said Mike, "you just gave me what I deserved and did it handsomely too, and there's the hand of Mike Daly if you'll take it and I bear ye no spite for this same, but will stand your friend if you'll have me."

"All right, Mike, friends let it be", and they shook hands.

Then turning to the rest "now, if any of you want anything off of me just step out here."

"Divil the wan of thim, wants anything of that kind, of ye," said Mike. "I can lick any of thim aisy and you have licked me and that ends it."

"All right boys. I bear no malice, but you have got to treat me decently from this out and you may depend on my doing the right thing by you," and Charlie went back to his work as if nothing unusual had happened.

So well and so cheerfully was his work always performed that when he was advanced to positions beyond what some of them occupied there was no murmur, they recognized that he had earned his advancement.

When Charlie had been about two years in the employ of Mr. Pineo, as the latter was passing into the office one day, he said: "Mr. Ruddock I would like to speak to you before you leave to-night."

The other young men said jokingly, "Ha, Charlie, going to get your discharge, eh? We will be sorry to see you go." This in quite a different tone from that they would have used a year ago. Charlie had now become quite popular. He was always ready to lend a helping hand when needed; and often assisted materially with suggestions of an improved way of doing the work. Mr. Brown had come to rely on him a great deal of late.

"Sure me bye," said Mike, "if you get your walking papers, divil the soul of us will go to work tomorrow."

When Charlie entered Mr. Pineo's office it was with little fear of a discharge, for he had the consciousness of work faithfully performed.

"Sit down, Mr. Ruddock. Have the hands all gone?" "Yes sir."

"Mr. Ruddock, Mr. Brown has concluded to leave us. He has beeen offered a much better position than he has here, and I think he does well to take it, and I wanted to consult you about a man to fill his place, a shipping clerk, who will be also overseer of all the work of this large establishment. This is a very important position and

BETTER THAN SPANKING.

Spanking does not cure children of bed wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W, 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

MOTHER OF SCHOOL GIRL

Tells How Lydia E. Pinkham's Vegetable Compound Restored Her Daughter's Health.

Plover, Iowa.—"From a small child my 13 year old daughter had female weakness. I spoke to three doctors about it and they did not help her any. Lydia E. Pinkham's Vegetable Compound had been of great benefit to me, so I decided to have her give it a trial. She has taken five bottles of the Vegetable Compound according to directions on the bottle and she is cured of this trouble. She was all run down when she started taking the Compound and her periods did not come right. She was so poorly and weak that I often had to help her dress herself, but now she is regular and is growing strong and healthy."—Mrs. MARTIN HELVIG, Plover, Iowa.

Hundreds of such letters expressing gratitude for the good Lydia E. Pinkham's Vegetable Compound has accomplished are constantly being received, proving the reliability of this grand old remedy.

If you are ill do not drag along and continue to suffer day in and day out but at once take Lydia E. Pinkham's Vegetable Compound, a woman's remedy for woman's ills.

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.

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and kill both the flies and germs. Sold by all Druggists and Grocers all over Canada.

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Write at once for illustrated catalog & specifications.

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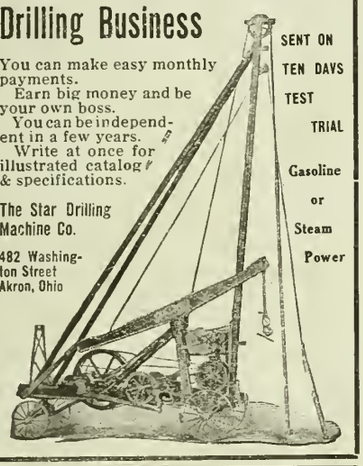

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"I was cured of diarrhoea by one dose of Chamberlain's Colic, Cholera, and Diarrhoea Remedy," writes M. E. Gebhardt. Criole, Pa. There is nothing better. For sale by all druggists.

there is a good salary goes with it. I paid Mr. Brown $1500 a year and his successor will have the same. There is but one man in our establishment at the present time, who seems to have the qualifications for the position, so Brown says, and I want your opinion of the matter, as it is a most important choice for me."

"Which one of the fellows do you think would suit." Charlie ran the men over in his mind. "I think", he said, "Mr. Brown must have thought of Mark Kely, he certainly has more ability than any of the rest."

"Well," said Mr. Pineo, "what do you think?"

"I am most too young, and have been here too short a time for my opinion to have much weight," said Charlie with a smile.

"Nevehtheless," said Mr. Pineo, "it was to get the benefit of your opinion that I asked you here tonight, and if the man Mr. Brown has selected, is in any way unfitted for the position, I feel that it is your bounden duty to me to enlighten me." As he spoke Mr. Pieno sprang up and walked nervously about the office. "You, perhaps, can scarcely understand how vitally important tnis is to me," and he returned to his chair on the orposite side of the table and looked appealingly at our friend. "Now, Mr. Ruddock, what do you advise?"

"Then, Mr. Pineo, I feel bound to say that I think you have not a man on the force, fit for the position. Mark Kelly comes the nearest and I hate to say a word that will perhaps prevent ment, but he is not at all times reliable."

"You refer to the fact thae he drinks?"

"Yes, sir"

"Your interests require a man to be always at his post, both quick to plan, quick to execute and also one who understands the control of men. Then, again, he requires to know the stock from cellar to attic, otherwise you would not be in a position long, to promptly fill orders.

I think you would be advantaged by going entirely outside your staff and securing a man thoroughly equipped for the work."

Mr. Pineo nodded and lapsed into silence for some moments. Suddenly he asked: "Would you like to know who Brown did recommend?"

"I am sure it must have been Kelly. he is the only one at all fitted for the post, and as I said, I am sory to have to say a word that seems to go against his advancement, but when you asked my opinion I felt that my duty to you required an honest one."

"Right Mr. Ruddock, there have been few times, if any, since you've been here, that you have not been right. Captain Fownes is a very old friend of mine, and when he asked me for a position for you, I would have made one, even if I had to discharge a man to do it. Luckily, we wanted a man for the rough work, the opening of crates, so Mr. Brown had told me a few moments before you came in, so you came opportunely. This you commenced, as you said you were willing to do, at the bottom, and I have had my eye on you ever since. I have noticed that when in a slack time, the others were skylarking, or spinning yarns, you were always looking over the stock and making yourself familiar with your surroundings The office door was ajar and both Mr. Brown and myself watched the deserved punishment you gave Daly, and I was pretty proud of you that day. My boy! I would not like to get a clip from that fist of yours I have watched your course all along. I have even employed means to know how you spent your evenings. When I found that you were taking a course in Science in Cooper's institute I was much pleased. When I learned that you had become proficient in shorthand and typewriting, I was much gratified. When I listened to your address at the Men's Union last month. I was extremely pleased with your remarks; that appeal of yours to the men, to make themselves indispensible to their employers, and there would be no trouble about wages, and no necessity for strikes, seemed to me, to strike bedrock."

I know that you attend Dr. Parker's Church at Brooklyn, and that you are a member of his Bible class. In short, I know nearly all about you since you came to the city. This I have done, partly to please my friend, Captain Fownes, partly at the suggestion of Mr. Brown, and partly to satisfy myself. I may say to you now, that the man Mr. Brown has recommended to succeed him, is Mr. Charles Ruddock, and I may say also, that I heartily endorse his choice.

Charlie sprang to his feet, his face crimson.

"Why, Mr. Pineo, I have been here but little over two years."

"The more credit to you, that you have mastered the business in that time. You have a marvellous gift it would seem in that direction. I don't mind saying to you, that I never saw any young man show such aptitude for business, as you have. There is little doubt in my mind that in a very few years when you have obtained some capital, you will be running a large business of your own, unless you should elect to take an interest here with me."

"Mr. Pineo, you overwhelm me. I have tried to master the business and to always do the best I could at whatever I worked, but I had not the slightest idea, that by so doing, I was preparing myself for further; though," with a smile, "you doubbtless remember Captain Fownes telling you of that remark of mine, that I was willing to start at the bottom, but did not calculate to stay there."

(To be continued.)

Everything you could ask for—
DAYLIGHT OVEN, if required—with heat-proof glass panels in door.
OVEN THERMOMETER, always reliable, and Thermometer guide.
HEAT ECONOMIZER, that holds oven heat when door is open.
CONVENIENT TOWEL RODS, not in the way.
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ENTERPRISE
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THE Monarch is the "Range De Luxe"—the best you can possibly get. It is made right here in Eastern Canada, however, so that it is very reasonable in price.
Other stoves have some of these features—The Monarch has them all, with others that we cannot list here. You must see a Monarch to even partly appreciate it. When you have used one, you will agree that it's the finest range made.
Write for a free copy of the book we've published about the Monarch, and for the name of our representative in your neighborhood.
Enterprise
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When the Fire is Low

One way to hasten the cooking of the contents of frying-pan or saucepan when the fire is low is to place over it a flat cover and upon this set the teakettle containing boiling water. It is quite surprising how this additional heat hurries the process of cooking, and it is a remedy that is generally at hand.

This method is unusually fine for cooking eggs without turning them, as the heat from the kettle cooks the top of the eggs sufficiently by the time they are cooked on the other side, and the eggs appear more attractive than when turned.

One of the most common ailments that hard working people are afflicted with is lame back. Apply Chamberlain's Liniment twice a day and massage the parts thoroughly at each application and you wil get quick relief. For sale by all druggists.

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A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for **Rheumatism, Sprains, Sore Throat,** etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is Warranted to give satisfaction. Price **$1.50** per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Toronto, Ont.

Getting Ready for School.

In spite of hot weather most country mothers have to be getting the children ready for school several weeks before it begins, and this is no small task. Children have a habit of shooting up in the summer time like weeds, and they also have the health ful habit of romping, playing and eating fruit, all things that ruin the clothes. Peach stains on frocks and grass stains on knees are the bane of most mothers, yet the children must have good times even if it is destructive to clothes to romp and play.

Sad experience has taugnt most amateur dressmakers that it is time and money thrown away to buy lawns or thin materials for school dresses. They are very much reduced in price at this season and the temptation is strong to buy them, but very soon the mornings are cool and the dresses must be laid away for next season, when they will probably be outgrown. The best material for boys and girls are the heavy galateas, stout ginghams, sensible cambrics—all wear-resisting fabrics that hold starch and look well to the end of the chapter. It does look a little cruel to send the children off in hot September in a heaky dress of stout gingham, but always there are a few summer frocks left over—best dresses that must be worn out before outgrown—and these can be saved for very hot days.

For boys stout waists in medium dark colors are best, and these are cheapest when made out of substantial materials. Cheap calico goes to pieces in the first wrestling match and the mother's time and money are thrown away, but good galatea will resist many bouts on the playground and look well always.

Light jackets and wraps made from the worn-out dresses of the older members of the family or from the best parts of the old coats are always needed for school in the early fall. The sudden rain, the veering of the wind to the north or a damp morning will make the thin cottons insufficient for the children's tender bodies, and the wraps should always be at hand. Then with stout shoes and stockings ready and plenty of dark bloomers for the girls and overhalls for the boys the school preparations wfll be out of the way until winter comes. Some mothers allow the little girls to wear gingham all winter with heavy wraps outside, while others use the dark wools and protect them with big ginggam aprons. At any rate the garments made in the fall should have deep hems so they can be let down next spring and there should be ample material laid away for new sleeves. By washing the new piece a few times and hanging it in the sun to dry it will fade out to mach the half-worn garment, and the child will not be conspicuous in a "two color" dress. made in simple style the garments are easy to wash and easy to iron, yet they always look well and satisfy the little lads and lassies for everyday wear.—Elizabeth Oswald.

A Real Lever Simulation

GOLD WATCH FREE.

A straightforward generous offer from an established firm. We are giving away Watches to thousands of people all over the world as a huge advertisement. Now is your chance to obtain one. **Write now,** enclosing 25 cents for one of our fashionable Ladies' Long Guards, or Gents' Albert, sent carriage paid to wear with the watch, which will be given Free (these watches are guaranteed five years), should you take advantage of our marvellous offer. We expect you to tell your friends about us and show them the beautiful watch. Don't think this offer too good to be true, but send **25 cents** to-day and gain a Free Watch. You will be amazed.—WILLIAMS & LLOYD, Wholesale Jewellers (Dept. 69), 89, Cornwallis Road, London, N., England.

The Baby Died.

The hour for the funeral had arrived, and neighbors were coming in to the services. The dead baby lay in a little white coffin lined with white satin, was dressed in white, and flowers in profusion decorated the room and testified to the sympathy of tne neighbors.

The preacher made a short prayer, uttered a few comforting words, a song was sung, the little baby was born to the white hearse by four young girls in white, and the procession moped toward the cemetery.

The baby had died from intestinal disorder induced by wrong feeding, yet the preacher had said: "The Lord giveth and the Lord has taken away." The doctor told how it all happened. "That baby," said he, "was born strong and healthy. The motner nursed it for weeks, but finding that nursing interferred with bridge and other social affairs, provided a bottle, and when she was absent, her aunt, who lived with her, fed cow's milk. This irregularity of breast feeding soon lessened the amount of the mother's milk and she concluded she would cease nursing entirely. The child seemed to do well on the bottle for a while, but it soon became evident that something was wrong. One time I saw the mother give a piece of rich pie crust to her baby, and I warned her against doing so. She told me she found the infant liked coffee, and a little was frequently given to it. And so, despite my medicines and my warnings in regard to feeding, the child's digestive apparatus gradually broke down. Someone prescribed soothing syrup which contained morphine. Another one recommended aniseed cordial, and so it went; the young mother being willing to depend upon drugs and remedies, but would not practice prevention by feeding rationally. When the digestive machinery was put to the bad the baby finally took dysentery and died." Continuing the doctor said: "I had three infants die of pneumonia last winter, simply because the mother would not give them air enough. In spite of my instructions that plenty of air would make babies strong and protected them against colds and coughs, still they would cover their babies' faces with veils and napkins, keeping the life giving air away. The foolish idea," said the doctor, "wh ch seems to exist everywhere, that fresh, cold air is injurious, must be somehow extracted from the minds whicn hold the same, or else pneumonia dead babies will always be with us.—Dr. J. N. Hurty.

NOTE the performance of Remington-UMC High Power Repeating Rifles, and the class of Sportsmen who use them—and you see the reasons why leading sportsmen of the world are more and more shooting Remington-UMC.

Accuracy. sure fire, speed, hitting power, ease and simplicity of operation, *dependability* such as you've wanted all your life.

Go see the dealer who displays the *Red Ball Mark* of Remington-UMC—the *Sign of Sportsmen's Headquarters.* Let him show you the Remington-UMC *Slide Action* Repeaters. He has these Remington-UMC rifles in stock now, or can get them for you.

REMINGTON ARMS-UNION METALLIC CARTRIDGE COMPANY, Windsor, Ontario

The Summer Diarrhoea of Children.

When the baby has loose green passages, it means that he is sick and needs medical attention. The disease may be mild at first and the baby often shows no other signs of illness than diarrhoea. There may be no fever. Such a baby often becomes dangerously ill in a short time. Send for a doctor.

Sixteen per cent. of the deaths during the first year, and thirteen per cent of the deaths during the second year of life, in Nova Scotia, are due to infantile diarrhoea.

The simplest cases of vomiting and diarrhoea during the summer should not be neglected. Every such case should be treated as an emergency.

Stop the milk at once.

Give a teaspoonful of castor oil, and feed nothing but barley water until the child has been seen by a doctor.

Do not give any cordial or teas or diarrhaea mixtures.

Never give any medicine other than the castor oil to the baby except upon the doctar's orders.

If the baby has fever, it is ill and you should consult your physician immediately.

The Department of the Public Health, Nova Scotia, issues a pamphlet on the Care of the Baby, which may be had free upon application to the Provincial Health Officer, Halifax, or to anv Medical Health Officer

Attractive Dress for Farm Women

Because we live in the country, is that any reason why we should not be well-mannered and attractively dressed? In this community there are several women so gentle and charming, always suitably dressed for the time and occasion, sympathetic and charitable in their utterances; trustworthy, wholesome, dependable women with whom it is good to come in contact.

Perhaps you have read of the delightful ladies of Cranford—they were very dear and very quaint, but just not like our more vivacious ladies of today. Now let me tell you whom you believe in pleasing quite the most—your husband! A young and pretty girl will probably do her utmost to enchance her charms sometimes after marriage she will become shockingly careless and negligent, and soon becomes prematurely aged and faded, because she has not taken proper care of her hair, skin, figure, teeth and clothes. If the husband of this careless woman is a good and kind man, does he not deserve a fairer vision of a wife?

What is really pleasanter than when "running in" on a neighbor at eight in the morning or five in the afternoon to find her neat and clean? Her hair, not pulled back in a tight little knot but arranged in a simple and becoming manner.

My sister visited me shortly after I was married; her hair, naturally beautiful, was arranged in an artistic yet simple coiffure; my husband asked me why I did not dress my "crown of glory" likewise. Now I thought I was "doing" mine in a rather pretty mode, but I soon arranged it differently, and he thought it beautiful, so you see at least some husbands are observant.

Perhaps I am extreme in my desire to please, but when my "dear com-

FEED COOKERS

Feed Cookers made in three different sizes, 30, 40 and 50.

Sides made of heavy Sheet Steel. Heavy Cast Cauldron. Large Fire place.

Write for Circulars, Prices, etc.

The Sussex Manufacturing Co., Ltd. - - Sussex, N. B.

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house. They

Keep the Children Well

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P, 209 Windsor, Ont.

A vast amount of ill health is due to impaired digestion. When the stomach fails to perform its functions properly the whole system becomes deranged. A few doses of Chamberlain's Tablets is all you need. They will strengthen your digestion, invigorate your liver and regulate your bowels, entirely doing away with that miserable feeling due to faulty digestion Try it. Many others have been permanently cured—why not you. For sale by all druggists.

Dates to Remember.

St. John Exhibition, St. John, N. B., Sept. 5 to 12, 1914.

Haliax Exhibition, Halifax, N. S., Sept. 12 to 19, 1914.

St. Stephen Exhibition, St. Stephen, N. B., Sept. 15 to 18, 1914.

Charlottetown Exhibition, Charlottetown, P. E. I., September 22 to 25, 1914.

Sydney Exhibition, Sydney, N. S., Sept. 29 to Oct. 3, 1914.

Annapolis Valley Fruit Farm
200 Acres, 700 Apple Trees

100 acres machine-worked tillage; brook-watered pasture; large amount wood and timber and only 2 miles to large village mkt. and R. R. center; splendid orchard for which farm is well adapted, large 13-room house; basement, barn, tool house, shop and poultry house; owner has met with accident, is unable to work and is forced to sell for only $7000, part cash, he will throw in pair heavy horses, wagons, harrow, plough, horse hoe, harnesses, etc.; probably the biggest bargain ever offered in this rich, fertile Valley. E. A. Strout Farm Agency, Wolfville, Nova Scotia.

Equipped Valley Fruit Farm

160-acres; 1½ miles to depot village; borders water; milk sold at door, 45 acres in deep loam tillage pasture for 12 head; 15 acres heavy wood and timber; apple orchard yielding in season 700 bbls.; 11-room house with piazza, painted and blinded, worth $3000; barn ties up 15 head; piggery poultry house and shed; owner called away includes 3 cows, heifer, household furnishings, farm tools, machinery, wagons. etc., everything goes for the low price of $6450, part cash, easy terms; all details and traveling instructions page 84, "Strout's Farm Catalogue 37", write today for your free copy. E. A. STROUT FARM AGENCY Wolfville, N. S.

Now is the Time to Plan for the Summer

Students can enter at any time as we will not this year have any summer vacation, the number in attendance from a distance making it inexpedient to interrupt their work.

Besides, St. John's cool summer weather makes tudy during the warmest weather just as pleasnt as at any other time.

Send for catalogue.

THE ST. JOHN Business COLLEGE. S. KERR *Principal*

panion" (Samantha Allen's name for her better half) does not care for certain dress or hat I, too, loose interest in it. My home dresses are made by a pattern with good lines—generally a little low in the neck and elbow sleeves, the short sleeves being especially good in that you have no inclination to roll them and spoil their freshness. My aprons, unless white and clean, I never wear at the dining table; at the very last moment, if I have prepared the meal, the apron is removed and hung up until I return to the kitchen.

Of course a gingham apron is an honorable appendage to a woman's toilet when "used as needed," , but let your children become accustomed to your making this little change. It will be beneficial; they will see you are quite careful in your appearance at the table and they will begin to think that there must be something manicuring and orderly appearance exacted from them.

At breakfast and dinner I wear my morning dress. In the afternoon, after a refreshing rest (for I arise early and have very busy mornings), I bathe and put on a plain gown but daintier and more dressy than its predecessor. When my husband comes into supper—his day's work on the farm done—he looks at me so approvingly and happily that I am rewarded for my extra laundry work. I keep no servant, and therefore have to be mighty careful to keep clean; there are meals to prepare, children to care for, hundreds of little and big things to do, some gardening and poultry work.

Let me tell you a little more; the consciousness that you are appearing well acts like a tonic and certainly increases your self-respect; you are very much at ease with yourself and everybody else. In the summer I have several very dear friends visit me. They dress well; my dresses are not so rich or elaborate but they look up to date. For going out in the summer season I try to have one thin white dress for very warm days one white linen and one colored linen, these are my "stand-bys"—the ratines this summer are used very much instead of linen.

My husband used to came to supper in the clothes in which he had been working all day—callers came unexpectedly and he had to hurry away to dress. I suggested, (never dictate, dear woman), that if he always dressed before supper he would feel refreshed and delightfully comfortable in his after-supper reading on the porch. So now in the warm season he makes himself quite tidy in fresh negligee and white duck trousers; when callers descend upon us we are both ready to receive.—Charlotte Marshall in N. E. Homestead.

The Proper Care of Honey.

When nectar is gathered it is thin and watery. The heat of the hive, aided by the manipulations of the bees, gradually reduces the nectar to thick, ripe honey. When the honey is ripe the bees seal it over. It is their finishing touch which proclaims that it is ready for market, or for use. While there is an excess of water in the honey, the bees will not seal it. They will leave it to evaporate. The process of evaporation is the ripening process.

After honey has been thoroughly ripened in the hive and is then removed, its future palatableness depends entirely upon the care it receives. Too many look at honey as a simple sweet, live cane sugar, forgetting that its flavor and aroma, are its chief attractions. When first taken from the hives it has very distinctly the flavor of the flowers from which it was gathered. Each variety of blossom gives a distinct flavor. By the tasting of honey, an expert can readily tell from what class of blossoms it was gathered.

Thoroughly ripened honey should be at once put into bottles, cans or barrels, sealed up tight, and put in a dry place. It will of course, soon candy, or crystallize, but the flavor will be retained indefinitely, and the honey can be liquified whenever it is needed for use. Care must be exercised in melting, that the flavor is not injured by the application of too much heat. Of course, the honey will not be burned if it is not heated hotter than boiling water, but the application of so great a heat as this rapidly drives off the flavor. Keeping the package closed and applying a very gentle heat, never above 150 degrees, is the better way. Putting up the honey in such packages as can be easily placed in warm water, makes the liquefying more convenient.

When reliquefying granulated honey, place the receptacle containing it in a vessel of water, place a few thin strips of wood between the nottoms of the two cans. The honey should be kept at a heated temperature for at least three hours, according to size of receptacle, to insure perfect liquefying. Any granules which are not thoroughly dissolved will hasten the solidifying of honey. Light and cold are the two elements which have the undesired effect in aiding the matter. Probably the best condition for preserving honey is to keep it warm, dry and dark, similiar to the inside of a beehive.

Honey has a great affinity for moisture, and if comb honey is stored in a damp moisture through the slightly porous cappings, and become thin and watery. The bulk of the honey will be so increased that it will burst the cells and ooze out. The honey may become so thinned that fermentation will set in.

Cold is also detrimental to comb honey which it causes to candy in the cells. When comb honey is first taken from the hives, it should be stored in a hot, dry atmosphere. Very few people know how to keep honey. The average housewife will usually put honey in the cellar or into a refrigerator for safe keeping, about the two worst places possible. Honey is kept very differently from fruit. If it is thoroughly ripe when taken from the hive it will not ferment unless it is placed in a cool moist place.—F. G. Herman.

DURABLE--Fire grates are three-sided; last three times as long. Shaped in the

McClary's Sunshine Furnace

to grind up clinkers when "rocked". See the McClary dealer or write for booklet. 32

Little bankroll, ere we part,
Let me nug you to my heart;
All the year I've cldng to you,
I've been faithful, you've been true;
Little bankroll, in a day,
You and I will start away
To a gay gnd festive spot,
I'll come home, but you will not.

MONEY IN POTATOES

Harvest Your Potato Crop Economically

In every line of industry, machines are taking the place of hand labor. The progressive farmer is quick to recognize what they will save for him—it is really only a case of selecting the right machines.

You will not go wrong if you pick the

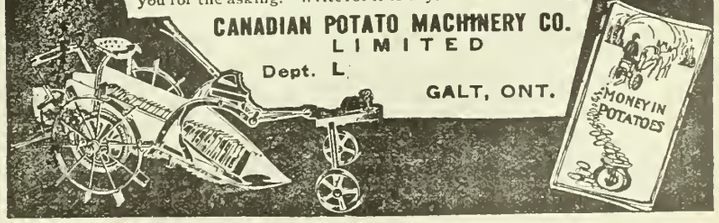
O.K. CANADIAN POTATO DIGGER

The popularity of the O.K. Canadian Digger is due to the simplicity and strength of its construction and its light weight. It is built throughout of steel and malleable iron and designed to avoid undue strain or friction on any one part. It digs all the potatoes without damaging them, is remarkably light of draft, and lays the potatoes out in an even row where they may be conveniently gathered. Think what it will save for *you*.

Our interesting booklet, "Money in Potatoes" will be sent you for the asking. Write for it to-day. 27

CANADIAN POTATO MACHINERY CO. LIMITED

Dept. L GALT, ONT.



READ THE LABEL
HEALTHFUL BISCUIT, CAKE, ETC.
DIRECTIONS
THIS BAKING POWDER IS COMPOSED OF THE FOLLOWING INGREDIENTS AND NONE OTHER PHOSPHATE BI-CARBONATE OF SODA AND STARCH.
MANUFACTURED BY E.W.GILLETT COMPANY LIMITED TORONTO, ONT.
CONTAINS NO ALUM
MAKES THE WHITEST, LIGHTEST
MAGIC BAKING POWDER
CONTAINS NO ALUM
READ THE LABEL

Canning Vegetables.

There is a scientific reason for the failure of all cooks to prepare vegetables so that they may be kept indefinitely in jars for winter use. Most vegetables are rich in starch, and those that are, are never sterilized by one cooking; sometimes this is done by a second, but give the vegetable a third cooking and the contents of the jar will be safe.

The first boiling kills the starch germs then alive, but it does not kill those unhatched, and of those some ripen the second day, to be destroyed by a shorter time of boiling, and then no more will develop. This bit of knowledge was the explanation given by a noted bacteriologist to his wife why her vegetables all spoiled, though she had put them up according to the rule of Mrs. Z, a well-known writer and speaker on cooking. Mrs. Z had advised her to boil them twice, but they had spoiled just the same. Not one has spoiled out of hundreds preserved after the three-time manner.

The writer has canned dandelions and found them delicious in the early spring and late winter. She had such quantities gathered and cleaned that she expected to have at least a dozen jars, but had only four quarts.

After the greens were thoroughly cleaned and washed they were left standing over night in a crock of cold water which served the double purpose of drawing out a little of the bitter and of freshening the drooping leaves. Early in the morning they were put in a kettle with no more water than came out as they were lifted from the crock, and were cooked with no salt until they weee tender—as they were young and small the cooking lasted about half an hour.

THREE BOILINGS FOR SAFETY.

Then they were packed into glass jars as closely as they could be pressed in, jars filled to overflowing, the tops snapped on, and the jars left until the next moroing, when the snap was loosened on the cover, which was not lifted, the jars set on a bit of wood in a kettle filled with water to their necks, and left to boil for 20 minutes. Then the snaps on the jars were fastened and the jars left in the water, though this not absoluely necessary. The same method was followed the next day, and the jars when cooled were set away.

Vegetables cooked in this manner retain all their freshness and flavor for they are never exposed to the air after they are put in the jars. Spinach needs a trifle less cooking, unless the leaves are old, but for canning it is not wise to take old vegetables, and if they have been gathered a day before they are to be cooked, they should always be freshened by soaking in cold water to cover.

The housekeeper who tries to clean and can all the dandelions or spinach to fill more than two quart jars and do the canning all in one day has undertaken too much for the average woman. This rule is also recommended for Swiss chard, beet greens with tiny beets, and many greens to be found wild in the country. Any of them will keep if prepared as thus directed.

There is another method of preserving these things, an old one which some housekeepers might wish to try. Into a stone crock lay a thick layer of any greens, then a liberal sprinkling of coarse salt, and so on until the crock is full, the top layer being of salt. Cover and weight down, and leave until wanted. When the vegetable is to be used it must be removed from the brine, washed in several waters, left to soak over night, and then cooked as if fresh. The odor when the cover is lifted is not inviting, but the greens after the washing and soaking will be found unspoiled. This is not nearly as good a way as the other, as it destroys the delicacy of flavor in the finer greens. Our grandmothers used this for dandelions and string beans. The German method of making sauerkraut is the same as this, only that less salt is used, the cabbage being shredded, and a few juniper berries being added.

For canning beans, they should be put into jars as solidly as possible when snapped, water run on them until there are no bubbles, and the beans are covered, the lid laid on the top, and then the jars set on something to keep them from touching bottom, water added to the neck, and *oen left to boil well for at least an hour. No salt is to be put with them, or with any other vegetable thus canned. Since the writer has ceased to salt tomatoes when canning them, she had none spoil. Fasten the lids of the jars, and next day repeat the process as outlined for dandelions.

Young peas can be cooked this way with hardly any water, but beans do not get tender without it.

Young corn, cut from the cob, is to be packed down with a spoon until no more can be crammed into the jar, no water added, and then cooked an hour or more. There is very little probability of over cooking any vegetable that is canned. Corn is one of the vegetables surest to spoil without sufficient, repeated cooking. It is delicious cooked without any water in the jar, but all the milk of the corn should be added to the contents of the jar.

Squash and turnip may be saved in this way, though one seldom cares to can these vegetables, unless one lives in a city flat and has to can them to keep them from spoiling.

Carrots and peas together can be done in the same way, the carrots cut in dice as small as peas and enough water added to the jar to develop a steam to cook them through. If the vegetables are packed as solidly as they should be in the jar there will be none to much water if it comes to the top. For this, the young, small carrots should be chosen. The combination is very good.

There is a rankness to water in which cauliflower is boiled which makes partial boiling before placing in jars better than cooking wholly in glass, as with other vegetables. The cauliflower, broken in bits, is packed in the jar so solidly that there are no interstices, and then twice heated, as before directed

Acid vegetables like tomatoes, and acid fruits need only one cooking.

Shelled beans and limas are preserved excellently by this method of triple cooking, which in their case is important. Corn and beans (succatash) can be combined with good results in canning.

Corn which has been cooked on the cob can be kept for winter use by drying. It is removed from the cob by picking off in whole grains, and is dried in a very slow oven or in a sunny place. It can then be placed in a bag, tied closely to keep out dust, and when it is wanted for use it is to be soaked overnight, then heated in milk. This is an old-fashioned, but simple way of preserving corn. Unless kept in a dry place it will mold.

Under ordinary conditions one will never care to can potatoes, but out in the mountains of the west, canned potatoes have been of great servcie at times. One may can them by boiling, mashing, packed well in a jar, and reboiling on two consecutive days.

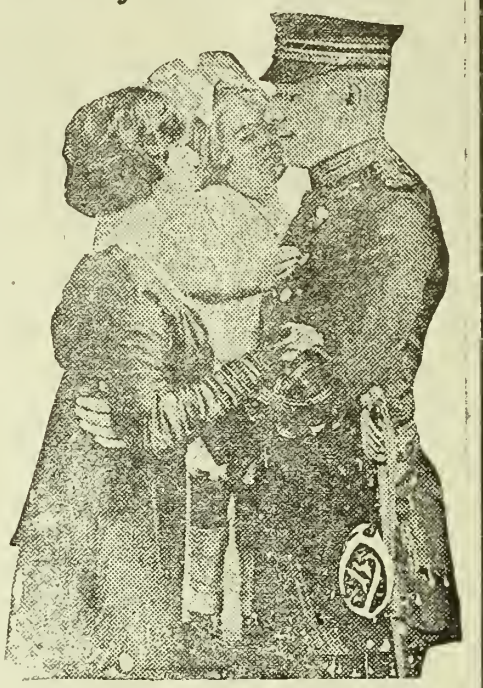
It is not as much trouble as one might think to repeat these boilings, for boiling is what is necessary—not a mere reheating. It will not be accomplished while one is doing up the morning tasks, and the result in winter will be ample compensation for all the work. Only fresh, perfect vegetables should be chosen for canning, for poor articles will not produce good results. Nothing from a garden need go to waste if one will can the superfluous green vegetables, and there is always the best kind of market for home canned vegetables, even more than for fruits.—Dora Morrell, Maryland.

Special Advice For Men

Vitality Restored by New Method

The attached coupon entitles you to one illustrated copy of my pocket compendium and guide for the self-restoration of lost strength. (See description below) Upon hearing from you, this valuable little book of private information for men will be sent by return mail in plain sealed envelope. Please call or write today.

There is a new and marvelous method for restoring lost manly strength, for renewing the vigor of youth, which every man should know of, a self-restorer which operates without the use of drugs or medicines, a new way to treat yourself and by which it is my firm belief any man anywhere who is content to lead a decent life, free from excesses and dissipations may be almost certain to restore his full manly vigor snd strength, if he but makes the little effort that is called for in connection with the use of a little vitalizing appliance which I have patented and am now distributing all over the world.



HEALTH IS HAPPINESS

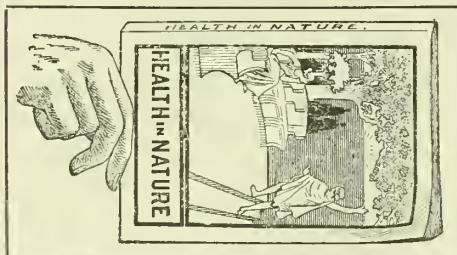
Please remember that a man is not one day older than he actually feels, and therefore no matter what your age, if you are young or elderly, married or single, large or small, if I can show you reader, how you can yourself actually add to your system, nerves and blood the very nerve force or vital vigor which may have been drained away, and which is necessary to make you strong, vigorous, and capable again, then I have shown you the real secret of perpetual youth, and how you can again be filled with vitality and again be just as powerful in your influence and just as thoroughly manly in your capacity as the biggest, fullest blooded, most successul fellow of your acquaintance.

I call my vitalizer a HEALTH BELT because it is worn around your body in the position of an ordinary belt. It sends a great, soft, strength-giving supply of a force I call vitality into your body nights while you sleep. I would like you to call or to write and get my free book, that you may know the whole wonderful account of what my HEALTH BELT is doing for others who were looking for a safe and sure means to restore vigorous health and to rid the body of pains, aches and weaknesses.

Note—My HEALTH BELT, with special attachment, is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

86-PAGE BOOK SENT FREE

My 86- page illustrated booklet (pocket size) was compiled by me to answer fully and correctly those questions which are asked privately by any man needing new strength and who seeks personal advice pertaining to the ailments and weaknesses he wishes to overcome. The book, fully illustrated, with photo reproductions contains much that a single or married man should know. It also fully describes my HEALTH BELT and tells how you may secure one to use in your own case, should you decide you want to use one. Remember the book is sent absolutely free, in plain, sealed envelope. Why not write for a copy today?



DR. M. F. SANDEN,
140 Yonge St., Toronto, Ont.

Dear Sirs—Please forward me your book as advertised, free.

NAME.....

ADDRESS .....

How to Clean an Automobile.

Cleanliness is half the health," said a famous doctor, and the same can be extended in the fullest sense to the autamobile. Dirt and dust are not only unsightly but also work mischief to the paint and varnish. Aside from the bady the machinery sufferes greatly by dirt adhering mainly to the joints of bearings, gradually entering into them, causing them to come loose and finally reducing the whole machine to a rattling assembly.

The use of soaps and other compounds do, in most cases, the greatest harm, while much rubbing with

Are Your Bowels Ever Constipated

If you wish to be well you must keep the bowels open. Any irregularity of the bowels is always dangerous, and should be attended to at once, for if the bowels cease to work properly, all the other organs become deranged.

Milburn's Laxa-Liver Pills work on the bowels gently and naturally, and will cure the worst cases of Constipation.

Mrs. A. Cumming, Manchester, Ont., writes:—"I have been troubled with Constipation for over five years, and I feel it my duty to let you know that your Milburn's Laxa-Liver Pills have cured me. I only used three vials and I can faithfully say that they have saved me from a large doctor bill."

Milburn's Laxa-Liver Pills are a wonderful remedy for all diseases or disorders of the liver or bowels.

Price, 25 cents per vial, or 5 vials for $1.00, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

the sponge or brush and too little water do the rest of the destroying work. To succeed with the greatest satisfaction I would recommend the following, as the result of long experience in the coach and automobile business. It is being done with great success in all the fine garages in the large cities.

The machinery part of an automobile needs inspection and oiling before every trip, or better, inspection and cleaning should be done at the same time after each trip, this being the best way to make sure of the perfect running order of the car. Gasoline mixed with kerosene applied freely with a common paint brush on the parts loosens and removes greasy dirt that adheres to motor or gear base. A wipe with a bunch of waste cotton or a clean rag finishes it nicely.

WASH OFF MUD CAREFULLY.

It is absolutely necessary, in order to preserve the good looks of the car, that the mud and dirt be thoroughly washed off. After having cleaned the top and upholstery from dust with a leather or wool duster and beaten out the carpets, we remove all the impurities in the body with a dusting brush and begin with the washing operations.

Washing should be done in a shady place to avoid the quick drying of the water on the car that would cause spots in the varnish. A pail, a good soft sponge and a medium-sized chamois skin are needed. Water should be absolutely clean and cold and applied freely over the car to moisten and loosen the dirt.

After moistening the body and gear in this manner proceed with the sponge and pass it over the body easily without pressing on it, dipping and rinsing the sponge frequently in a pail of clear, fresh water. Having washed one side of the body, wipe the water off with the moistened chamois skin without applying any pressure, and we will have a nice clean surface equal to a new finish without any scratches from dust or dirt. The other half of the body is done in the same way.

USE PLENTY OF WATER.

Then wash the running gear, a very important part to be cleaned thoroughly, as the many narrow corners and small parts are places where the dirt accumulates and shows, particularly on dark cars. The wheels and gear are moistened thoroughly to loosen all the dirt, then we pass the sponge over using plenty of water without pressing or rubbing hard. The moistened chamois skin is used for wiping off the remaining water.

It is advisable to have a sponge and chamois skin for use on the gear only on account of the coarser dirt or grease that one is liable to catch when washing around the wheels and greasy springs. The car should be jacked up to allow the wheels to turn at will.

Grease or oil spots on the body panels and fenders should be removed as soon as possible. Use a soft rag upon which pour a few drops of linseed oil,, rubbing easily over the spot without pressing and wipe it off with a dry cloth. On the running gear we may proceed in the same manner, or we may use instead of linseed oil a mixture of raw oil and kerosene.

The top, if made of mohair, should only be brushed, and if of imitatian leather or the like should be washed and wiped dry. If through much use and washing an imitation leather becomes unsightly, the new aspect can be restored by applying with a rag some linseed oil and wiping it dry with another clean rag. The same can be done with the upholstery and cushions of the car, if of leather or imitation. Great care is to be taken to wipe off all the superfluous oil.—P. Wagner.

Water—the Best of all Drinks.

Water drinkers are seldom sick, and the longest lived, other things being equal. Men everywhere are trying to find how to keep well, and live happily and long, yet continually miss the essentials. Few persons realize that artificial drinks fail to meet the daily wants of the system.

A very large number are actually falling behind in health for the lack of pure drinking water to cool and refresh the over-heated blood. Water is frequently repudiated by men and women who seem wholly unmindful that it has advantages for them beyond price.

More than three-fourths of the contents of the body is water, nine-tenths of the brain and nervous system, likewise the blood and other fluids. The daily supply of water required by the averaged sized man or woman varies according to age, work and climate.

There are no known counter-indications to the use of water as a drink. The quantity of water may be whatever the stomach and intestines are able to absorb. It is safe to say that pure water may be drunk at any hour and with hardly any limitations, save such as might be plain to any one.

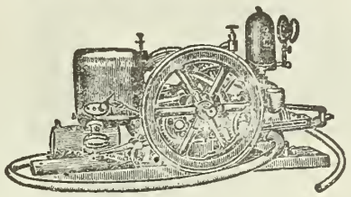
Strange as it may seem, few are aware that clean, pure water has virtues superior to medicated liquids as a life-saving agency. Mineral waters, either natural or artificial, fail to satisfy and are less wholesome than water which holds in solution no foreign element.—From Physical Culture

Foreign Bodies in the Ear.

Except in the case of an insect getting into the ear nothing can or should be done without a doctor. In the case of an insect, to drown it, fill the ear with oil or water, after which it will generally float out. Syringing of the ear afterwards is often necessary. The entrance of insect into the ear may cause intense agony.

"Were all medicines as meritorious as Chamberlain's Colic, Cholera and Diarrhoea Remedy the world would be much better off and the percentage of suffering greatly decreased." Writes Lindsay Scott, of Temple, Ind. For sale by all druggists.

Protect your trees and garden



A Fairbanks-Morse Spraying Outfit offers you the most effective and economical means of destroying insects and of curing and preventing plant and tree diseases.

The spraying machine illustrated here can be used for practically every spray use on any farm, and will quickly pay for itself in improved crops.

You can buy a Fairbanks-Morse or Gould Spraying Pump, from a brass hand pump costing a few dollars up to an engine-operated, truck-mounted outfit of the highest efficiency.

Send for free catalogue of spraying outfits and appliances. It contains much valuable information, tells you what to spray, what chemical compounds to use, how to prepare them, when to do the spraying, etc. We are the largest Canadian dealers in farm engines, scales, and mechanical goods of every kind.

Address Dept 44

The Canadian Fairbanks • Morse Co., Limited

Montreal Toronto Winnipeg Calgary
Quebec Ottawa Regina Edmonton
St. John Hamilton Saskatoon Vancouver
Ft. William Victoria

Canada's Departmental House for Mechanical Goods

Dominion Ammunition

TRADE MARK *Metallics and Shot Shells*

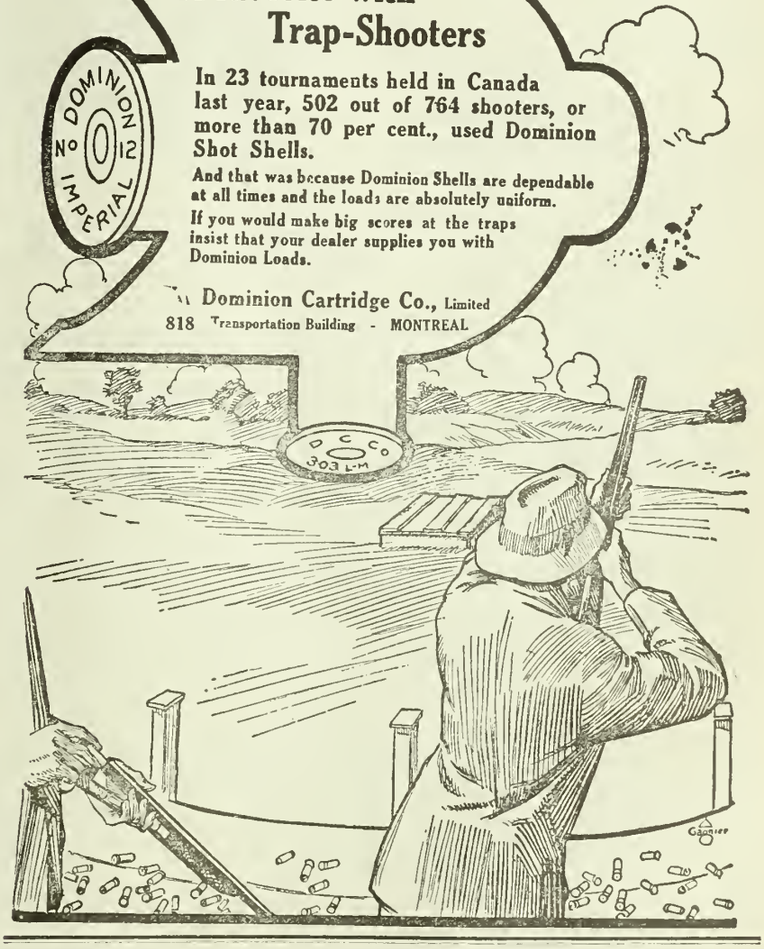
A favorite with Trap-Shooters

In 23 tournaments held in Canada last year, 502 out of 764 shooters, or more than 70 per cent., used Dominion Shot Shells.

And that was because Dominion Shells are dependable at all times and the loads are absolutely uniform.

If you would make big scores at the traps insist that your dealer supplies you with Dominion Loads.

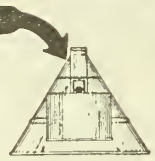
Dominion Cartridge Co., Limited
818 Transportation Building - MONTREAL



It Pays to Advertise in the Maritime Farmer.

We Give You $2.50 For Coupon Below

This illustration shows the sectional view and interior mechanism of the



MINUTE VACUUM WASHER

Delivered to you for $1.00

The Minute Vacuum Washer was patented in 1914. It is therefore the latest and best on the market, and yet is being used to-day by over 75,000 satisfied housewives in all parts of Canada. It has *all* the *good qualities* of *all the other washers* and *none* of their faults. It will absolutely do all we claim for it or we will return every cent of your money. We have *confidence* in the washer or else we could not make this offer:

WE GUARANTEE IT

Some reasons why *you* should buy the **Minute Vacuum Washer.**

It is the strongest on the market *because* —it has quadruple turned seams.

Triple rolled and pressed rim.

Costs $1.00 delivered

It is the lightest machine made.

Will do the fastest work.

Does its work in *three* minutes.

A child can operate it.

Your clothes last twice as long.

Your hands do not touch the water. It forces the boiling suds through the clothes, NOT the clothes through the suds

We make this offer for

A SHORT TIME ONLY,

in order to secure agents. **$1.00** is practically *cost price*, and if we were not absolutely sure that we had the best washer made, we could not afford to make this offer. We count on repeat sales for our profit.

SEND TO-DAY—DON'T WAIT!!!

If this publication was not absolutely sure that the **Minute Vacuum Washer** would do all we claim, they would not accept our advertising, and you know it.

YOU ARE PROTECTED

$2.50 Coupon

Send us this coupon and $1.00 cash and we will send you the **Famous Minute Vacuum Washer,** directions for use, and agent's offer, by parcel post, all charges paid, to any address. **Remember** this offer holds good for a short time only. We will send the washer to you no matter were you live by mail for one dollar.

MINUTE VACUUM WASHER CO.
Dept. 54 Franklin Building, Toronto, Ont.

AGENTS WANTED

in every town and village, to take orders for the best Made-to-Measure Clothing in Canada.

Samples ready for shipment July 20th. Magnificent Samples.

CROWN TAILORING CO.
Dept. E. TORONTO

rtise in the Maritime Farmer

The Mother's Mission.

At a recent meeting of charity and social purity associations in Omaha, at which the national authorities on such matters were present, it was a little woman from a small Nebraska town who made the speech that attracted the most attention. Mrs. G. W. Crossland, of Wayne, Neb,, was an interested listener to all that was said. Finally she arose and spoke. "I am not connected with any reformatory institutions," she said, "but I am a member of the greatest institution in this commonwealth, and that is the home." Her talk was not prepared and polished, like most of those preceding her. It came from the depths of her heart. Below it is reproduced in part:

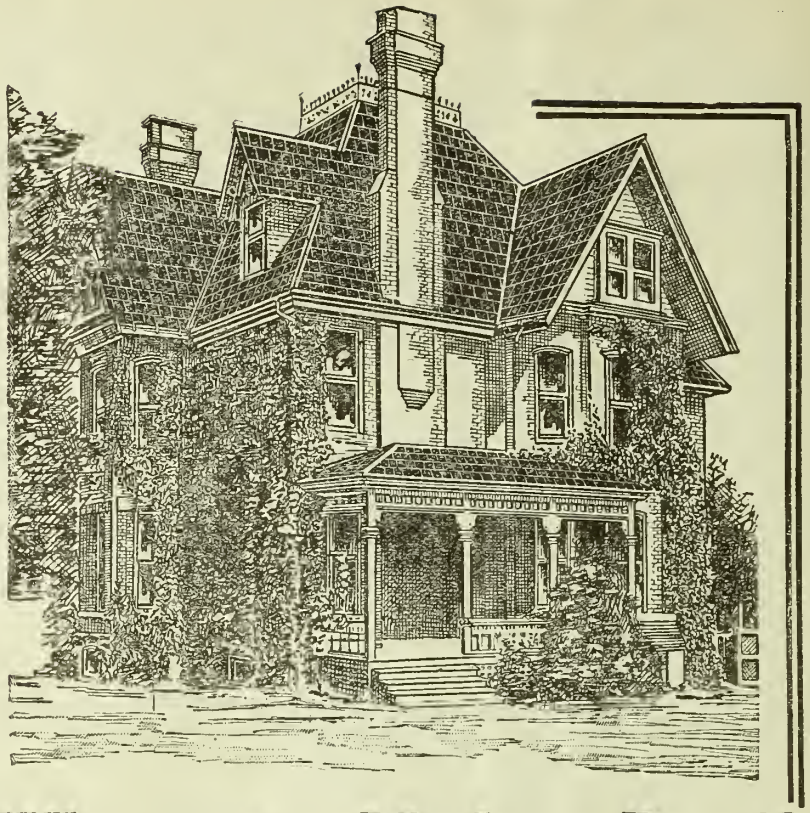
It seems to me as though the American woman of today has in some way lost the vision of the duty and responsibility of the home. The mothers think their life work is wash ing dishes and cooking and feeding the body—I want to say to them that their life work is doing much more vital and important things. Their life work is the training of their children, for they have them from the time of their birth all the way through, and if they fail in their mission of bringing up these children in the nuture and the rights that belong to them, somebody else must do the work, and that is where our trouble comes today.

I would just like to say to the mothers here today that you have got a man's job, and it is a 'mighty big one at that. I am not one of these elderly ladies who has no boys to raise, I have four boys. I know what I am talking about. My boys have heard all the sacred things of life in their home. They did not have to go out on the street and hear whether the stork brings the baby or anything about that. I want to tell you mothers that it is your duty to tell them about this. What right have you to send a young man out into the world who does not know anything about the pitfalls and the dangers and the sins and the temptations of life? You are not doing your whole duty when you do it.

I am a woman, I am a mother and I consider that I have a mission in this world, and it is not the mission of scrubbing floors and washing dishes. Those are little side issues. My Mission in this world is to give to the world men who will leave a footprint on the sands of time that will help lighten the load of humanity, that the world may be made a little better for my life that has been lived in the tiny corner of a home. Our Commonwealth is only measured by the happy, prosperous homes.

It takes a great deal of charity to handle a boy, but they are manly fellows, and it is something worth all your effort. Sometimes you have to put your arm around the young man and look him straight in the eye when down in your heart you feel like hitting him a good smack.

Sometimes I feel like opening my home to the mothers and daughters and just talking along this line and seeing if I cannot help them get a vision of the wonderful work God has entrusted to the mother's care." You say, "Well, I cannot do that way." Why can't you? The effort is not great enough. You don't make a good enough effort, because I tell you Almight God will help the mother in every case. If you have a big problem, if your boy wants to keep company with a young lady who s not right, talk to him and persuade him in some way, if you can, not to do so. And when you have done all you can just say to God: "Here, I am in trouble, help me out of this difficulty." The conscientious Christian mother has a hope that some people know nothing about, and when the boy goes astray put your arms around him and make h m believe that he is worth more than anything else in the world. I make a great plea for the American motner to wake up and find that she has a mission far beyond the washing of dishes and scrubbing of floors—the mission of the home. Take a girl and say, "Mother is your friend, even if you do the worst thing in the world," and also tell the girl that mother always has been and always will be a friend that "sticketh closer" than anyone else. This is the mother that has been awakened to her mission.



Why not a Modern Roof?

The old wooden shingle has to go the way of all other unsatisfactory building material and is being rapidly replaced by the twentieth century *Brantford Asphalt Shingle.*

Everyone knows how the old-fashioned wood shingle was high in price but low in quality, would warp, curl, get loose, split and rot. The

Brantford Asphalt Shingle

will do none of these things. It is practically imperishable, although costing little more than wood shingles. Again, you save on the laying, as *Brantford Asphalt Shingles* are easier to lay and can be put on not only quicker, but more effectively. Quite fireproof too, therefore reduce insurance rates. Never need repainting, because colors are permanent and fadeless. *Brantford Asphalt Shingles* undoubtedly make a house warmer and more attractive in appearance. They are finished with a coating of crushed natural rock, in green, red and black. Artistic effects can be obtained without extra cost by using shingles of different colors. Write for free booklet to-day.

'Roof Leak'

For protecting tin, iron, wood or felt roofs. Makes any leak watertight and old roofs as good as new. Write for booklet.

Brantford Roofing Co., Limited
Brantford Canada
Warehouses: Toronto Montreal Winnipeg 76

Lightning Rods.

A bulletin advocating the use of lighting rods on buildings has just been issued by the Ontario Department of Agriculture. Prof. W. H. Day, of the staff of the Ontario Agricultural College, is the author of after a series of investigations covering thirteen years, that lightning this bulletin, and he demonstrates rods are the protection that science claims them to be. In Ontar o in 1912 the efficiency of rods was 94½ per cent. from the reports of insurance companies Prof. Day found that in every 200 farm buildings insured, 42 were rodded, which is 21 per cent, but out of every 200 farm buildings struck by lightning only 3 were rodded. In this connection Prof. Day observes "We should have expected 42 if the rods were no good."

Lightning rods in Iowa are recorded as showing an efficiency of 98.7 per sent, and inspected rods in Michigan show an efficiency of 99.9 per cent. Records in Iowa show that for the eight years 1905—1912 the average number of insurance companies carrying risks on rodded buildings was 55. The highest number of companies reporting in any one year was 68 and the lowest 46. The total lightning claims paid by all these companies for the whole eight years on rodded buildings was only $4,-464.30—an average of $10.15 per company per year. On unrodded buildings they paid lightning claims amounting to the large sum of $341,-065.32, which is an average of $75.15 per company per year, and the number of unrodded buildings was the same as the rodded ones.

In Michigan where a company insures only rodded buildings which have been inspected a risk of $55,-172,075 was carried during four years and damage aims arising from lightning during that time totalled only $32.

These and other proofs submitted by Prof. Day are practical demonstrations of the scientific fact that lightning rods properly installed are a protection. In using directions for the proper rodding of buildings the reader is reminded that lightning is electricity. Prof. Day asserts that rods should be in metallic connection with the building and that new insulators should be used. This method of attachment is directly opposite to that adopted when lightning rods were first used.

The following are the names of hides and skins used for tanning purposes:—When a calf is born prematurely, or is skinned whilst very young, the skin is called a "bobby." A skin from 7 to 16 lbs. is called a calf-skin, from 16 to 30 lbs. is called a kip, from 30 to 40 lbs. is called a light leather, from 40 to 70 lbs. is called medium leather, from 70 to 100 lbs. is called heavy leather. The skin from a sheep (with wool removed) is called a "pelt."

In marketing, hides should be classified as follows:—Butcher's hides, yearling hides, ordinary butcher's and farm hides, horse hides, bull hides, calfskins. These may, for sale, be still classified as under:—

Extra stout—60 lbs. and upwards in weight. Heavy weights, picked lots. Heavy weights, good condition. Ordinary.

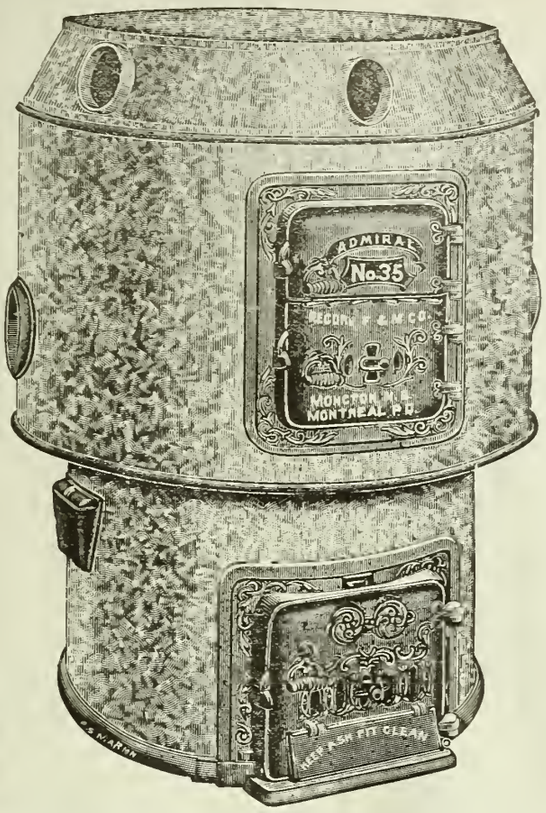
Medium weights—50 lbs. to 60 lbs. in weight. Good condition. Fair condition.

Light to medium weights—40 lbs. to 50 lbs. in weight. Good condition. Fair condition.

Light weights—32 lbs. to 40 lbs. in weight. Good condition. Ordinary condition.

Inferior and faulty.

Dry hides. Bests. Seconds.



Good For Wood and Hard or Soft Coal

This is the furnace you require for all round heating purposes and now is the time to instal it.

Flues do not clog up with soot. Large double feed doors specially adapted for wood.

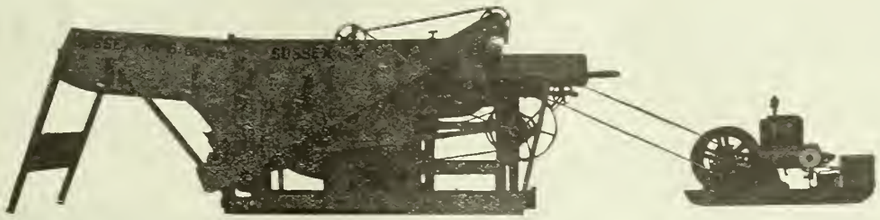
Record Admiral Furnace

The ADMIRAL is a leader in hot air furnaces, designed to give the greatest amount of heat out of fuel with the least amount of labor or attention.

Write for catalogue of furnaces, heaters, stoves.

Record Foundry & Machine Co.,
Moncton, N. B.

Thoughts of Threshing Suggest at Once the "Little Giant"



The "Little Giant" hardly needs an introduction in the Maritime Provinces. It's the Thresher that every operator aspires to own.

Reasons: They are almost numberless. Economy in power, easy operation, great strength in construction, excellence of material used, are but a few of the qualities which make selling the "Little Giant" such an easy matter. More "Little Giants" are used in the Maritime Provinces than of all other makes combined.

The "Little Giant" two horse thresher can be operated with engines of from two to four horse power. The four horse power requires from four to seven horse power. All threshers are supplied with or without Tailings Elevator, Straw Carrier and Bagger and Trucks.

We guarantee every Machine. Fully tested before leaving Erecting Department.

We also manufacture Hay Presses, Tread Powers, Wood Cutters, Grain Grinders, Feed Boilers, Root Pulpers, etc.

Free Catalog for the asking.

The Sussex Manufacturing Co., Limited, Sussex, N. B.

The N. S. A. C. was looking particularly nice when we visited there last week. Each and every department shows that the men in charge are right on the job. It would pay the farmers of the Maritime Provinces to visit the College Farm as often as possible during the growing season and see how the work is done. The excavations for the foundations of the new Science building is nearing completion and next term will find the College more efficient than ever. Will you be there?

Three Rules for Measuring Hay.

There are two main considerations in all rules for measuring hay, says G. E. Morton, Colorado Agricultural College, first, the method of measuring to arrive at the actual number of cubic feet of hay in the stack, and, second, the number of cubic feet required to furnish a ton of hay.

With regard to the latter, practice is fairly uniform, 512 cubic feet (8 x 8 x 8 being generally accepted as a ton of alfalfa hay in stacks settled about sixty days. Native hay packs more closely, and 422 cubic feet ($7\frac{1}{2}$x$7\frac{1}{2}$x$7\frac{1}{2}$) is a fair amount to allow for a ton. Hay bought in the spring of the year has settled considerably, so that a less number of cubic feet are given for a ton—about 450 cubic feet for alfalfa hay.

The methods of measuring to arrive at the cubic contents of the stack, of course, take the three dimensions, length, width and height, into consideration; but as it is difficuly in actual practice to get the height, the over-measurement is taken instead. The over-measurement is the distance from the ground on one side of the stack, over the top to the ground on the other side.

In taking these measurements it is very necessary to get average measurements, and sometimes where the stacks are very irregular in shape all four sides must be measured in order to arrive at the average width and average length.

Rule 1.—Rule for measuring, small, broad stacks of hay)—One-fourth of over multiplied by the width, then multiplied by the length and divided by 512 (or other divisor agreed upon).

Note: In actual practice I have found this rule very satisfactory for both buyer and seller when the hay is stacked in small, squat stacks, such as are put up by the overshot stacker, and containing from 5 to 20 tons each. Rule 1 is better for the buyer than either rule 2 or 3 when the width of the stack is from one-third to one-half of the over-measur' ment.

Rule 2.—(A Colorado rule for measuring hay)—Subtract the width from the over. Multiply one-half of the result by the width. Multiply the proddct by the length. Divide this product by 512 or other number of cubic feet agreed upon.

Note—Rules 1 and 2 give the same result when the width of the stack equals one-half of the over. When the width exceeds one-half of the over, rule 2 is the best for the buyer.

Rule 3.—(Frequently called government rule for measuring hay)—Add the width and the over-measurements. Divide this by four. Multiply the quotient by itself. Multiply th s product by the length and divide the result by 512 or other number of cubic feet agreed upon.

In other words the rule may be stated as follows: Width plus over, divided by four and squared; then multiplied by length and divided by 512.

Note—This rule is satisfactory for large, tall stacks (25 to 45 tons), because such stacks usually are bigher for their width than smaller stacks. thus giving a greater over-measurement.

Rules 2 and 3 give the same result when the width equals one-third of the over, so that when the width exceeds one-third of the over, rule 2 is better for the buyer.

With ordinary small Colorado stacks, rule 3 favors the seller.

General instructions·

A. Where stacks are from one-third to one-half as wide as they are over, use rule 1.

B. Where stacks have a width more than one-half the over measurement, use rule 2.

C. Where stacks have a width less than one-third the over-measurement, use rule 3.

D. Allow 560 cubic feet to a ton of alfalfa hay settled 30 days, 540 on 60 day hay, 512 on 90 day hay, 48 on hay settled 120 days, 450 on hay bought in late winter.

Tells of Damage That Lightning Can Accomplish.

The famous French astronomer, M. Flammarion, in an article in the New York Herald, gives interesting statistics relative to the loss of life by lightning in different countries, touching upon some of the dangers to be avoided during the storm.

Official statistics, he writes prove that in France there are on an average every year 117 persons killed by this fire from heaven; that is, three dead in every million of the inhabitants! Other countries share with us more or less in this respect. Some pay a greater tribute to Jupiter Tonans, but there are others also which have less to their credit. If we consider the number of persons mortally injured by l ghtning relative to a given number of population, for example a million of human beings, we find that this number, which is three for France, as we have just mentioned, only amounts to 0.36 for England (that is an average of 12.4 victims yearly), two for Belgium and three for Sweden. It rises to 4.4 for Prussia, ten for the United States, Syria and Carinthia and 16 for Hungary.

In 1900 the estimate was seven or eight hundred annually killed by the atmosphereic fluid io the country of Franklin out of 76,000 000 inhabitants. In that year, 1900, alone there were 713. That is an average relatively much greater than the French average and can be explained up to a certain point by the frequence and violence of tbe storms on the other side of the ocean and by the great number of workers out of doors. especially in the fields about the time of the harvests, which is also that when the lightning flash occasions its most disastrous ravages. Perhaps there figures also an element of imprudence on the part of the victims.

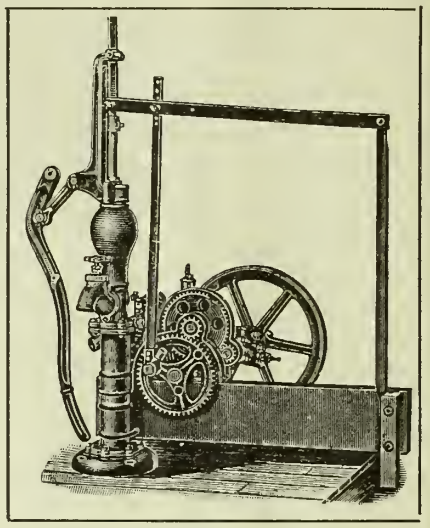
DANGEROUS SHELTERB.

We cannot too often insist on the danger there is, when the storm rumbles, of sheltering one's self under trees, besides haystacks or in currents of air. This has been seen quite recently. In the department of the Doubs last June three workmen busy in the quarries took refuge under a spruce tree during a storm. One of them was killed, the two others were hurled to a distance of several yards. Such tragic accidents occur frequently, in spite of the warnings addressed to those concerned. On the same day, at Maintre, near Chatellerault, in the department of the Vienne, two men at the side of a haystack were thrown over by lightning. The younger man, although not wounded, lost the use of speech.

If certain precautians were observed the damage by the malignant fluid would be less notable. One cannot insist too strongly on shunning exposure out of doors to the loudly proclaimed threats of the thunder, especially in large meadows, across fields or in the woods. While in the case of earthquake it is wise to go out from houses, on the other hand it is better to remain within doors in time of storm. It is also prudent to close carefully doors and windows and not to be near the walls and chimneys. Schercik recommends a feather bed as an excellent refuge

THIS LITTLE ENGINE

is designed to take the place of the man at the pump and anyone who watches this outfit pump water for ten minutes will never again be willing to work the pumphandle. The operating cost is very small and a splendid feature is that this engine can be easily connected to "any old pump." The ladies often start it to pump a single pail of water. They rest while it works.



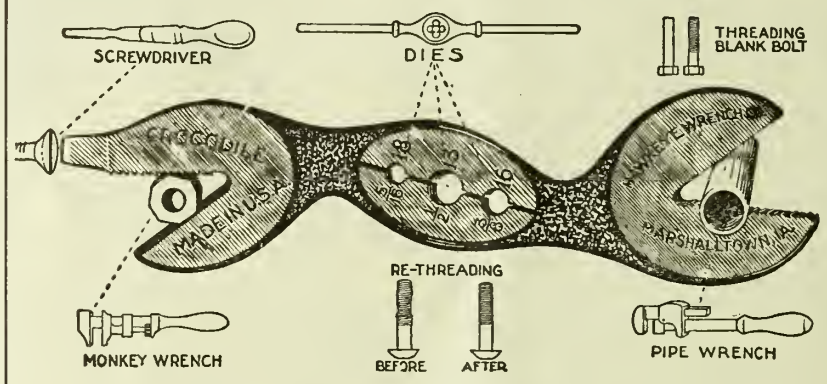
The Outfit Complete as shown sells for $70.00. The engine alone $55.00. Immediate shipment from stock.

The A. R. Williams Machinery Co., of St. John, N. B., Limited,

15 Dock St. ST. JOHN, N. B. 34 Nelson St.

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wrench, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

WAS ALWAYS TROUBLED WITH BOILS AND PIMPLES

Could Not Get Rid of Them Until He Used

BURDOCK BLOOD BITTERS

All Blood or Skin Diseases are caused by bad blood, and to get it pure, and keep it pure you must remove every trace of the impure and morbid matter from the system by a blood cleansing medicine such as Burdock Blood Bitters.

Mr. A. F. Hopp, Kipling, Sask., writes:—"I was always bothered with Boils, and could not get rid of them, and also had all kinds of Pimples on my face, from early in the Spring till late in the Fall. One of my friends told me about your medicine, and that I had to get something to purify my blood. I got two bottles of your Burdock Blood Bitters, and in a short time I was cured, and I have never been troubled with Boils or Pimples since."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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Mailed direct to your home anywhere in the Maritime Provinces at these wonderfully low prices :

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500	1 lb.	Printed	1.40
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1,000	1 lb.	Plain	1.20
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500	2 lb.	Printed	1.95
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You can easily make up an order for Plain Parchment with your neighbor. Buying 1,500 one pound sheets you have your wants filled at 59 cents per ream. These prices go into force on and after February 10th, 1914. All goods shipped parcel post.

The Maritime Farmer
SUSSEX, N. B.

I bought a horse with a supposedly incurable ringbone for $30. Cured him with $1.00 worth of MINARD'S LINIMENT and sold him for $85.00. Profit on Liniment, $54.00.

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Hotel Keeper, St. Phillippe, Que.

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ONE CENT is all it will cost you to write us a postal, and catalogue and full information will be sent to you **Free Postpaid** by return mail. **Do not wait.** Write it **now.**

HYSLOP BROTHERS, Limited
Dept. R TORONTO, Canada

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he has used Chamberlain's Colic, Cholera and Diarrhoea Remedy in his family for fourteen years, and that he has found it to be an excellent remedy, and takes pleasure in recommending it. For sale by all druggists.

Turley advises travellers on railroads to keep far from the locomotive and to place themselves preferably near the middle of the train. In general, cellars are considered as safe shelters, perhaps not without reason.

DANGER IN FORMING GROUPS.

It is sometimes asserted that silk dresses or wet garments are good protectors against strokes of lightning, and this belief seems justified to a certain point by several authentic observations. In like manner it has been voiced that crowds, groups of persons gathered together during the storm, and the neighboring of animals, especially if they are collected in herds, appear to attract the electric bolts. The number of animals killed by one lightning flash is sometimes very great. Again this year, about the middle of June, in the department of the Landes, lightning set fire to a sheepfold and killed 140 of them. It has caused much greater damage. There is cited the case of a stroke of lightning falling on a herd of 1,800 sheep, throwing 1,200 to the ground and killing 556 in the twinkling of an eye. It should be added that these unfortunate quadrupeds were unluckily penned along an enclosure of iron wire.

Ah! What shall we say of the danger of metalic objects, of firearms and of clock bells and so forth, which seem so many allurements for lightning.

Really it is very difficult and rash to pretend to trace laws for the atmospheric electric fluid. I have under my eyes at this moment a rather recent case which shows us the lightning killing two agriculturists, one a shepherd, from whom it completely removed the cloth, and his dog, all sheltered under the belfry of a church to which it set fire, at the same time breaking the bell in two symmetrical pieces. So do we see it often, tragic or fantastic, sometimes even facetious, as when it rendered mute a loquacious woman, and restored speech to one who was dumb.

Small Water Power Plant.

On Stephen Loines' place near Lake George is a seven-acre pond about 150 feet above the lake. The outlet was a small brook. In the summer of 1902 Mr. Loines built a dam across the outlet, raising the pond about 2 feet. He ran a galvanized pipe line from the dam down the hill side and along the brook. It is four inches in diameter for a short distance, then reduced to 3 inches, and finally to 2 inches, and is about 1200 feet long in all, with a fall of about 110 feet. A 24-inch water wheel of the impulse type is installed in a small power house to which the pipe line runs. The waterwheel develops about three-horse power, and is belted to an electric generator.

According to D. R. Cooper of the New York state water supply commission, this plant is utiltized for sawing firewood to supply the superintendent's cottage and the other buildings during the winter.

A countershaft was erected on the wall in the power house, a building 7 feet by 10 feet in a plan and about 8 feet high. The shaft has three counter pulleys, by means of which the speed of the water wheel may be doubled or trebled. For sawing firewood a leather belt placed on one of the pulleys and run through a small aperture in the side of the power house to the driving pulley on a circular saw, which stands on a small porch at one end of the building.

The superintendent states that by operating the saw continuously for eight hours it would be possible to saw 12 cords of wood, which he estimates to be sufficient to supply his cottage, and such other of the buildings as need wood, for the entire winter. This illustrates very aptly the large amount of work that a small power is capable of doing in a short time.—N. E. Homestead.

Build Concrete Crib Floors and Supports

THEY keep the rats, squirrels and other rodents from carrying away your profits. Millions of dollars are lost to farmers each year through the ravages of rodents in cribs and granaries. Part of this loss is paid by every farmer whose crib floor isn't built of concrete.

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Write for this free book "What the Farmer can do with Concrete." It tells all about the uses of concrete and will help every farmer to have better buildings and save money.

Farmer's Information Bureau

Canada Cement Company Limited
713 Herald Building, Montreal

When to Inbreed.

In reply to a question from a subscriber the question of inbreeding is one that can be determined only after a careful study of the individuals involved. It must be remembered that weaknesses and undesirable characteristics are intensified by inbreeding the same as good qualities and desirable characteristics. If the individuals involved are of the proper type and have no particular weaknesses, the intensification of which will result seriously, then it is possible to establish desirable characteristics more easily and much more quickly by inbreeding than by any other method, and this method has been followed successfdlly in some instances. This method has proved advisable only in the hands of intelligent breeders who have given the subject very careful study.

Turnip Growing.

Wm. M. McAdam, Killams' Mills, N. B., who is a successful turnip grower writes: My best success with turnips was a plot of land that had been under a potato crop for two seasons. I harrowed the plot in the fall after the potatoes were dug. In the spring I broadcasted stable manure and plowed and harrowed until it was thoroughly incorporated with the soil. I then furrowed drills and sowed Kangaroo seed. I thinned the plants to one foot apart and cultivated them once. There is no insect pests.

Good Roads Require Permanent Culverts of Concrete.

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Sussex Concrete Products Plant, - Sussex, N. B

Milk Production.

An address by Prof. John M. Trueman, Professor of Agriculture and Farm Superintendent, Nova Scotia Agricultural College, Truro, N. S.

In discussing the production of milk I will begin with the herd. We cannot produce milk economically without good cows. How can we get them? Not by going out into the market and buying them. A few may be obtained in that way. but the price of good cows is too high and the supply too limited to make the method a complete success. If you spend three thousand dollars for 30 cows you woll not be doing any more for the improvement of the herd as far as breeding operations are concerned than if you buy one good bull. In other words, herd improvement can be brought about just as surely and just as quickly by the use of good males as by the use of females. Of course, more rapid progress could be made if both males and females of the right character could be bought at the start. Most farmers are not in a position to invest large sums of money in females, but every farmer keeping any number of cows can afford to buy the best bull obtainable.

Perhaps you will say that money is not available to buy even the good bull. That excuse cannot be accepted. If enough money is invested to maintain ten to fifteen cows or more, then it is imperative that a good male be secured. It would be better to borrow the money and put one or two hundred dollars into a bull containing the blood of high producing dams than to go on using the average bull. Average blood on both sides means average offspring. A superior bull and average cows mean an impprovement with every generation, and before long it will be a superior bull and superior cows.

Having decided to buy a good bull, how can we select him. First, he must be a good individual, showing the typical form of his breed and a vigorous constitution. Second, he must come from a dam that was a good producer. Third, he should be sired by a bull that came from a good producing dam. It is not enough to have the two parents of the bull you are going to buy just what is wanted. Only 50 per cent. of the bulls characteristics on the average, come from his immediate parents. The remaining 50 per cent. come from the ancesters more remote; 25 percent. from four grandparents, 12½ per cent. from eight great-grand-parents, and so on. The only way to be sure of getting good blood in the offspring, therefore, is to ascertain for o certainty that all his ancestors at least the first three generations back were all good. What we want is strong, producing blood in all the ancestors. When we have this there is no pull out or down in the ancestry, all of the animals transmit the same qualities and the offspring must be right.

It has been difficut in past years to secure this kind of stock because records have not been kept and no one could tell us what the ancestry was able to do. Of late years the establishment of the "Record of Performance" tests is giving us much needed information. It is the duty of breeders of pure bred cattle to test their cows, and offer for sale males that will be certain to improve rapidly the live stock in the country. Those breeders should weed out these pure breds as carefully as the wide-awake farmers weed out their grades. It costs money to discard highly bred and expensive animals and the farmer must therefore be prepared to pay a good price for good stock.

The next most important point in producing a good herd is feeding. Vigor and size are two vital factors in dairy cattle. All improved strains, families and breeds of live stock have been developed by the liberal use of food. Keep the calves growing from the time they are dropped. Produce big growthy heifers. Breed them so they will drop their calves at from twenty-seven to thirty-three months old, according to their size. After they are milking, feed them liberally. Nothing is more valuable for the purpose of developing a heifer than a liberal supply of nutritious feed. Instead of seeking for the heifer that can be kept on the least feed try to find the one that will use the largest amount. Other things being equal, the cow that eats the most will make the largest net profit. Given two cows of equal dairy quality, the one larger than the other, the large cow will eat the most, give the most milk and return the most net profit.

Each cow should be fed according to her individual capacity. This necessitates weighing the milk daily from each cow, and keeping track of the feed eaten.

To illustrate the importance of feeding each cow according to her capacity the following illustration is instructive.

In 1909 I had charge of a herd of 25 cows. Two of these cows were Jerseys, No. 25 and No. 30. They both looked like good cows and it would be hard to tell from inspection which was the better cow. That year No. 25 gave 2752 lbs. of milk and ate $87.16 worth of feed. No. 30 gave 6371 lbs. of milk and ate $90.37 worth of feed. Here was an indication that No. 30 was the best feeder and the best producer. The next year. 1910, both cows were fed according to the amount of milk they would produce. Neither one was kept short of feed,,, neither was the feed wasted, one pound of grain, besides roughage, for each three pounds of the milk given. No. 25 gave 6321 pounds of milk and ate $84.41 worth of feed. No. 30, however, kept on eating feed and prolucing milk until she produced 9341 pounds of milk and ate $97.91 worth of feed. She ate half a ton more grain than No. 25 and surely she was an expensive cow to keep. Right here is where the interest lies in this illustration. Although an expensive cow to feed, she produced practically 3000 pounds of milk more than No. 25, and gave a return above cost of $75.89 against $34.14 from the other cow. This illustration could be duplicated again and again from the records of the cow that I have handled during the past 6 years.

In order therefore, to be successful in handling dairy cattle one would put especial emphasis upon the necessity of securing a first-class bull from a superior milking family, upon feeding the calves liberally in order to promote as much growth and vigor as possibble and upon close attention to the individual cow in order that she may receive al the food that she is capable of using to good advantage.

Mr. W. R. Barss moved a vote of thanks and welcome back to Nova Scotia be tendered Prof. Trueman.

A Suggestion to Sheep Raisers

WHY NOT? Save all your dead lambs, by breeding our Karakule-Arabi rams to your flock, you can get $4.00 to $8.00 for their skins. The skin of every dead lamb will bring you a profit where now they are a total loss. If from any cause the ewe dies after 4 months of pregnancy, the Unborn **Baby Lamb Skins often bring from $9 to $15.**

We have a number of Half-Blood, Three-Quarter Blood and Full Blood Karakule-Arabi Rams and Ewes ready for delivery on short notice.

THE CANADIAN KARAKULI-ARABI SHEEP AND FUR CO., LTD.,

Apohaqui, - New Brunswick.

Agricultural Conference.

A meeting, which means considerable to the agricultural development of New Brunswick was held at Agricultural Office, at Fredericton, July 23rd. The occasion was a conference between the Minister of the Department and the members of the staff.

Those present were.—Honorable J. A. Murray, Minister; J. B. Daggett, Secretary; A. G. Turney, Horticulturist; R. P. Gorham, 1st Assistant Horticulturist; D. B. Flewelling, 2nd Assistant Horticulturist; Robt. Newton, Director of Agricultural Schools; C. W. McDougall, Dairy Supt.; Seth Jones, Poultry Supt.; J. E. DeGrace, Supt. of. Agr. Societies; H. B. Durost, Instructor in Fertilizers and Bee-Keeping; W. D. Ford, Animal Husbandman; B. T. Reed, Field Husbandman; H. N. Flewelling of Dairy Division of the Federal Dept. of Agriculture.

On account of the Summer Science School being in session, at Woodstock, R. P. Steeves, Director of Elementary Agricultural Education was unablbe to be present.

The purpose of the Conference was to obtain the experience of the various members of the staff, that together they might compare notes and devise ways and means for continued devel-

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MRS. M. SUMMERS, Box 309, WINDSOR, ONTARIO

opment and enlargement of the work of the Department.

The session opened at 10 o'clock a. m., and, with only a brief intervale for dinner, continued until evening.

Each division was taken up and was thoroughly discussed.

The staff were of one mind, that the most important thing to New Brunswick today is th proper care of its soil, the conservation of its natural resources and the restoring of the run-out and unbalanced farms.

Under the direction of Mr. Newton, a vigorous policy of education will be instituted, through the schools at Woodstock and Sussex next year, also in farm to farm visitation, with the object in view of bringing about a better cultivation of the soil and a proper rotation of crops.

The drainage work of the Department will be continued and definite steps will be taken to enlarge upon it.

The live stock interests were carefully discussed. It was decided to make the Department a sort of clearing house for live stock. It is proposed to ask all breeders to list with the government whatever animals they have for sale and buyers will be asked to apply to the Department for advice and information as to where purebred stock can be found.

The present policy of the Department will be continued, of giving a bonus upon purebred cattle imported by the Agricultural Societies. A small importation will also be made. It was decided to establish three demonstration flocks of sheep in the province. In the next issue of the Maritime Farmer we hope to make a definite anouncement as to the policy of the Department in this connection. The question of testing cows for performance was gone into at considerable length. The work being done by Mr. Flewelling at Sussex was highly commended. A start has been made in Carleton County and this work will be pushed forward with vigor. The matter of co-operation in this work with the Federal Department will be a matter of consideration later between the two departments.

The question of commercial fertilizer eame in for much discussion. Mr. H. B. Durost is making a number of experiments in the potato districts with home-mixed fertilizer. It was decided to commend the work of the Agricultural Socities United in this connection to the various agricultural societies.

Bee-keeping and poultry raising were also discussed. Some special work will be done next season in the distribution of purebred eggs among the schools. Mr. Jones was instructed to give the question of fattening stations careful consideration and to advise at a later date. The usual encouragement will be given to the bee-keeprs. With the advanced work in horticulture, it is felt that bee-keeping is very important to the province.

The Horticultural Division under the direction of Mr. Turney, was discussed and the present policy of aid to the horticulturists of the province will be continued and enlarged upon.

So satisfactory was this conference that it has been decided to hold several during the year. The conference adjourned to meet again in October.

What it Cost to Fill a Silo in the Corn Bely.

The cost of filling the silo will vary a great deal upon different farms. The cost of a ton of ensilage depends upon the methods employed in growing the corn and filling the silo. If a man is a good farmer and raises a large crop of corn and the cost is based on the cost of producing an acre of corn, it will be seen that this ensilage will cost a great deal less per ton than the ensilage produ*ed by his neighbor who uses a small amount of corn. Last season I saw one farm where 5 acres filled a 100-ton silo, while on another farm not more than three miles distant it took 25 acres to fill a 100-ton silo. The market value of the land was about the same. It can thus be seen that estimates on the cost of production will vary greatly, probably due more to the amount of ensilage produced per acre than to the cost of filling, although that is no small itemThe variation in estimates will not be so great if it is figured on the basis of the bushels of corn produced per acre, at market value. Professor Mumford, of Illinois, states that corn yielding 42 bushels per acre and worth 35c on the market will give ensilage at $2.-75 per ton. In my own instance, last year where it took 18 acres to fill two silos of 110 tons each and with an estimate of the corn at 60 bushels per acre, at 35c per bushel, and with the labor of filling extending oper a period of four days, and costing $110, and allowing the stalks to be worth $1 per acre on the market, the cost of ensilage at $2.-49 per Haecker of Nebraska Solution bases his estimate upon the cost of growing the corn and statest that ensilage can be grown and put in the silo at $1.95 per ton. Mr. Richardson, of Scott County, Iowa, said it cost him far growing and filling, $1.15 per ton. I believe careful farmers can easily produce ensilage at $2.50 per ton, figuring the cost of the market value of the corn if it had been harvested and sold, and at this rate it is one of the cheapest and best foods in connection with clover hay that can be produced.—C. W. Pugsley.

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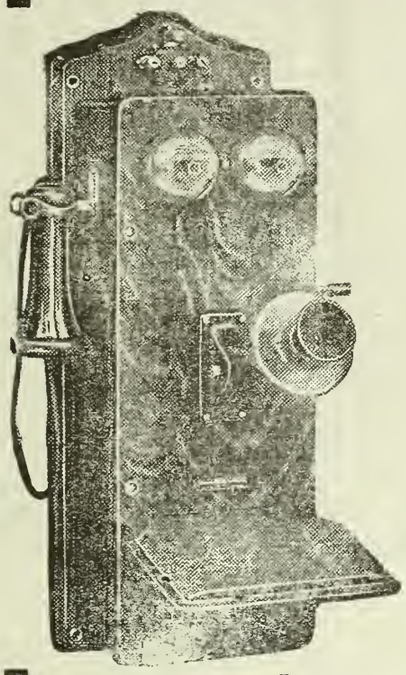

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We are the largest Independent Telephone Manufacturers in Canada. We carry complete stocks of guaranteed telephone materials, and can make shipment within 24 hours after receipt of order. Our telephones are superior to others in design, material and workmanship. Send for Free Trial so that you can test and compare with others.

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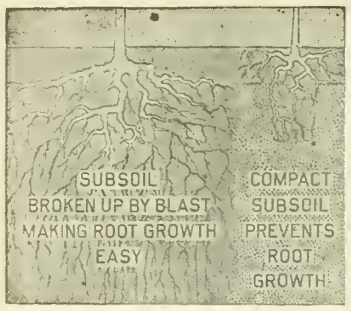

The above cut clearly demonstrates the advantages to be gained by planting trees in holes exploded with C. X. L STUMPING POWDER. The ground is so pulverized that the roots can immediately expand in search of nourishment.

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SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price $3.00 per acre.

Duties—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent on certain conditions.

A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price $3.00 per acre. Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land. Live stock may be substituted for cultivation under certain conditions.

W. W. COREY, C. M. G.
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—64388.

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Social Conditions of Farm Life.

(Continued from page 753.)

of conservation, we would become so broad-minded that we would be surprised with ourselves and surely believe that our lots had been cast in pleasant places. A short poem illustrates present conditions most admirably:

Our Neighbors.

We had some, offish neighbors once
who moved in down the road,
We thought they was about the proudest folks we ever knowed.
And when we'd meet them now and then, we'd hold our heads up high
So that they couldn't snub us, even if they were to try
It realy made me nervous so I just braced up one day,
And reckoned that I'd show them my manners anyway,
So Sunday 'stead of turning round and looking at the view,
I looked at them and said "hallo!"
And they said "How-de-do."
It wasn't the cold and formal greeting that you've often heard,
They smiled and said it heartily like they meant it every word
'Tis serious to reflect on what we miss along life's way,
By just not being social and good humored day by day.
And nine times out of ten you'll find this rule works right and true,
Just tel the world hallo, and 'twill answer How-de-do.

In conclusion I would mention factors that are detrimental to social life anywhere, and of these factors, the principal are jealousy, envy and narrow-mindedness.

Of the first, let us take conditions right in this association. Here we have a very young man as president, are we not very sure that there are older men jealous of such proceedings, and I also know that there are men just past the prime of life, who are jealous of the influence this honorable young man creates in public associations. To my mind, it is much better for the young man or woman to be very enthusiastic, even if in more than one department of the farm branches than to have no enthusiasm for anything except to trade horses and smoke tobacco.

Just a little aside from jealousy, comes envy. It is just as detrimental to sociability as one can imagine, and is often the source of slander and dis reputable gossip.

How much more courage there is put forth in the much abused prizering contests of hard blows, wrestling or running, than there is in the low, slanderous, behind your back, lies of the envious, narrow-minded persons, who can be so sociable to your face, but most abusive when opportunity offers. Yea, open rebuke is surely better than secret love.

Open sociability is what is needed to make farm life more agreeable.—Wm. H. Moore, before Farmers' and Dairymen's Association.

Owing to the abundance of grass-seed, ophthalmia is prevalent in sheep and cattle just now, and as a remedy the following lotion is recommended:—1 oz. of laudanum, 5 drams sul. zinc to 1½ pints of clear water, or 1 dr. cocaine to 5 drams sul. zinc, to the same amount of water. The best method of getting the lot on into the eye is per medium of a sewing machine oil can. The can with a cork over the nozzle. A small wooden forceps, for extracting grass-seeds from the eye is also useful to carry.

Bessie's Mother—Bessie, did you let that Mr. Smuggle have a kiss?

Bessie—Yes, mamma, I did! He saih it would be a good-by kiss and I was just dead anxious to have him go!

TAYLOR'S
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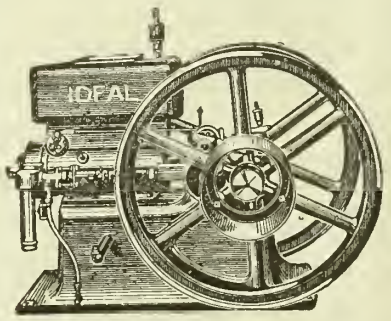

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Volume 19. SUSSEX, NEW BRUNSWICK, AUGUST 25, 1914. Number 22.

"IF ENGLAND DIES, YOU DIE!!"

How Can Farmers Best Help England in Her Death Grip With Europe?

FOOD FOR THOUGHT

"IF England dies, you die." Such was the grave warning uttered in the city of St. John a few nights ago by Sir Rider Haggard, noted author and member of the Dominion's Royal Commission.

Sir Rider has been led to doubt if Canadians fully realized that England is in the death grip of Europe and whether we are sufficiently impressed with the view that this is our war, quite as much as it is England's.

The Maritime Farmer, in its front page article, has been priviliged to deal in the past with purely agricultural matters... Unfortunately, Germany and Austria have decreed that the plowshare shall be forged into the sword and England has been drawn into a struggle greater than the world has yet witnessed.

It is estimated that twenty millions of men will be engaged in this horrible and uncivilized butchery. Already English dead have been accounted for and thousands of brave fellows will follow where the memories of Waterloo and their fathers lead. We in Canada have contributed our first installment to the grim tragedy and the signs point to other thousands who will also go to the front.

Then, what of the morrow? "If England dies, you die," are words which will inspire every Canadian to do the best that in him lies. Already the fields of Europe are being tilled by women. What will the next few months mean to Canada and particularly to the Maritime Provinces. Will the women be working our farms in two, four, six, twelve months hence? These are questions which must be soberly asked and thoughtfully answered.

But suppose Canada does not reach the state where her men MUST go to the front. We still can be of inestimable assistance to the Motherland. Every acre of soil that is possible to prepare should be broken for next season's crop. England is in her death grips. To Canada she must look for food and our duty is to see that the men at the front are fed. There lies our goal.—It is not to be a question this year of best prices in best markets. We are to feed the men in the trenches. Lord Kitchiner is credited with the statement that the war will last eighteen months. These long, dreary months will be pregnant with anxiety, the loss of dear ones, the dislocation of all lines of business and the many other sides of HELL that accompanies war.

The FARMERS of the MARITIME PROVINCES should see to it that the approaching few months are put to the very best use in providing for the LARGEST CROP THAT IT IS POSSIBLE TO RAISE. There will be need for every pound of foodstuff. Canada's offer of five million bags of flour to England was received with joy and thankfulness. It is not the luxuries of life that will be in demand during the months to come but the commonest neces sities. They are produced on the farm. In addition to the food supply for men, the demand for fodder for the tens of thousands of horses at the front will be enormous. Europe, deluged in blood, cannot produce it, and Canada must help. That is why every possible effort should be put forth at the earliest possible date to fit the fields for the crops of next year. No living man knows what the coming months may have in store for us. The summer of 1915 may find the fields of the Maritime Provinces tilled by women and men too old to bear arms. The very produce, which the farmers are urged to make ready for, may be their next year's rations on some distant battle field.

"If England dies, you die," are words which should burn their way into every man's understanding. They are whips whose scourge should awaken us to the realities of the present day situation. Without England, WHAT?.. Where will our home, our liberties, our freedom and everything we hold dear, be? And England is in the death grips. So says one of the foremost men in the British Empire. Already the women of the Tight Little Island have bid Godspeed to husbands, sons, brothers and have, like Spartan mothers of old, exhorted them to be true to British traditions, to that history of wonderful deeds and devotion to duty, which has made England what England is, our protector, our champion.

This is not mere froth. It is the Gospel of to-day that should be preached in every section of Canada. The question on every man's lips should be, what can I do for the Empire. The Maritime Farmer has given the answer in part to every agriculturist in the Maritime Provinces. See to it, then, that, realizing "If England dies, you die," you will give your best effort to sustain a cause, than which there has been none worthier in all history.

The present situation is unique in the history of the Dominion of Canada. It is the first time since confederation that we have been confronted by an enemy whose sole interest is that of conquest. Germany desires not only that her supremacy be indisputable in Europe but she would extend her colonies and thus secure to herself a haven for the teeming millions who have long since overcrowded the Fatherland. Canada, the brightest jewel in the British colonial crown, would doubtless be the first concern of Germany. "Shall we submit?" "Are we but slaves?" There can be only negative answers to both questions. To Canada, in her death grip, England looks for subsistance. We know what the response will be Every acre of available land should be prepared this year for next year's crop. We can at least feed the men at the front, always remembering that grave warning, "If England dies, you die."

The New Brunswick Agricultural Societies United

By A. R. Wetmore, Clifton, Kings County, N. B.

Secretary New Brunswick Agricultural Societies United
Secretary Kingston Agricultural Society No. 23

Editor The Maritime Farmer:—

During the past weeks many inquiries have been received regarding the work which has been done by the "Kingston Agricultural Society" and the work which is to be done by the New Brunswick Agricultural Societies United" in the buying of unmixed fertilizers. The purpose of this article is to place clearly before the farmers of New Brunswick an outline of this work.

It has been felt for years that the farmers of New Brunswick have been paying far too much of their chemical fertilizers. The matter has been discussed at meetings of the Farmers and Dairymen's Association and elsewhere. It has seemed to those who have been spending considerable thought along this line, that co-operation in the buying of fertilizing ingredients and the mixing of those ingredients on the farms by the farmers themselves would be the solution to this perplexing problem.

The buying of ingredients and home mixing is not a new thing and is no experiment. The Agricutural Society at Kingston has been doing this work for its members for twenty-five years or more, and the success which they have attained has proved beyond a doubt that this method is the most economical and most satisfactory way of buying and using commercial fertilizers.

While the Kingston Society has been buying the ingredients and distributing those materials to its members at cost and at a price that enabled the members to use a mixture which gave much better results at less cost than would be possible in using ready mixed goods, yet that cost of ingredients was not as low as was desirable. In the past this Society has been buying the materials from local firms. During the last two years it has been found that the buying of those ingredients from the manufacturers or importers direct would materially decrease the cost.

As an instance of the saving to farmers brought about by the use of "home mixed" fertilizers we have the following: The highest grade complete fertilizer "ready mixed" has been costing the farmers from $38.00 to $42.00 according to the amount purchased. Previous to 1913 the Kingston Society was able to sell to its members ingredients, which when combined gave a fertilizer as good or even better than the ready mixed goods, at a cost of $32.60 per ton.

During 1913, owing to the fact that eight other societies placed their orders with the Kingston Society, which society financed and purchased the materials, the prices obtained were practically the same as prices quoted to the fertilizer companies. As a result, materials to make the highest grade fertilizer were sold to the members of the Kingston Society at $26.00 per ton for cash. To the other societies this price varied with the cost of handling and transportation. To those who had been using ready mixed goods this meant an average saving of about $15.00 per ton or about 37 per cent. The Kingston Society handled during 1913 about $10,000 worth of fertilizer and at the price given, compared with the cost of ready mixed goods, this means a saving to the formers of about $3,700.

This goes to show the benefit of co-operation; thus making possible the buying of ingredients in large quantities, of buying from the manufacturing syndicates direct and of buying for cash.

From the work of the Kingston Society in the past and the good results shown by its co-operation with other societies during the last year came the idea of a Central organization which would render possible the buying of fertilizing ingredients for all agricultural societies in New Brunswick, and thus give the members of any of those societies the adantage of buying a much superior article and at much less cost.

It is hardly necessary to give the various steps taken and the many discussions which took place before a satisfactory plan was arrived at. Suffice it to say that a number of interested men spent considerable time and thought upon the matter. It was finally decided to form a central organization which would be known as the New Brunswick Agricultural Societies United." This organization was incorporated during the last session of the Legislature at Fredericton under a special act as follows:

BILL.

"An Act to Incorporate the New Brunswick Agricultural Societies United."

Whereas, the Agricultural Societies which have been incorporated under the provisions of the Agricultural Act and amending Acts, find it necessary to have a central organization to purchase to advantage fertilizing ingredients in quantities and for other purposes in connection with carrying on of the work of the said Agricultural Societies;

And Whereas, it has been deemed expedient to incorporate a Society for the purpose of purchasing and distributing to such Agricultural Societies the necessary ingredients to make chemical fertilizers and in other ways to assist the farming industry:

Be it therefore enacted by the Lieutenant-Governor and Legislative Assembly, as follows:

1. Austin R. Wetmare, Burrill N. Shaw, Malcolm A. MacLeod, Robert G. Murray, Hastings N. Flewelling and Henry F. Puddington, their associates, successors and assigns, be and they are hereby created and declared to be a body politic and corporate by the name of The New Brunswick Agricultural Societies United, and by that name shall have all the general powers and privileges, made incident to a corporation by Act of Assembly in this Province or otherwise for the purposes hereinafter mentioned, being in this Act hereafter referred to as The Association. The six persons named in this section shall be provisional directors of the association, and Robert G. Murray and Austin R. Wetmore shall be provisional President and Secretary respectively, and they shall hold office until the first annual meeting of the association. The directors shall have full power and authority to manage the affairs of the association subject to the by-laws and regulations, which may from time to time be made, and shall act until the first annual meeting hereinafter mentioned at which time, and each year thereafter, directors shall be elected.

2. The Association is hereby authorized and impowered to purchase fertilizing ingredients and to arrange for the importation, warehousing and distributing of the same to any Agricultural Society, and when authorized by Order-in-Council of the Lieutenant-Governor-in-Council to undertake and carry on any other work or business which may be of advantage to the farming industry.

3. The Association is hereby authorized to obtain credit from any incorporated Bank within the Province, and to pledge and hypothecate such of its property as may be necessary or incident to financing such business.

4. The Association shall file with the Department of Agriculture on or before the first day of January in each year, an account in detail of its receipts and expenditures during the year ending the first day of November preceding, in such form as the Minister of Agriculture shall prescribe."

In order to get the best results it is necessary for each and every Agricultural Society interested to be in a position to purchase through the Central Organization on a cash basis. Regarding the financing of orders for cash I will give our experience of last year and the method will be practically the same in doing business with the Central Organization. The following arrangements were made with banking institutions at St. John, Sussex, Hampton and other places, and these arrangements may be made at any banking institution in the Province that is convenient for any society.

Form of Guaranttee to a Bank.

To the Bank of .....

In Consideration of The Bank of.... .....making advances to ..... either by the discount of negotiable securities, consisting of Bills of Exchange or Promissory Notes, or by overdrafts, or otherwise, from time to time as the said Bank may think fit, ... hereby guarantee payment in full of such negotiable securities or overdrafts, or other indebtedness. This is a continuing guarantee, intended to cover any number of transactions, and .....agree that the said Bank may deal or compound with any of the parties to the said negotiable securities and take from and give up to them again security of any kind in their discretion, and that the doctrines of law or equity in favor of a surety shall not apply hereto. It is also agreed that the guarantee shall be liable for the ultimate balance remaining after all moneys obtainable from other sources shall have been applied in reduction of the amount which shall be owing from .... to the said Bank, but the said Bank shall not be bound to exhaust all such recourse against other parties previous to making demands upon.....for payment, the intention being that the Bank of .....shall have the right to demand and enforce this guarantee in whole or in part from the guarantor whenever the principal debtor, or other party or parties concerned, fail to discharge any obligation they have entered into.

.....
.....
.....

As witness.....hand at.....this .....day of .....

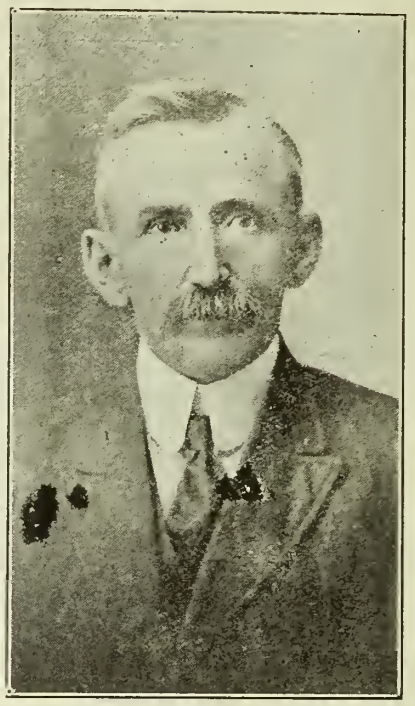
Witness:

This guarantee was filled in and signed by the President, Secretary-Treasurer and Board of Directors of each Society and deposited at the bank. When it became necessary to make payment for fertiizer the Secretary gave the bank the Agricultural Society's note, signed by the President, Secretary-Treasurer and the chairman of the finance committee, for the required amount.

In doing business with the Central Organization the Agricultural Society, in addition to the foregoing arrangement, will furnish the Central Organization with a certificate from the bank with which they are doing their business, showing that the necessary amount is there to their credit and subject to sight draft of the Central Organization on the arrival of their goods

The "New Brunswick Agricultural Societies United" is now a live organization and ready to do business with and for any Agricultural Society in New Brunswick. We would like it clearly understood that the purpose of

(Continued on page 810)



MR. A. R. WETMORE.

The home mixing of fertilizers in the Maritme Provinces has been systematically carried on for a longer period of years by the farmers of the Kingston Agricultural Society than by any other organized body of farmers in these parts. While Secretary of the above mentioned Society, Mr. O. W. Wetmore of Clifton, carried on the good work and on retiring from office his successor, Mr. A. R. Wetmore, the writer of the accompanying article. aud whose photo appears for the first time in the columns of The Maritime Farmer continued the good work and went a step farther in extending the helping hand to other Agricultural Societies in the provinces. His fertile mind originated the N. B. Agricultural Societies United scheme which has been endorsed so heartily by Hon. Jas. A. Murray, Minister of Agriculture and his colleagues in the Legislature of New Brunswick. Mr. Wetmore has given a great deal of his time to the successful organization of the N. B. Agricultural Societies United. As Provisional Secretary, he has worked hard and gratituitously and when the business assumes larger proportions and requires a guiding hand, who will devote all his time to the development of the work we know of no one who is more conversant with the work in all its phase s than is Mr. Wetmore and the N. B. Agricultural Societies United should see to it that he gets the appointment. He will certainly be the right man in the right place. He's a live wire.

Another gentleman who has given considerable of time and attention to the question of cheaper fertilizers for the farmers of New Brunswick is R. G. Murray, L. L. B., of St. John, who owns a nice farm at Loch Lomond, St. John County. Mr. Murray, for many years, has been an able advocate for the farmers. His scheme as originally propounded was for the government to take entire charge of the fertilizer question. He, however, heartily concurs with Mr. Wetmore's plan and as President of the New Brunswick Agricultural Society United, he is using his whole-souled efforts in furthering the cause of which he has been such an ardent advocate.

Milk Fever and How to Combat It

While in Berwick last week we heard Mr. L. D. Robinson of that town relate how he had saved the life of a valuable cow for a farmer in Lunenburg County by applying the air treatment by means of an atomizer, the only available instrument. His success with this case goes to show what may sometimes be accomplished in urgent cases by farmers in the absence of a veterinary by using good judgment and being resourceful.

The following article on milk fever, prepared by Mr. Irving M. Avery, manager of Auray Farms, Sparta, N. J. for the Holstein-Friesian Register will be interesting to our readers:—

"Not so many years ago the words "milk fever" and "total loss," were almost synonymous. This disease was pretty generally considered fatal, and the unfortunate dairyman took his loss resignedly and said "Kismet," or perhaps other words to the same effect. Today, however, the situation is changed and authorities claim that less than 5 per cent, or one out of every twenty only, of the animals afflicted die of this disease; and so this dread malady, which in the past has been the cause of heavy losss in the dairy herds of this and other countries, because of the wonderful efficacy of the so-caller sterilized air treatment, and the increasing familiarity of dairymen with its every day use, no longer has the power of inspiring the fear in the mind of the average man that it once had.

"In a few simple words which every one may understand I will try to call attention to this comparatively new treatment and to consider the disease, its causes and effects. It is almost impossible in a short article of this kind to write anything of any particular interest to experienced breeders or anything that has not already been said, in some form or other, many times before. That is not the idea, but, rather, to outline my own experience as clearly and simply as possible for the benefit of the layman.

"The average man reads about "parturient paresis," or a "plethora of blood plasma containing an excessive percentage of glycogen" and he is apt to become discouraged, and no wonder. Well, all this is only a very high-sounding and rather difficultt way of saying just plain "milk fever", although to be exact, the disease is not really a fever at all, but anemia or lack of sufficient blood in the brain, brought on (or as a tchnical treatise might say, "superinduced") at the time of parturition, or calving, by an excess of blood in the udder with a consequent uneven distribution throughout the circulatory system, resulting in anemia of the brain and a form of apoplexy.

"The theory of successful treatment is so simple as to be readily understood by every dairyman once a clear comprehensive and thorough explanation has been made him. It consists merely of the proper inflation and distention of the udder by pumping in sterilized atmospheric air, thus relieveing congestion and bringing about a return of normal distribution of blood throughout the body. So far as I know, no animals other than milch cows are subject to this disease and it usually attacks only those in the best condition and the heaviest milkers. It rarely makes its appearance until the animal is at her best, usually from about five to seven years of age, and cows having had one attack are predisposed to the disease and more liable to affliction than in the case of those that have never suffered from it. Heifers with first or second calves are almost entirely free from it and I believe it is rarely manifested in cows over eight or nine years old whose milk yield has commenced to decrease somewhat.

"The symptoms are luckily very well defined and easy to reeognize once one becomes thoroughly familiar with them The animal is constipated, because of the approaching paralysis of the bowels; is extremely restless; looks wild and staring from the eyes and, after a time, begins to "weave" and stamp. Later on she will stagger and show signs of increasing weakness, especially in the hind parts, until finally she collapses completely, invariably dropping upon the right side, with the head drawn around to the left and almost touching the hind quarter on that side. Later still, paralysis by this time having become general and if the attack is severe and far enough advanced, she appears to all intents and purposes unconscious and may be handled at will. The eyes are observed to be fixed and glassy, and the body apparently insensible to any pain. The limbs may be placed in any position desired without the least resistance and the victim appears to the inexperienced very close to death. Right here it would be advisable to send an S. O. S. call for a veterinarian unless you are familiar with the handling of such cows and have at hand the necessary appliances and help, in which event expert assistance may hardly be necessary.

"If a competent veterinarian is summoned the proceeding on his arrival will be somewhat as follows: He will first of all order plenty of clean bedding and have th animal propped up from underneath the right side by means of bags filled with straw or some such contrivance, so that she may rest as nearly as possible upon the breastbone, the object being to take the weight off the right lung and thus relieve her respiratory action. Next he will carefully wash the udder with antiseptic soap placing a clean bag or cloth underneath to keep the parts clean; after which he will thoroughly disinfect the parts with a 4 or 5 per cent. solution of lysol, pure carbolic or other equally good agent.

"The apparatus used for injecting air into the udder is very simple and consists of a rubber bulb to be compressed in the hand, next to which comes an air chamber or reservoir of about the same size to regulate the pressure, and then comes several feet of ordinary rubber pipe or tubing halfway of the length of which is included a small metal cylinder filled with carbolized cotton through which the air passes, and on the extreme end of the rubber pipe is fixed an ordinary milking tube. The utmost care should be taken during the operation to avoid all danger of infection and thus prevent inflammation of the udder or caked bag, with the possible loss of one or more quarters later on. This point cannot be too emphatically emphasized. The milk tube should be boiled for at least ten minutes before use and then placed in a jar containing a 5 per cnt. solution of the antiseptic solution at hand and allowed to remain for several minutes prior to insertion in the teat. Be certain to avoid drawing any milk whatever from the udder before commencing operations. In fact, at Auray Farms, we make it a rule never at any time, whether sick or well, to milk a cow completely out until at least twenty-four hours after she has dropped her calf. The resulting complete distention of the udder has somewhat the same effect as the artificial distention by the air treatment and acts as an excellent preventive against an attack of milk fever. In the event of a very large and badly swollen udder a little milk may be taken if the cow seems all right, but only enough to afford relief and she is never milked out clean the first day.

"When all the parts, including the operator's hands and the apparatus itself, have been thoroughly sterilized, carefully introduce the milk tube into one of the teats and commence pumping air into the quarter, meantime tapping and gently massaging the part, so that the remotest recesses may become distended. When all the air possible has been injected, withdraw the tube gently, being careful to pinch the teat immediately upon ite removal so as to prevent any outflow of air. Then carefully tie the teat about in the middle with a piece of hard tape—tie it hard so that no air can leak out. Again disinfect the milk tube by immersion in the antiseptic solution and repeat the operation upon the remaining quarters.

"One good feature and so far as I know the only one, of the disease is this: The afflicted animal either succumbs or completely recovers in a comparatively short time—you get quick action and are not kept long in suspense and there is no tedious convalescence. I have known cases where a cow survived a severe attack and was up and eating hay, apparently none the worse, a few hours after treatment. A great deal depends upon promptness in recognizing symptoms and combating the disease. For this reason every progressive farmer should equip himself with a milk fever outfit and thoroughly familiarize himself with the theory and practical method of treatment, because it is frequently impossible to secure the services of a competent vetetrinarian at short notice. Outfits may be obtained at a very small cost, some, I believe, as low as $3.00 from any reliable dairy supply house.

"Sometimes in aggravated cases if the air becomes absorbed and no improvement is apparent after three or four hours a second treatment identical with the first is necessary. Generally, however, if the case has not been neglected too long before beginning she will get on her feet in a few hours after treatment. The tapes should not be removed at once but allowed to remain in position for an hour or so after recovery, after which time the contracting muscles at the extremity of the teats will retain the balance of the injected air. When satisfied that the patient has completely recovered, and under no circumstances until after about twenty-four hours have elapsed, gradual milking may commence. It will probably be several days before satisfactory results are obtained in the way of milk production—however, it is surprising how quickly cows will sometimes recover under careful handling and come up to their proper milk flow I have had a cow survive a bad case of milk fever and later go on A R. O. test, afterward making a satisfactory record, less than three weeks from the time of being attacked.

"It is somewhat difficult for a progressive dairyman to wholly avoid milk fever. If a cow is to do her level best at the pail she must certainly be well fed up to the time of calving and in tip top condition. This, of course, increases the chances of contracting the disease. On the other hand, by taking away all feed and practically starving a cow for a considerable period before parturition, the chances of milk fever are materially lessened, but at the expense of decreased efficiency, because the milk flow will undoubtedly be somewhat reduced in consequnce and it becomes doubtful if the animal, for that year at least, will ever attain her maximum production.

"In the case of purebred animals intended for A. R. O. work and expected to go on test it is of prime importance that they be in the very best possible physical condition in order to do their utmost in the matter of performance. Therefore, at Auray Farms, we feel justified in running all chances of milk fever for the sake of attaining maximum production; but at the same time we take every precaution to prevent, and, if necessary, to combat the disease. A week before calving all grain feeds except bran are discontinued and the latter is given in the form of a mash, with plenty of salt added. In addition, cooling laxative feeds are given —green grass, green oats of green corn if possible, but if not available we feed a liberal supply of cut beets or beet pulp, etc., and alfalfa or clover hay ad libitum. Also once daily a handful of oil meal, which we consider very beneficial. Immediately after parturition we give a drench of 1½ lbs. Epsom salts with 1 oz. of creolin added which restores the normal movement of the bowels and prevents any fermentation. No feed is offered for six to eight hours and then only a bran mash with oats and salt. The following day, if the animal seems all right, we commence with about two pounds at a feeding of a mixture of equal parts of bran, dried brewery grains and crushed oats; and alter on as she begins to come to her full flow we substitute our regular ration, a little at a time, until finally, after about a week, she is taking 10 to 12 pounds daily of her regular feed mixture. If she continues to increase as she should the feed is gradually increased to corerspond—generally about one pound of feed for every four pounds of milk. We have never lost a cow because of milk fever, although we have had several severe cases. We do not particularly fear it, but we certainly do not welcome it.

"In conclusion, I might add a few "dont's" which I trust will meet the approval of all those experienced in handling milk fever cases and which, I hope, may be of some use to those as yet unfamiliar with the disease and its treatment:

Don't forget to act promptly if you intend handling the cow yourself—send for help p. d. q. in case you do not. Delays are dangerous.

2. Don't attempt to milk out the cow in order to relieve her—it will help a great deal if you resist the temtation.

3. Don't try to give a drench after the cow is down—the muscles of the throat are by then probably paralyzed and some of the dose may enter the lungs with disastrous results.

4. Don't neglect a single precaution in the way of cleanliness and disinfection—a lost quarter or a spoiled udder is too great a price to pay for a little carelessness.

5. Don't think of leaving the calf with the dam after the first symptoms appear—both are better off away from each other anyway.

6. Don't be in a hurry to commence milking and feeding after the cow recovers—give nature a little opportunity to help you.

7. Don't forget to remember next year that she had milk fever the year before—"an ounce of prevention," etc.

BUTTER PARCHMENT PRICES ADVANCE.

The European war has resulted in a sharp advance in the price of butter parchment. Nearly the entire world's supply of parchment comes from Germany and as that country is cut off from the commercial world, it is impossible to get supplies from that source. Germans have for years controlled the pure parchment trade. It is true that a large quantity of good parchment is now produced in the United Sttaes but the quotations there are so much in advance of the German prices that it will cost at least 35 per cent. additional to get the stock landed in Canada. The Maritime Farmer has already been forced to pay considerably more for new stock and the dealers report that the next raise in price will be even sharper. In keeping with the changed conditions, the price to customers has also been raised. The change is not in keeping with the advance promised by leading paper houses. At present, the outlook is that pure vegetable parchment will be a very scarce article within a short time, should the war be prolonged.

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—"I saw" your adv. in the MARITIME FARMER.

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R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

AUGUST 25, 1914.

DATES OF ISSUE

September 15-29
October 13-27

MEANS TO AN END.

Farmers have earned and are entitled to all the educational assistance that the Goverment, private county and various private agencies offer them. Men can be helped to help themselves. This is the sound theory upon which all social action is based. To receive assistance involves a personal response on the part of the assisted which increases their capacity to think and act. Help is a hindrance only when it accentuates the helplessness of the helped. There are men who would never do a lick of work for something to eat if somebody would feed them for asking. There are others who never do more work than is necessary. Real assistance, flavored with unselfish, human kindness, is one of the finest expressions of good-will; it is a power for good. But in business matters it is not often observed; in this realm service is organized and subsidized. A group of men pay an expert to advise and help them in their professional affairs. This has been done in agriculture. It is a business arangement that should be judged altogether upon its tangible returns. That is why a county agent who can show his employers that he puts money in their pockets each year can hold his job.

All the aids now accessible to farmers are concerned largely with the business of farming; it is the prime purpose of the educational movements under way in agriculture to increase the profits from land and labor. So far as possible farming is going to be practiced as a business. Pecuniary success will be more than it ever has been before its aim and end—unless as men grow their vision widens. In quiet moments, when strong men confess things to themselves, they remember that old question beginning with the words, "For what shall it profit a man," and then another kind of success looms large.

MACHINERY ON THE FARM.

Every farm justifies a careful and judicious investment in farm machinery. Like all other lints of business, there must be observed a carelul and considerate outlay in the running expenses of the farm. There are many farm implements, tools and machinery that every farm needs and must have in order that the work be carried on economically and profitably. More than the real need is a waste and counts against the conserving of economical farm industry.

While it is poor economy to do with out needed machinery, serious inroads and leaks have been introduced into farm management by some farmers in years gone by where a too liberal purchase of farm machinery was indulged in because it could be bought on time. There is such a thing as acquiring unnecessary debt and paying high rates of interest that cripple the business of well meaning and industrious men. Some persons have kept themselves poor and their credit poor by their mania for buying machinery and their careless practices in handling and preserving it after it gets into their possession. Such persons are not very numerous among the farmers of the present day. Yet there are places all over the farming communities where the barn yards, feed lots and orchards are the common storage for the farm machinery, when not in use. Machine sheds are not regarded of any value on these farms. The preservation of the machine has not been taken into account.

It may not be out of place to suggest in this relation that the farmer who treats his machines and farm implements in this way gets but little credi for his intelligence and sense of management. A sane man who would stop for a moment and estimate the cost of a machine shed or two or three sheds, even, conveniently located so as to be easy of access from the horse stable where the teams are kept, and the differences in wear between outdoor and indoor housing of machinery will not argue the case, but provide shelter at once. There is nothing so damaging to the reputation of the farmer as careless, slothful methods and practices in the handling of his business, and in this, there is no better key to the situation than to see the fences and barn yard lined up with machinery of all sorts new and old.

This is now the beginning of the season of farm machinery abuse. Planters, cultivators, mowing machines, horse rakes, reapers, binders, plows, harrows, where are they? Under the machine shed, out in the field where the team was unhitched when the last work with them was completed, or are they stored in the barn yard along the fence to decay and rust and rot under influences of rain, sunshine, heat, cold, etc.

FIXING THE PRIZES.

Under the Caption of "the Slandering Know-it-all" a writer in the Live Stock world, Chlcago threads pretty closely on remarks not infrequently heard at the ring side of our Maritime Shows.

We publish the article referred to on another page of this issue and trust that whom-so-ever the cap fits will wear it.

The inference cast in the second paragraph of the article in question about ewards being "fixed" is always an ugly insinuation. The Maritime Farmer suggests that possibly it would be more satisfactory to the loosers in the showing if the winners had not been apparently too chummy with the judges from the time of their arrival in ihe exhibition town until the time when the stock judging is completed. It would look better and help keep down an onus of the above kind if stock owners would refrain from busying themselves around the judge until he completed his work, we do not for a moment mean to infer that judges are influenced by Individual stock breeders but for the judges own sake as well as for a more harmonious feeling among the exhibitors it will be well for the judges to refrain from holding intercourse with any breeder until their work is completed. We have frequently heard insinuations of this kind in the past when names were freely mentioned, but we believe the extreme friendliness shown by these stock breeders was altogether to a stranger in a strange land due to a friendly rather than to a mercinary motive.

WATCH THE LIVE STOCK JUDGING AT THE FAIRS.

Ere the first September issue of the Maritime Farmer reaches our Subscribers, the Maritime Circuit of fall fairs will be in full swing. St. John Exhibition will be held from the 5th to 12th, Charlottetown Exhibition 22nd to 25th

We have reports from the various fair boards that indications point to a large number of entries in all classes and given good seasonable weather it remains with the farmers of the Maritime Provinces and the citizens generally to help make the various fairs a success by supporting their respective fairs with record attendance. The stock men are coming out in full force and what is more pleasing to look upon than a splendid array of purebred stock ?

In years gone by the ring side at the various exhibitions has not been as well patronized as it should.

Make your visit to the exhibiton something more than a holiday trip make it an educational trip, you can drive a great deal of profit from your visit to the fairs by spending less time around the frivolous features and devoting your energies to the educational features of the show.

Spend some time at the ring side when the stock is being prized. It will do you good.

ASSISTANCE TO AGRICULTURAL SOCIETIES.

We wish to call the attention of the readers of the Maritime Farmer to the contents of a circular recently issued by the New Brunswick department of Agriculture which we publish in full on the following page the contents of the circular as published are self explanatory. Members of Agricultural Societies wishing further information along this line should write to Mr. W. D. Ford, Animal Husbandman for the department and section five must be strictly adhered to.

DEATH OF MRS. HUGH DICKSON.

We regret to chronicle the death of Mrs. Hugh Dickson, which took place recently at her home in Onslow, N. S. Only a few short weeks ago did we meet her at her home looking healthy and happy, little did we think then that our next tidings of her would be the news of her death, Mr. and Mrs. Dickson were married only last september. The Editors of the Maritime Farmer extend to Mr. Dickson, their sincerest sympathy in his irrepairable loss.

Getting Ready tor the Shows.

The preparation of stock for exhibition at the fall shows is an important business. Litlle success in the showring can be expected, even with first-class stock, unless the animals have been taught to make the best of themselves when brought before the judges. An animal that has not learned to walk and stand well, or that is constantly fighting for his head or trying to break away, is likely to hide his best points, and present his weaknesses in prominent form. The desire of the exhibitor is obviously just the opposite to this. He wants his animal to make the most of his good points, and keep his faults as much in the background as possible. There is much that may be done to further this object without in any degree overstepping the line which devides fair exhibiting from dishonest faking.

Schooling Horses.

The training of a horse for show ought to start when he is a foal. The youngster can be haltered and accustomed to being led about, walking and stopping as required. This early handling is half the battle, removing many of the difficulties of further training. Later on the youngster can be taught to move at the walk, trot or canter, as required, for it is important that he should promptly assume any desired pace when called upon in the ring. A heavy horse, of course, is not required to move at a fast pace, but it is essential that he should walk, and trot in easy, well-balanced style, the action being smooth and true. When pulled up, the horse should be taught at once to assume an attractive pose, with the feet set well out before and behind, though without exaggeration. It looks much better if the animal naturally falls into this position than if it does so only after a lot of shifting about by the attendant. Action is important with all breeds, and is largely a matter of breeding, but it can be encouraged where deficient. There are various ways of teaching a horse to pick his feet up sharply, one being to use heavy shoes, and another to exercise in a heavy clay field. The greatest difficulty is experienced with a sluggard, whose tendency is to slouch along. Such a horse is best taken on a long lead, the groom running before, whilst the judicious application of a whip by a runner-up will induce a smarter action. An active, high-spirited animal, is much easier to show well, but he needs to be kept well in hand on a short lead.

Training Cattle.

The training of cattle for the showring consists frequently of frequent exercise on the lead, so as to render them perfectly tractable. They must walk well and stand easily, without any attempt to break away from the attendant. A wellbalanced walk is a natural trait, and is not likely to be produced by artificial means in an animal that is not evenly made, but a good deal can be done to make him show to the best advantage when standing before the judges. Some excellent cattle drop their backs when pulled up. This is very undesirable, as a level top goes far in a ring. Such an animal should be kept on the move as much as possible, and taught to hold his head low when at a standstill, as the defect then shows least. With cattle, a good cost is an important feature. This is induced by keeping in airy quarters, and by frequent use of currycomb and brush. With these useful implements, and a pail of water, the skilful cattleman puts the finishing touches on his charge before entering the ring, and he knows how to make the hair cover weaknesses of back and rump. A great point in showing off any animal to the judges is to know its weak points, and to manage it so that these assume the least possible prominence.

Sheep and Pigs.

The main care of the shepherd should be to teach his charges to lead well. This can be done only by early haltering and frequent exercise on the lead. This also helps to keep the animal sound on his feet and straight on his legs, so that he walks well and stands square. It is by no means easy to regulate feeding and exercise so that a sheep goes well on his feet whilst in high condition. Naturally the fleece comes in for much attention. and lends itself to the covering of faults of form, though these come out readily enough under the hand of the skilful judge. The shears must be used frequently on the fleece as it grows, right up to the eve of the show, as a smart appearance is expected.

Pigs lend themselves less to training for show than any other stock, but, fortunately, less is xpected of them in this direction. They must be driven, for they can hardly be led. However, a good deal can be done to make them tractable to some degree by handling from an early age.—Farmer and Stock Breeder.

The Maintenance Ration.

No subject connected with agriculture has had more attention given to it during recent years, or with bettter results, than has that of animal nutrition, and nowher has better work been done in the matter than in the United States A maintenance ration is one which simply keeps the animal machinery running in good repair without the production of external work or of an increase in body weight. Under normal conditions the first draft upon the food the animal consumes is for such maintenance, for only as the food supplies matter and energy in excess of this demand, which takes fully one-half of the average farm ration, is the production of work, or of body-weight gain, possible. A knowledge of the maintenance ration for animals under diffring conditions is therefore essential, both for the wise planning of feeding methods and for the correct interpretation of feeding experiments. This, therefore, gives interest to a very important report by Dr. H. P. Armsby, of the Institute of Animal Nutrition (U. S.), in which this side of the subject is very comprehensively dealt with.

Loss of Matter and Energy.

Put in as summarized a form as possible, it may be said that the maintenance requirement is ascertained by studying the losses of matter and energy of fasting animals. The results of many investigations indicate that for store ("thin") cattle this requirement is, besides a little mineral matter, one-half pound of digestible true protein. and 6.2 therms of available energy per 1,000 lb. of live weight per day. A therm (equals 1,000 large calories) is the amount of heat required to raise the temperature of 1,000 kilogrammes (2204 lb.) of water 1 deg. C. (1.8 degree F.). A maintenance ration is a ration that exacty supplies to the animal its maintenance requirements. Its quantity and the proportion of its parts must vary with the digestibility and character of the crude protein, and the availability of the energy of the several feeding stuffs of which it is composed, as well as with the live body weight of the animal, assuming other conditions to be equal. In the average mixed ration of grain and rougher food (hay and straw chaff, etc.), the digestible true protein is about five-sixths of the digestible crude protein. The total energy which 100 lb. of various common feeding-stuffs yield upon burning ranges from 170.9 therms for maize meal to 196.7 therms for linseed meal. But much of the total energy is unavailable to the animal because of the portions of the food eaten that escape unburned in the various excreta—22 per cent. of the energy of maize meal, and 55 per cent. of the energy of ordinary hay was thus lost in the average of experiments, while another fraction of the energy developed is spent in separating the digstible from the indigestible food, and is therefore not directly useful to the body proper.

Value of Various Foods.

In this connection Dr. Armsby gives a table showing the available energy, or energy value, for various feeding stuffs. These have a range from 4 therms for mangolds to about 89 therms for maize and gluten meals, per 100 lb. of the food consumed.

The protein requirements probably varies directly with the body live weight of other constituents supply the available energy; but the energy requirements vary approximatly with the surface area of the animal's body, which area is, roughly, proportional to the cube root of the square of the live body weight.

The average stated in connection with maintenance requirement, is for a store ("thin") animal of good feeding temperament, and assumed to stand but half its time. The muscular work required to hold up and move the body affects the energy requirements. A steer produces 28 to 65 per cent. more heat when standing up than when lying down. Again, a restless animal wastes energy. A quiet, pure-bred steer showed an energy requirement of 5.6 therms; and a rather restless scrub steer one of 6.65 therms.

Stall feeding involves less movement than yard feeding, and consequently the energy maintenance requirements are somewhat smaller.

Condition and Age.

Condition also affects the energy requirement for maintenance, fat steers having shown requirements of two or more therms above those for corresponding store steers, the requirement increasing with the fatness. This is thought to be due to the extra weight to be supported and moved, although the point has not to be dtermined with any definiteness. The effect of age is another point not conclusively ascertained as yet, but older animals apparently require less energy maintenance than young, restless animals.

One other minor point, in practical application, remains to be noted, and it is that external temperatures may have some effect upon the energy requirements. Dr. Armsby, however, points out that, since a steer on maintenance ration produces considerably more heat than is needed to maintain the body temperature n air of 60 deg. F. the air temperature may fall much below this point before additional food consumption is necessary for heat production alone.

Assistance to Agricultural Societies in the Purchase of Pure Bred Stock.

The live-stock situation in the province is such that the Minister has decided to continue the assistance to Agricultural Societies in procuring pure-bred stock for breeding purposes, under the following regulations:—

(1) Stock must be bought and sold under the direction of an Agricultural Society.

(2) The Society procuring stock will be required to make an annual report to the Department of Agriculture upon live-stock conditions in its district; (a) the number of pure-bred animals in the district; (b) are pure-breds increasing or decreasing in the district?

(3) Assistance will not be given to more than two breeds in any one Society, one beef and one dairy breed; the breeds to be determined by a majority vote of the Society, at a regular or special meeting, notice of the vote to be taken having been given by mail to each member of the Socety at least one week prior to meeting.

(4) Animals purchased with the assistance of the Department to be sold by auction to the highest bidder, and only members of the Society holding the sale to be allowed to purchase same; or the animal to remain the property of the Society for the use of its members only.

(5) Animals to be bought subject to approval of an officer of the Department, and must be subject to tuberculine test.

(6) Societies obtaining assistance under these regulations to make a report to the Department of cost of animals, expenses incurred in the transaction, and the amounts received from sale of cattle (if sold), certified to by President and Secretary of the Society.

(7) Under the above regulations the Dept. will pay a bonus of 15 per cent of the purchase price of an animal costing $50.00 or under, and 25 per cent of purchase price when above $50.

(8) Not more than six animals to be bonused in one Society in one year.

(9) The bulls purchased under the above regulations to be reserved for use of members of the Society only, and not to be disposed of without consent of the Department.

(10) Notice of desire to participate in the above to be given to the Department before purchase is made.—J. B. Daggett, Secretary for Agriculture.

What Every Man May Do.

Because we have felt that the health of the dairy cows of this country never can be what it ought to be until every man does his part toward that end, on our farm we have done our best to make the surrundings of our stables as good as we possibly could. To this end and we have lifted the floors of our barns so that there is a nine feet space between the floor the cattle stand on and the ceiling overhead; we have put a good cement floor down, covering the feeding alleys, the mangers, the platforms where the cows stand, the drops and the driveway back of the lines of cows; we have put in more and larger windows than there are in any barn I know of in this part of the country, and we have taken every possible precaution to have everything as clean as we could.

It has cost us something to do this, but we cannot help thinking that we will get our pay in the better sanitary conditions of the premises. The way I look at it, tuberculosis is a disease that is not very apt to invade a barn that has plenty of air space and as much light as possible and is kept clean. There is nothing that will help to keep this dreaded disease out of a herd like these three elements, air, light, cleanliness. I believe where cattle have already been attacked by tuberculosis, if a man will clean up his premises, get rid of any individuals that are beyond question too far gone for recovery and himself treat his herd by the application of light, pure air, and ceanliness, he may stay the progress of the disease and soon stamp it out.

Every man may do this. There is no barn in the country that may not be made over so that it shall be light, airy and clean. It takes some time and money to do it, but the satisfaction, as well as the money returns, amply repay for all such work.—E. L. Vincnt in Hoard's Dairyman.

N. B. Government Ditcher.

The New Brunswick Government ditching machine is now operating in Sussex, having come here a few weeks ago from Sunbury County where it had been operating earlier in the season.

Last year the ditcher dug over eight miles of ditches. To date this year, it has dug close on to seven miles. Tile drainage is badly needed on many farms in New Brunswick and we are glad to see some of our Kings County farmers taking advantage of the use of the ditcher. There is hardly a section in New Brunswick but would keep the ditcher busy for a whole season but as it is only used for demonstration work it cannot be left in any one district for too long a period.

Mr. John Woods, a graduate of the O. A. C. is in charge of the machine.

HORTICULTURE.

A Visit to the Valley.

The Editor of the Maritime Farmer paid a pleasant visit to Kentville, Berwick and other points in the Annapolis Valley last week. We are delighted to find that the Valley as a whole is experiencing a season of apparent prosperity. Fruit growers, with a few exceptions, are looking forward to a bumper apple crop, and individual growers are paying more attention than ever to the protection of their trees and fruit from insect and fungus pests so that a large percentage of No. 1 fruit may be harvested.

The hay crop is reported a little light but well up to the average. Breeders of live stock find a good demand for their stock, at remunerative prices.

The potato crop is very promising and altogether the Valley farmers are a happy lot.

While in Kentville we visited the Dominion Experimental Station A great many improvements have been made at the station since we visited there over a year ago. The forest of various native trees is fast giving way to the axe, the stump puller and the plow and is being replaced by rows of fruit trees of various kinds and field crops of grain and roots. The lawns and gardens are looking particularly nice and under the efficient superintendency of Prof. W. S. Blair and his able assistant, Mr. J. Milton Robinson the whole farm is fast becoming one of the most interesting places in the Valley. Considerable work has also been done in the conserving and making the natural park in connection wit hte station more accessable to the public. The park is one of Nature's beauty spots. Visitors of Kentville should avail themselves of the opportunity of a walk through the beautiful glen, the approaches to which are so arranged that the sight-seer may make a round trip of the cultivated and uncultivated areas of the farm.

At Berwick, the United Fruit companies of Nova Scotia have their headquarters and preparations are now being made to handle the big crop that the Valley is producing and which are now nearing the harvesting period.

We chanced to meet Mr. Manning K. Ells, the genial Secretary of the Nova Scotia Fruit Growers' Association at Kentville. He was in town with the last of his strawberry crop and was feeling particularly jubliant over the returns from this lucious crop. From a two-acre plot he had sold enough berries to net him over $1,400 and the demand was far in excess of the supply. He reports a big demand for strawberry plants as a result of his ad. in the Maritime Farmer. He is wearing the smile that won't come off as letter after letter reaches him from customers stating that his plants are giving good satisfaction.

Cultivation and Pruning of the Grape Vine.

In response to the request of a correspondent who asks questions relating to the pruning and culture of grape vines the Queensland Government "Agricultural Journal" published the following:—"The vine will, being a very hardy plant, grow in almost all kinds of soil. The most suitable, however, is a porous, easily worked loam, deep and well drained, subsoil sufficiently retentive to hold moisture to carry plants over a dry spell. In districts of heavy rainfall, (torential rains) and dry districts, too much slope is not advisable, as in one the soil is liable to wash and in the other, too much exposure and drainage is present; therefore, a, level or slightly undulating site is better. "The preparation of the land should be begun in autumn, and the ground should be thoroughly stirred to a depth of 16 in. or 18 in. according to locality and quality of soil. Where gravelly subsoil is closer than this to the surface this depth is not necessary. The depth advocated can be reached by ploughing,, to a depth of 8 in. or 9 in. and then stirring up the bottom of the furrow another 8in. or 9in. with a subsoil, or plough with mouldboard removed following imediately. ',After this the weeds should be harrowed off and the ground permitted to lie during the winter, sufficient working being given to prevent rusting and growth of weeds. Cross plough in the spring and harrow, and, if necessary, cultivate, or roll to bring the soil to the desired tilth.

The soil having been thoroughly prepared, the next thing to be done is to lay out the vineyard. This should be done with a view to overcome disadvantages of the site, to mitigate as far as possible the damage resultant from hail, and to facilitate working. If a level site or slightly undulating one, as previously recommended this will present little difficulty. "If on a slope the vineyard should be laid out across the slope, the longer the rows being the less turning for the teams making working less costly. Should hail storms come from south west then the rows should run north east to south west. In setting out the vines, the distances apart are governed by the climate and method of growing adopted. For a district 8 ft. by 8 ft., ,if grown on stakes; and 8 ft. by between 6 ft. in the rows if trellised. This will give, allowing space for roads, 650 vines per acre, 7 ft. by 7 ft. for staked, and 7 ft. by 6 ft. for trellised vines in medium dry districts; whilst for the moisture districts, 6 ft. by 6ft. is sufficient.

"The planting in square is recommended as if on the bush system, vines can be worked two ways leaving very little to be done by hand.

If narrow rows are planted, it will be necessary to have roadways throughout the vineyard for removal of produce, prunings, etc.

The most economical way to stock a vineyard is by using cuttings, though not so reliable as the putting in of rooted plants. The cuttings, which should be about 15 in. long, should be put in the ground slightly slanting, leaving only one eye exposed, the ground be well firmed round the cutting to within one-third of the top. Following the setting out, it will be necessary to keep weeds down and keep surface of the soil loose to prevent evaporation. Tie up young shoots as they reach a sufficient length to stakes to prevent being broken off by the wind, etc. Prune low the first winter and late as possible.

Winter Pruning.—No fixed time can be stated as when to prune, though June and early in July is preferred by most. In warm districts it should be early, and in places where late frosts are likely to occur it should be delayed as long as possible. The methods in vogue are many, and are adopted according to variety, climatical conditions, and mode of growing.

Summer Pruning.—Suckering and disbudding: Suckers are those shoots which spring from the old wood and are generally unfruitful. These can be rubbed with the hand, which operation should be done as soon as possible after they appear.

Disbudding consists in the removal of shoots on the one-year-old wood not showing fruit, or thinning out.

Topping, which consists in the removal of the end of the shoot is recommended by some authorities, but it is not absolutely necessary under Queensland conditions.

Tying.—This should be done when buds are swelling; the canes are then

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more pliant, consequently are not so liable to crack. Material for tying; strands from potato bags, old binder twine, rushes, all are suitable. Binder twine or similar material, which is inclined to cut the vines as they grow, will in all probability have to be cut during the summer.

Cultivation.—Summer: Consists in keeping the surface stirred and the vineyard free of weeds. Winter: Ploughing 4 in. to 6 in. deep should be carried out as soon as the pruning is finished, throwing away from the vines. This destroys any surface roots, which are not advantageous, more especially in dry climates, and sweetens the soil.

Bear River Cherries.

Editor Maritime Farmer:—

Enclosed find photo of cherry picking at Hillside Farm, Bear River, July 27th, 1914., B. C. Clark, Prop.

I may say the cherry tree shown in photo was planted by the writer 12 years ago and this year I picked and packed 40 boxes, worth in cash $16.00. —B. C. Clark, Bear River, N. S.

Cherry Picking at Hillside Farm, Bear River, N. S.

Do Caterpillars Think ?

Do caterpillars think? Mr. Fred Enock, lecturing to an audience of children at the London Institution, said that, after 50 years of "grubbing," he had come to the conclusion that caterpillars really seemed to have a conscious knowledge of their own marking and coloration. They had a good deal more sense than most people gave them credit for, and he did not see how people who studied them could arrive at any other opinion than that which he had stated. These remarks were prompted by a study of the ability of the familiar little insects to conceal themselves from their natural enemies, the birds. Mr. Enock showed on the screen a picture of a dead geranium branch, on which there appeared to be nothing but withered twigs. How many caterpillars are there there?" he asked his juvenile audience. "None," answered a skeptical youngster. "Three" ventured another, greatly daring. As a matter of fact, there were eight, and even Mr. Enock had to be careful, in pointing them out, not to confuse twig with caterpillar so close was the resemblance. There was mention of another interesting instance of self-preservation. The caterpillar which chooses a leaf under which to spin its cocoon seems to be aware of the danger of the leaf becoming detached and falling to the ground, thus probably killing the chrysalis. So it takes the precaution of fastening the base of the leaf to the stem by means of silken threads, and then, if the leaf, becomes detached, it merely spins round on the silk, and the chrysalis is saved. Mr. Enock said he had seen this dozens of times, and could come to no conclusion but that the caterpillar was conscious of the danger of the falling leaf.

N. B. Orcharding Possibilities.

One of the greatest assets that New Brunswick possesses is its orcharding possibilities. This fact has only begun to be recognized by our farmers in recent years. A very positive improvement is noticed this year in orchard conditions in this Province. One authority on the subject remarks:—"The prospects for commercial orcharding in New Brunswick are very bright, because of the relatively low price of land here and comparative cheapness of production, together with enormous saving in transportation rates. The apple lands in New Brunswick being from 800 to 3,000 miles closer to the European markets than many other apple producing sections of the North American continent, not only is the cost of transportation greatly decreased but other apples can be placed in the consumer's hands in better condition."

In a memorandum presented to the Dominion Royal Commission by Mr. C. N. Vroom, President of the New Brunswick Fruit Growers' Association, the statement is made that New Brunswick is very favorably situated for growing extensively such fruits as apples, strawberries, raspberries and cranberries. Especially is this true of the southern portion of the Province where the proximity of the sea ameliorates the severity of the winter, and where the more tender varieties of apples may be sucessfully grown, as well as the harder varieties of plums, pears and cherries. Mr. Vroom says that in the past four years about 100,000 young apple trees have been set out in this province, btu the fruit industry is still in its infancy.—St. John Board of Trade Rept.

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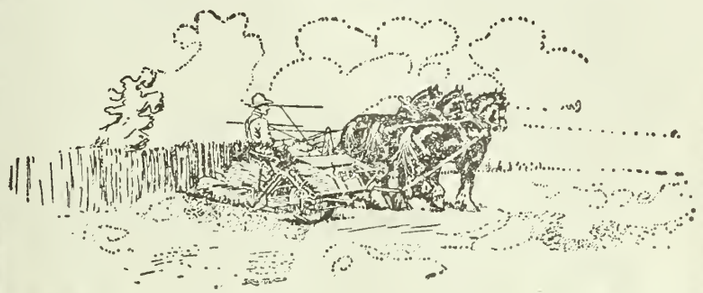

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DAIRYING.

Raise Your Good Heifer Calves.

As every breeder and every thinking farmer knows, a good dairy cow is not an accident but the result of long and earnest effort on the part of the one who produces and raises her. The foundation must be laid in the calf, both in the matter of breeding as well as in the care of feeding.

Too many of our farmers and dairymen are prone to think that they can buy cows cheaper than they can raise them, and the prevalence of this very idea throughout the country has had a tendency to reduce the number and quality of good dairy cows.

Many dairymen are depending upon some one else to raise the cows and sell to them, while they in turn sell their calves for veal. This is very poor business, for many a good row is wasted in this manner. Then it stands to reason that the wise breeder or farmer is not going to sell the best cows he has. No, he is going to keep those for his own use and sell the inferior ones. You cannot blame him, for if he knows which ones are the good ones he naturally wants to keep them for himself. The buyer comes along and he offers the inferior cows for a price. The buyer takes them, because he thinks he is getting the cows cheap, and perhaps he is, but he is getting cheap cows as well. He is not only buying inferior stock, but he is paying the owner a profit on them besides.

Why not keep that profit at home, and at the same time know that you have good cows by raising them yourself? It is a business proposition. You can produce them as cheaply as anyone, and why should you not have a few to sell instead of having to buy them from the other fellow.

Cheese Made with Windsor Cheese Salt brings best Prices

The Cheapest Way to Build up a Good Dairy Herd is to Raise It.

The profit in dairying is very largely dependent upon the qualit yof the cow, and the only successful way to build up a profitable dairy herd, at anything like a reasonable cost, is to raise the cows at home. As said before, if the breeder knows that a cow is good he keeps her for himself, and if he does not know how can the buyer know? Therefore, you are running a risk of getting poor producers when you buy from your neighbors, whereas, if you raise them yourself you know which cows they are from and what to expect from them when they grow up. At the same time you save for yourself the profit that the other fellow charges for raising them.

These facts apply to breeders of scrub and grade cattle, as well as to breeders of pure-bred animals. Any herd can be improved by raising the calves from good, carefully selected cows that have been mated with a well bred bull, provided the calves are properly raised and taken care of a way to insure stamina and vigor.

Some of the Finest Cows in the Country Raised on Separator Skim-Milk.

The cost of raising calves has been greatly reduced since the advent of the separator on the farm, which furnishes nice, warm, sweet skim-milk to feed them on. While it is not every one who can successfully act as "stepmother" to a baby calf, most any of us can learn in a short time to be reasonably successful. Some of the best producing cows in the world were raised on separator skim-milk, and there are thousands of calves that are growing and thriving upon it right now, which goes to show that it can be done successfully.

Good dairy cows are very much in demand all over the country, and there are miles and miles of territory in the Western States that need and must have cows, and there are thousands of farmers in those States who are looking for good cows right now. They need them, and must have them in order to make a living. It is therefore, evident that the demand is not going to abate for some time to come, because cows do not merely happen along when you want them, and they must start with the calf, and it must be reared economically and well. Why sacrifice perfectly good calves by selling them to the butcher when ten times as much profit can be made from them by feeding them skim-milk and growing them into dairy cows?

Stop and think a minute. Why is it better for the dairy farmer to raise his own calves?

1st—Because it is cheaper. He can raise them as cheaply as any one else and save the oher man's profit, if he has warm, sweet separator skim-milk and will use a little care.

2nd—Because he can select and raise the heifer calves that are from the best cows and show promise of making good producers.

3rd—Because he can raise them properly and see that they are kept in a thrifty and growing condition.

4th—Because he generally gets second and third class cows when he buys.

Fat the Only Food Element Removed by the Cream Separator.

Some people have an idea that nearly all of the food value is taken out of milk when the cream is removed, but, on the contrary, it is nearly all left in. The fat can be readily replaced by something cheaper, and the calf will thrive as well on skim-milk if properly fed, as it will on whole milk. Separator skim-milk has been and is being fed successfully all over the country, and from the writer's experience it is one of the most practical and economical ways to feed a dairy calf. Naturally, a calf cannot be expected to thrive on cold, sour milk of any kind, but those who use care and judgment can raise good calves on warm, sweet skim-milk fresh from the separator, and thus at a much less cost than they can be grown in any other way.

The economical thrifty farmer can readily see the advantages of this method over the old way. It is a matter of dollars and cents with him, and when he finds that through the use of skim-milk and a little care he can raise a calf just as well, but a great deal more economically than he has been doing, he is going to change at once. That is a good business, and any level-headed business farmer is going to do it as soon as he sees the advantages.

We would be pleased if some of the readers of the Maritime Farmer would write us their experiences in feeding and raising dairy calves on separator skim-milk, bringing out their ideas of the advantages gained and as near as possible the actual cost of raising calves by this method.—S. E. Barnes.

Special Purpose Cattle Breeding.

In your isue of March 5, under the head, "Dairy Shorthorns and Holstein-Friesians," I see that the qualities of the Holsteins are becoming more generally known in Ontario and that it is getting difficult to find dairy Shorthorns. Farmers are evidently finding that it pays better to veal the male grade Holstein calves, as they are large and of superior quality, and get their milk and butterfat from a special purpose breed whose dairy qualities have been developed continuously for more than a century. If they use the smooth-type of Holstein they could steer the calves just about as well as the Shorthorns.

Prof. Clinton D. Smith found. years ago, that a cow making 25 lbs of butter in 7 days must assimilate as much food as seven steers gaining a pound each day. It would, therefore, be a long and tedious job to develop a large producing dairy strain of Shorthorns, to any number, since for years the use of extreme beef sires has been the practice of most Shorthorn breeders. It would be much easier to develop a smooth, beefy Holstein because with their large frame all that is necessary is to divert their capacity to the putting on of flesh. We understand that connoisseurs cannot distinguish between the good Holland and English beef, as it appears on the English tables. It is easier to retard development than to increase it; therefore, it would be easier to let the Holstein run into a beef animal than to develop a special dairy animal from the Shorthorn. When this is accomplished, we should have, as W. A. Riddel says in the same issue, "a type that is entirely different from that of the dual-purpose Shorthorn"—a special dairy animal devoid of beef characteristics. When fed above a certain point her feed would go to the production of beef rather than to milk and butterfat.

We know Holstein-Friesian cows that made official world's records for milk and butter production, and which have scores of relatives that have produced 15,000 to 26,000 lbs. of milk and the fat for 600 to 1,200 lbs. of butter in a year. These cows weigh from 1,400 to 1,700 lbs. They are smooth in conformation and when dry would finish for the block easily at 1,500 to 1,800 lbs. A few through failure to breed, have gone to the South St. Paul and Chicago markets, and held their own with cows of any breed; the last one sold last month in South St. Paul at $6.75 per cwt., when the top of the market for prime steers was quoted at $7.35.

We have no quarrel with any breed; we as a nation want beef, and if we continue to have beef at a moderate price it must be produced with the greatest economy, largely with breeds especially developed to produce beef. We must have dairy products, and they should be produced with the greatest profit. If veal and beef are a factor, we can breed and develop large, strong smooth, prepotent dairy animals of constitution and capacity. "Specialize for efficiency" is the motto of our day. Then why burden farmers with a dual-purpose cow when we cannot give them a piece of dual-purpose machinery? Judging from the letters we receive the dual-purpose cow produces the no-purpose cow that has lost the farmers of our State millions of dollars. So far as we can learn, she has but one place: when a farmer already has a lot of them and does not feel that he can start over again with pure-bred females of a special breed, he can by using pure-bred sires of one breed continuously, build up his herd either to the beef or the dairy lines.—John B. Irwin in Breeders' Gazette.

What Makes Milk and Butter Yellow.

That rich yelow color demanded by the public in dairy products is primarily due to the character of the cow's feed is demonstrated by recent experiments carried on by the department in co-operation with the Missouri State Experiment station. For some years dairy experts have been studying this question. Their conclusion is that, although to some extent a breed characteristic, the intensity of this yellow color may, within certain limits, be increased or diminished at will by changing the animal's rations.

Chemical tests show that the yellow pigment in milk consists of several well-known pigments found in green plants. Of these the principal one is carotin, so called because it constitutes a large part of the coloring matter of carrots. The other yellow pigments in the milk are known as xanthophylls. These are found in a number of plants, including grass, but are especially abundant in yellow autumn leaves.

These pigments pass directly from the feed into the milk. This explains the well-known fact that fresh, green grass and carrots increase the yellowness of butter, the only standard by which the average person judges its richness. On the other hand a large proportion of these pigments is deposted in the body fat and esewhere in the cow. When the ration is changed to one containing fewer carotin and xanthophyll constituents, this hoarded store is gradually drawn upon and in consequence the yellowness of the milk does not diminish so rapidly as it otherwise would. This yellowness increases, however, the instant the necessary plant pigments are restored to the ration.

Green grass is probably richer in carotin than any other dairy feed. Cows fed on it will, therefore, produce the highest colored butter. Green corn, in which xanthophylls constitute the chief pigment, will also produce a highly-colored product. On the other hand, a ration of bleached clover hay and yellow corn is practically devoid of yel-

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low pigments and the milk from cows fed upon it will gradually lose is color. It is, of course, indisputably true that the breed does influence the color of the milk fat; but vary the ration and there will be a corresponding variation in the color of the milk fat in each breed.

In cows of the Jersey and Guernsey breeds the body fat is frequently of such a deep yellow color that some butchers and consumers look with disfavor upon beef from these breeds. For this prejudice there is absolutely no justfication. The yellowness of the fat springs from the same cause as the yellowness of the milk fat, and there is na reason for objecting in one case to the very thing that is prized in the other.—Weekly News Leter, U S. Dept. of Agriculture.

Salt for the Dairy Cow.

Few men realize just how badly the dairy cow needs common salt. It is a shame how some of the best animals are treated. Salt is an essential needed by every herbivorous animal, but by the dairy animal most of all. Yet, how is she supplied?Ofttimes she receives salt but once a month. However, the wise dairyman is careful to feed salt at least once a week. Few really know (says a writer in Hoard's Dairyman) what would happen if we did really withhold this chemical from the dairy cow. We do know that ever so often the cow indicates, by licking her mates or otherwise, her desire for salt. She is given some of the chemical and it is made to serve the purpose until she again indicates a desire for the luxury.

It is a question with many, as to the real need of salt by the cow. The purpose it serves is scarcely known to one man out of ten. The cow is fed over so often until her appetite is somewhat lessened. The average man considers that a good deed has been done and his animal treated remarkably well. Often the opposite is the case.

Purpose of the Salt.

It is interesting to note the purpose for which salt is commonly fed the dairy cow. Writers agree that the digestibility of the ration is neither increased nor decreased. It also does not increase waste of protein but serves to lessen protein decomposition.

It is thought that ordinary salt serves as an appitizer. Thus its action is much the same as a condiment or spice. The greatest effect seems to be its ability to increase the palatability of the foods consumed and as a result the appetite of the animal. The digestive system is materially aided by the introduction of salt into the system. So called digestive disturbances are in greater part lessened if not entirely prevented. The secretion of the digestive fluids is increased. This aone is one of the strongest arguments for feeding the chemical to the cow. There is no other effect produced that is almost as equally important. The circulation of the body fluids is hastened as well as increased. From a medical standpoint, salt becomes quite essential to the animal.

Harm From excessive Quantities.

If not fed rightly, there is no doubt but that harm can come from th feeding of salt in excessive quantities. It is apt to increase the amount of water excreted in the urine. Thus the protein is broken down and the water content of the body lessened through the kidneys. An excess may cause an abnormal appetite for water. Ths is true only where the animal has not had access to the chemical for a considerable length of time. An abnormal amount of water may be consumed. This is very apt to cause considerable digstive disturbances.

Breaking Down.

Babcock and Carlyle of the Wisconsin experiment station, have done considerable work along the line of salt requirements for dairy cows. They found that when an animal has been deprived of salt for two or three weeks, an abnormal appette is created for ti. The animal may do without salt without any noticeable effect for a period of from one month to one year. It is remarkable that up to this time there is no loss in live weight. The animal does not decrease in either health, condition, or milk supply. There is, however, a stage reached where the animal has a sudden breakdown and a consequent loss of vitality. This stage is marked by a loss of appetite, a general listlesness, lustreless eyes, rough coat, and a rapid decline in milk supply and live weight.

If at this stage salt is given the animal, a quick recovery results. The breakdown is most apt to occur when the animal is heavy in milk, immediately after calving.

The Quantity Required.

The pertinent question now arises, how much salt should be fed and how often? This is a stumbling block for more than one dairyman. One authority recommends that 0.75 to 1.0 ounce of salt be fed per cow and should be given at this rate once a week. Another recommendation is as follows:—Feed three-fourths ounce per day per 1,000 pounds live weight with 6-10 oz. additional for each 20 pounds milk produced. This would probably vary between one-half and three ounces, depending upon the cow.

The Best Way.

Either recommendation may be safely followed. The important thing is the fact that the animals should receive salt at least once a week. Some darymen purchase rock salt and allow the cattle to lick of it as they will. This is among the best methods of feeding salt to cattle. After a short time, if salted previously, the cow will adjust herself to the change, so that she will consume just enough salt for her needs. This plan works out much better than the one of feeding the cow salt in connection with her feed at intervals of one or two weeks. The latter is never to be recommended.

Natural Ways.

It is interesting to note that soils rich in salt supply more of this material through the herbage raised upon the land than soils low in salt content. Certain water supplies, as wells, springs, etc., vary in their percentages of salt dissolved in the water. However, there are few natural ways at the present time for the average dairyman to secure salt for his cows. It must be supplied in sufficient amounts regularly or constantly. When so applied it makes up one of the essentials so necessary to the successful care and management of the dairy herd.

Careless handling and slipshod methods can prove most disastrous in the milk and butter producing factory, for the better the cow the quicker she will be ruined by poor care, and, as a rule, the best cows in the dairy herd under poor management are the ones that are first spoiled. No animal on the farm will respond to kindness and quiet surroundings so quickly as will the dairy cow. All who work about the cow barn should be quiet, kind clean, regular in detals, energetic, and endowed with sufficient brain power to take an active interest in the work. The feeder should have the faculty of studying and learning the individual needs of the cow and sufficient energy and interest in his work to cater with regularity to each member of the herd. Success is not a matter of luck, but rather of common sense and hard work, and the application of these two to the dairy business can have only one result.—I. R. Henderson, B S. A.

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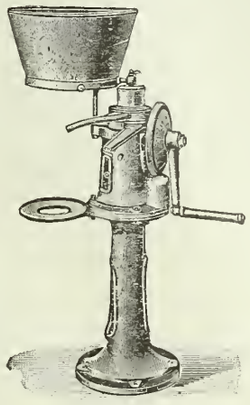

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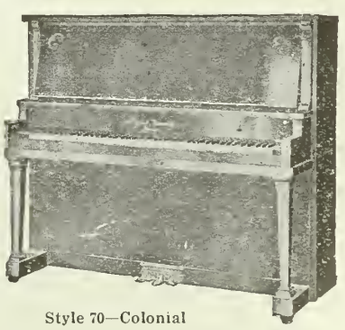

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Present Status of the "Dual-Purpose Cow" in Britain.

The "dual-purpose cow" is perhaps the most discussed animal in the United States at present, and many of its supporters claim that it must be retained, and in support of their argument they point to its popularity in Britain. Undoubtedly it is a fact that the English farmers for a long time bred with the object of producing an animal which would yield good beef and at the same time be a good milker. but conditions are changing rapidly and in a few years the so-called "dual-purpose" cow will be a thing of the part so far as England is concerned.

During the years 1905 to 1911 (inclusive) the bovine population of Great Britain was growing from 6,887,000 to 7,114,264. This increase was not uniform throughout all classes of stock however, while the cows and heifers in milk or in calf increased from 2,707, 392 to 2,824,509, the number of other cattle only rose from 4,279,628 to 4,-289,755, i. e., an increase of 117,117 for cows and heifers producing or ready to produce milk and an increase of 10,-127 for other cattle. These are small increases, 4 per cent. in the case of cows and heifers, and only .2 per cent. in the case of other cattle, but in considering them it must be remembered that the agriculture of Britain is much more intensive than that of the United States and other comparatively young countries and so increases in live stock will not be great. The average number of cows per square mile will give some indication of the intensity of the agriculture of a country; thus in Britain there are 44 cows and heifers in milk per square mile and in addition there are 12 cows and heifers per square mile which are in calf but not in milk, and in the United States, Iowa, Wisconsin, Vermont, and New York come first with only 24 to 31 milch cows per square mile.

The above figures show that the milch cows of Britain are increasing 20 times as fast as the other cattle. Now what are the causes of this difference in the rates of increase of the two classes of British cattle? In the first place the importations of foreign beef have increased rapidly in the last ten years and this has had a tendency to decrease the home production of beef or at least to retard its rate of increase. Then, the population of the country (especially the urban population) has been increasing and so there has been a greater demand for fresh milk. This cannot be supplied by the foreign producer and so more cows have to be kept. Again, the cost of land has gone up and also the cost of labor and the price of feeds. These three factors to a large extent determine the cost of production of both beef and milk and owing to the large increases in them the farmer has been forced to patronize the class of animals which will give the most economical returns.

It has been shown that for every 100 pounds of digestible nutrients fed, the milch cow returns six times as much edible matter as the beef animal. The cost of 100 pounds of feed is the same in each case and as six pounds of milk solids are more valuable than the one pound of edible matter produced by the beef steer, it is evident that the dairy farmer will get a much better return for the feed he supplies to his stock than will the beef producer.

At first the above factors may not seem to have any relation to the "dual-purpose" cow in England; but in fact they point to its extinction. The importations of foreign beef have an adverse effect only on the poorer classes of the home product, while the price of the better classes of beef is as high as ever it has been. The poorer quality of home-grown beef is not wanted in England, now that its place is taken by the cheaper imported article, and as it has always been produced by the "dual-purpose" animals, the beef producers have to replace them by cattle better suited for the production of the best quality of beef.

For very similar reasons the dairy farmer requires the cattle which will produce milk most economically, and these most certainly are not the dual-purpose animals. Being wanted by neither beef nor milk producers, the dual-purpose animal is rapidly disappearing in England and must ultimately become extinct.

Shorthorns were long looked on as the dual-purpose breed of England, but this idea has now been practically abandoned. Most Shorthorns are excellent beef animals but very poor milkers and so cannot be spoken of as dual-purpose animals. Then the dairy Shorthorns are excellent milk producers, but are deficient as beef animals and so must also be kept out of this intermediate class.

In Cheshire and other of the midland counties of England, the dairy Shorthorn has been bred pure for a long time and is now a typical dairy animal in both form and performance though it is perhaps not just so near perfection as the Holstein and other dairy animals which have been bred for milk production for a much longer period. The pastures in this locality are amongst the best in the world and as there are also excellent markets for milk and milk products this district is the greatest milk producing one in England. Milk recording is still in its infancy in England but undoubtedly as it develops it will do much for the production of a good race of dairy cattle.

In Scotland little mention is ever made of the "dual-purpose" animal; here they have the Ayrshire for dairy purposes and the Aberdeen Angus, Galloway, Shorthorn, and Highland breeds for beef production, and as they know that it is impossible to combine the two functions of milk and beef production, they make no attempt at evolving a "dual-purpose" breed. The average butterfat yield of the dairy cow of Scotland, though not as high as Danish yields. compares very favorably with the results obtained in other countries and the annual production is rapidly increasing under the influence of the milk testing associations.

Some of the authorities of the British Agricultural Colleges still recommend the "dual-purpose" cow though their reasons for doing so are not of the best—afraid of offending the dairy farmers they will not recommend the pure beef animal, even for beef production, and similarly they must not recommend the dairy animal lest the feelings of the beef producers be hurt. Consequently, they please very few and do much harm to the agriculture of the country.

The best animals of the so-called "dual-purpose" breeds yield beef of fair quality and a medium quantity of milk but they do not produce these as economically as do the animals which have been bred especially for the production of beef alone or milk alone and so in these days of keen competition the British farmer has no use for them. In most cases, however the beef from these half-way cattle is poor and their milk yield is small and consequently they should be termed not "dual-purpose" but rather semi-purpose animals.

The extinction of the "dual-purpose" type has been going on rapidly in Brittain but it would be much more effectual if sufficient good animals of the beef or dairy breeds could be obtained at reasonable prices. Owing to the foreign demand prices have never been higher than during the last few years and so the "dual-purpose" man, not having made much money, with his cattle, can only buy a few good animals to start with, but by breeding from these he will eventually get rid of the inefficient animals which he still has

The agriculture of Britain is much more intensive than that of the United States as a whole and so it is evident that Britain would be the first to feel the harm done by the "dual-purpose" cow. Many United States teachers and farmers already recognize the folly of breeding animals other than special purpose ones and without a doubt the "dual-purpose" animal will soon be as scarce in the United States as it is in Britain. This is an age of specialists and the cow that is a "Jack-of-all trades" and not a specialist cannot survive long.—Andrew C. McCandlish, Iowa.

(The above article by Mr McCandlish corroborates the statements made by several persons of late regarding the dual-purpose cow in Britain, Mr. McCandlish, a graduate in agriculture of the University of Glasgow, Scotland, has had a life-long experience in dairy farming in Britain, and has a good understanding of the breeding operations of that country. Several Americans who have visited England reently have come away with the same impression of the breeding operations in England as is reported by Mr. McCandlish.

From the photographs we have received of the so-called dual-purpose cow, more commonly termed the dairy Shorthorn, we are glad to believe that the form of this animal is dairy in conformation, and in the article published some months ago we called attention to this fact. Our judgment has been corroborated by Mr. Chandlish.—Hoard's Dairyman.

Foul-in-the-Foot in Cattle.

When "foul-in-the-foot" is due to what may be called common causes, it is practically the same disease, or in most respects similar, to the non-contagious form of foot-rot in sheep. Among the more common causes are acumulations of mud between the claws, giving rise to irritation and inflammation of the interdigital skin, and injuries from foreign bodies, such as thorns, nails, or metalic rubbish, often distributed about the pasture when dung is spread.

Causes of Foul.

These wounds of the foot may cause a condition akin to quitor in the foot of the horse, and , like it, most difficult to cure. Exposure to dirty, wet litter in yards, or in wet, low-lying pastures, such as give rise to the non-contagious foot-rot of sheep, also cause "foul" by keeping the horn constantly macerated, and by favoring growth without compensating wear. Cases of simple inflammation of the horn-secreting structure and adjacent skin, the result of direct irritation, may, if neglected, involve the joints and lead to disease of the bones, of the burrowing of pus and the formation of sinuses may completely disorganize the foot. Therefore, when a bullock is found to be even slightly lame, it should at once receive atention, as this may save much subsequent trouble and loss.

Symptoms of Foul.

When a typical case of "foul-in-the-foot" ocurs there is generally great lameness—lameness out of all proportion to visible disease—a peculiar separation of the digits that points at once to the seat of pain, and a swelling in the heel. Lameness is very marked, no weight can be borne on the foot, the animal lies continuously, and there is fever and loss of appetite. In the cow milk supply fails, and the flesh melts away like butter in the sun. There is scarcely any disease in which the flesh is so rapidly lost as where extreme pain exists in the feet, and to this pain the animal sometimes succumbs.

Improper Methods of Treatment.

Treatment should comence with the prompt removal of the animal from wet or dirty suroundings to a dry shed or loose box. It is of no use to apply some powerful caustic agent, such as is still too often used in the treatment of "foul" and foot-rot, and leave the animal in a wet field or dirty yard. Bleeding at the coronet, or stabbing the claws with a penknife, often none too clean, is a favorite device in some districts, particularly with cases occurring at grass in wet weather, but rarely does any benefit result, while many cases are complicated by it. Under these conditions the essentials of giving free vent to pus, the removal of all decayed, under-run, or over-grown horn, and of dry lying and cleanliness are lacking. It is a common thing, not so much, perhaps, as formerly, for a dealer or grazier to visit his bullocks in the marsh, and finding one lame to stab it between the claws with his pocket-knife, and leave it without further attention. It is difficult under such circumstances to give proper treatment, where bullocks are half wild, and there is only one "looker" in charge of scores of cattle, but it is generally a measure of economy to do at once what has to be done eventually, and so avoid such suffering the unfortunate animal, and loss to the owner.

The Right Treatment for Foul.

After removing the animal to a dry, clean place, the next step should be to cleanse the foot thoroughly, make a careful examination to ascertain the nature and extent of the mischief, and to remove anything in the shape of a foreign body. After washing in hot water, it is generally advisable to apply a poultice, the warmth and moisture of which tend to relieve pain. The bovine, lacking the training of the horse accustomed to be shod, and to have its feet picked out and washed daily, is not easily handled about the extremities at any time, and when the part is excessively tender to touch, is still less willing to submit to examination. Poulticing also softens the horn, and after removing all excess of growth, and loose and decayed horn under which pus may have burrowed, and giving it free vent, it is generally advisable to continue the poulticing for another day. With reference to paring, some discretion must be exercised. The cowman, like the shepherd in the case of foot-rot in sheep, is generally a deal too free with the paring knife, but while it is essential to remove all that is loose and decayed, and to let out pus, care should be taken to touch nothing that is sound, since denuding the foot of its horn favors profuse granulations from its sensitive parts, which are difficult to repress.

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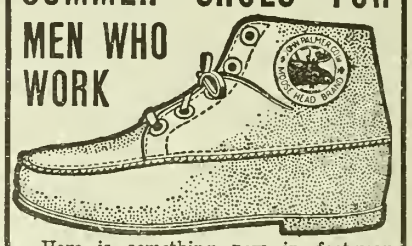

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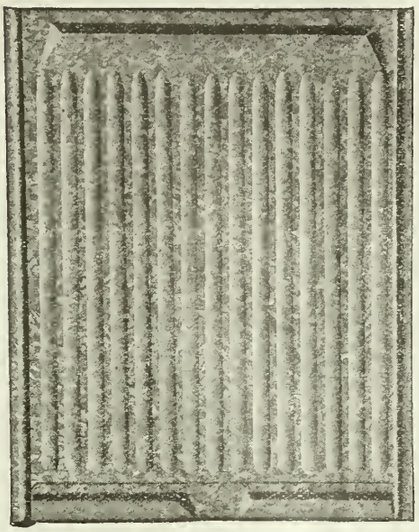
Bran, linseed meal, boiled mashed cargood plan is to twist a piece of tow into a light rope, saturate it with carbolised oil of a strength of 1 part of pure carbolic acid to 19 parts of olive oil, draw it between the claws, wind the free ends round the heel, and then confine the whole with a light bandage, and put the foot in a bag of sacking. Where the case has made some progress, and there are fungoid granulations between the claws, or at the heel. or where horn has been removed to let out pus, a useful dressing is a mixture of equal parts of butyr of antimony and tincture of myrrh applied with a feather or an ointment of sulphate of copper may be employed. There is never any need for strong acids or powerful escharotics, which do harm. A full dose of Epsom salts is always useful during the febrile stage.—Paisley Bridge

Potatos as a Food for Pigs.

I do not believe that the potato is sufficiently recognized as one of the most valuable of foods for the pigs. The average individual probably supposes that while it is an agreeable addition to the dinner-table, it is quite out of the question to assume that it is sufficiently nutritive to maintain life. But this is not so; the potato, cooked in its jacket and buttered, is amply sufficient to maintain man in healthy and muscular condition, the fat being added partly as a relish and partly to reduce the quantity consumed. I have reliable records of facts in proof of this remark. When fed to pigs the potato should form part of a mixed diet, which therefore assist in making the animal fat enough for sale at an earlier date. It is, however, the economical character of the tuber which enables it to obtain so high a position as a stock food. No form of grain will produce so much feeding matter to the acre. The potato contains in round figures an average of 22 per cent. of nutritious food, or 492 lb. to the ton; a crop of 10 tons therefore provides 4,920 lb. A crop of wheat of 60 lb. to the bushel, and reaching the average of the country, contains only 1,386 lb. of feeding matter with out the straw. As, however, ten tons of potatoes is much above the average yield, we may, in order to be fair, remark that the feeding value of 40 bushels of wheat, which contains 1,848 lb. of digestible food, still leaves the potato crop of 10 tons nearly three times as great. I have referred on more than one occasion to crops of 18 to 21 tons of potatoes to the acre which have been grown by farmers in my own neighborhood, and which in consequence still further emphasise the fact that this plant will produce much more pig food than grain, whether wheat, barley, or oats.

Uncooked Potatoes not Desirable.

There is, however, one point of importance to which attention should be drawn. Raw potatoes are not desirable food, containing as they do a poisonous matter known as solanine, which it has been shown vitiates the water in which they are boiled. Cooking, however, watever the form, renders them perfectly healthy; but the one form of cooking which it is well to avoid is boiling, owing to the fact that it causes a serious loss of the feeding matter, which consists chiefly of starch. The protein, or albuminous constituents, and the minerals which are available as food are chiefly found in the skin and the layer precisely beneath it, and it is these materials which it is so important to preserve, owing to the small percentage of the former which the potato contains and to the great value of the latter. For this reason potatoes should never be peeled, the double process of peeilng and boiling reducing the value of the tuber enormously. Steaming or baking in the skins should be invariably practised. It has been frequently shown that 4 lb. of grain will produce 1 lb. of grain in live weight during the first feeding period of a well-bed young pig. If we, therefore, take the most



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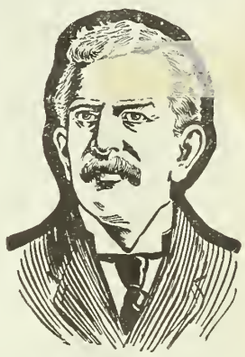

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ESTABLISHED 1861.

rots, or turnips, or scalded hops, may be used for poulticing, and the material should be frequently renewed, or the whole warmed up by dipping the foot in a bucket of hot water. In the case of what "Eight Years' Reader" calls "stinking foul," it is a good plan to sprinkle the poultice material freely with powdered charcoal, which is an excellent and powerful deodorant.

It is not advisable to continue the poulticing too long as it favors profuse granulations, and an antiseptic dressing should be applied, and the foot kept as clean and dry as possible. A common food of the pig—barley—and compare it with the potato, we find that as 4 lb. of the cereal contains 2.6 lb. of feeding matter, 12 lb. of potatoes would be required to provide the same quantity. As, however, small pigs would not consume so much, it becomes necessary to reduce it and to add barley or some other meal. Barley meal, as it is sold, is not so rich in feeding matter as barley, and for this reason more is required. When pigs have reached greater size, they are able to consume a much larger quantity of feed, and it would be well if at some time a careful experiment could be made in feeding them solely on potatoes. It is well known that store pigs can be maintained on grass, clover, lucerne, and other forage crops, without any meal whatever, but the potato is much richer than these. As mangels and beet have been improved by selection and now contain larger quantities of sugar, there is no reason why the potato should not be improved in a similar way, and to contain 25 per cent. of nutritious matter, or still more in the course of time.—Jas. Long.

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THE HORSE.

Training Young Horses.

A writer in the "Maine Farmer" offers a few points on the training of young horses. He says:—"When I was a boy, we thought it great sportto break the colts. The usual way was to let the colt run without even putting a halter on it until three or four years old then get it into some corner of the stable and put on a halter, and often the same day put on a biting harness. This was simply an arrangement for pulling the colt's head up and its nose in higher than it was ever expected to be kept when at work or being driven. Then turn the poor thing loose in the yard and let it run for several hours.

"We did not even think this was a cruelty to the colt; that was really inhuman, not to say wicked, because a 'merciful man is merciful to his beast.' There was no mercy in this, consequently, it was wicked. If the colt is properly handled, there is no need of its being 'broken.'

"The first thing is to secure the confidence of the colt; let it understand that you are its best friend. A ump of sugar now and then will be highly prized by the colt. Nothing loves sweets more than the horse, and a lump now and then to the colt will soon have it following you about, teasing for more. Accustom it, when only a few days old to wearing a halter by putting on a light one for a day or two at a time and leading it around. When only a few weeks old, put on a light collar and back band to which the collar can be fastened, so as not to slip off when the colt puts its head down, and let it wear these for a few hours at a time. Before it is weaned, it should have a light harness put on and be driven by the side of its mother until fully accustomed to the lines. Its feet should be taken up and handled and pounded upon with some light thing until it is accustomed to have them handled in any way desired.

"When a year old it should be harnessed by the side of a genttler horse, preferably its mother, and hitched to some light vehicle without a load, and driven until fully accustomed to the use of the reins. Accustom it to robes and blankets, so that no matter where it sees them, or how they may be thrown against body or heels, it will not be frightened. Never atempt to teach the colt more than one thing at a time, and the first and most important thing to teach the colt is the word whoa. Let it understand that 'whoa' means stop, at all times and under all circumstances. Never couple any other word with it. 'Gee' and 'haw' and 'back' are important words and should be taught, but 'whoa' is by far the most important, and if thoroughly taught will save many a catastrophe.

"But in training the colt, whatever else you do or don't do, never lose your temper, nor speak harshly, or unkindly, or in an excited manner,psotnaeser ly, or in an excited manner. If you get excited and lose your head, you must not blame your horse for doing the same."

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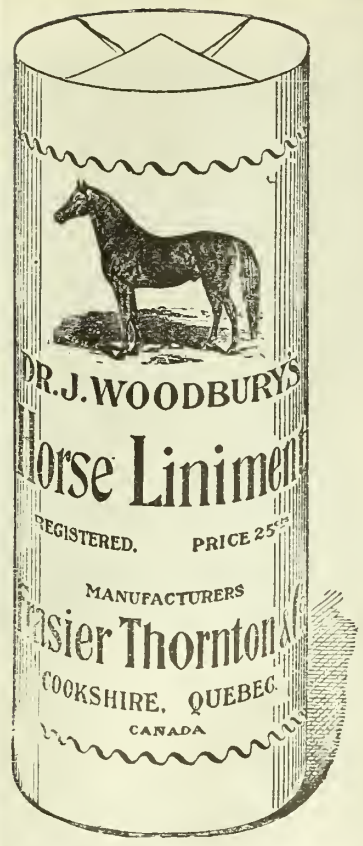

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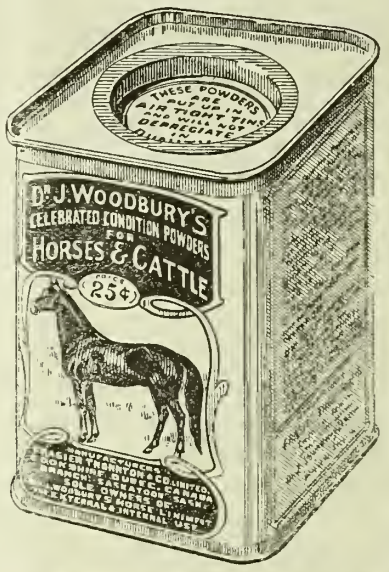

The Renewal of Hair On Broken Knee.

A question that generally exercises the mind of the owner of the horse that has been "down" and cut his knees, when he finds on healing that the cicatrix is bald, is what will make the hair grow? It is one that can rarely be answered satisfactorily, and more rarely still is the desire of the owner for a quick reproduction and a perfect covering realized.

The amount of blemish left after healing is complete depends on the amount of damage done to the true skin. Where true skin has been cut away, or has subsequently sloughed and the hair follicles have been destroyed, there is no agent that can reproduce growth. True skin is never renewed, and this is why in operations, and in wound surgery, so much care is taken to preserve every particle. Hair cannot be made to grow under these circumstances, and it is as idle to expect that it will as to produce a new crop of bristles on a worn-out water brush by applying a hair "restorer", but there are agents that have a stimulating effect on the hair follicles if they are intact, though damaged. Even in slight wounds of the front of the knee the hair often grows the wrong way, and leaves a roughness that a careful examination will detect. Under such circumstances, it is a common practice to shave both knees, and apply a m ld blister—preferably a cantharidine one.

This is, perhaps, the best method known of preventing the detection of a slight injury. There is always a fear, or feelng, of uncertainty about buying a horse that has been "down," be the blemish ever so slight, but how far this is justified, depends, of course, on the circumstances under which the accident occurred, or the cause that gave rise to it. Some blister a badly broken knee as soon as it is healed, for the double purpose of exciting the absorption of superflous material brought to the spot by Nature in effecting repair, and of stimulating the growth of hair, which is one effect of the application of vesicating agents where the hair follicles are intact. Sometimes the hair over a contused knee wil grow white owing to the absence of pigmentary matter. Here there is no remedy except to dye it, or, if the white hairs are few, pull them out with a pair of fine forceps. Diluted mercurial ointment, popularly "trooper's ointment" or "blue unction" stimulate the growth of hair, and if a mixture of one part of mercurial ointment and three parts of lard is stained with a little lamp black, or with lamp black and a touch of Venetian red or American bole, in the case of chestnuts, to match the "points," it serves a double purpose—stimulates the growth of hair, and at the same time hides the blemish.—Pateley Bridge.

Dealing With Kickers.

Kicking is a problem with which breeders and owners of horses will always have to contend. In attempting to deal successfully with the habit some horses have of kicking at persons or other animals in the stable, the disposition of the offender must be carefully considered. It will not do to adopt the same plan of procedure, for all cases, as a plan which may be perfectly successful in some cases would be worse than useless in others.

Some horses are not naturally of a vicious or sulky disposition, but have learned to kick solely as a result of bad treatment. This is the most general cause of bad tempered horses, and in order to overcome the habit the proper thing to do is to try to reestablish the confidence of the animal and to make him forget his hostility by consistently kind treatment, combined with frequent atentions, when the horse is in the stable. If the habit is not of too long standing and has not become completely ingrained in the horse it may be eradicated by these means.

Horses which are vicious by nature or inclined to be so, someimes get into the habit of kicking at persons without any real provecation and simply as a result of either excessive high spirits or of sheer vice. This is particularly liable to occur with the young horses, and with those which are underworked and kept standing idle in the stable a great deal while at the same time being highly fed. The fact of a horse being "restive" owing to too little work and too much grain, is very apt to bring outt any vicious tendencies which may be latent in his nature.

In those cases in which a natural propensity toward viciousness, or the high spirits and unruliness which are often found in young horses, give rise to the habit of kicking, drastic measures must be taken in dealing with them, if the habit is to be overcome. The offending animal must be treated with great firmness and rquires to be kept in complete subjecttion. Whenever he kicks, or offers to do so, he should be sharply called to order, and the offence must never be allowed to pass unnoticed, as to do that merely encourages the horse to repeat it. Unless the animal, n such cases, is kept well under control and is firmly treated, he is most apt to take increased liberties, the habit gradually growing worse, and it may finally become so ingrained that eradication is impossible.

Punishing Kickers.

As to punishing horses in these cases when they kick, this depends entirely upon circumstances, and due discretion must be observed. In many cases actual punishment would certainly make matters worse and serve to aggravate the habit instead of counteracting it. To hit horse s in the stable with a whip is very often a sure way of making them kick, and a horse can be turned into a pronounced kicker in this manner. In some cases, however, the infliction of punishment on an incipient kicker by means of a cut with a whip whenever the animal kicks is attended by satisfactory results and helps

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to stop the habit. It depends upon the disposition of the horse whether it is advisable or the reverse to inflict punishment in the stable in dealing with vice or youthful unruliness. In any case great discretion must be exercised in regard to this question, and in the majority of cases punishment will be out of place and harmful. With many horses which are unruly in the stable, and evince their unruliness by kicking, plenty of hard and regular work is all that is needed to render them more amenable and better behaved and to stop the undesirabe habit (says a writer in "Indiana Farmer") In breaking a horse of any vice it is necssary always to take advantage of the limitation in his mind that makes him reason almost wholly from experience, and to convince him that after all your will is superior to his and that he has no alternative but to obey you and to do gently and quietly. Show him that it is in your power not only to handle him as if he were a toy, but handle him very roughly, if you desire.

Heat Resistance in Horses.

It is a well-known fact that there is a great difference in horses in regard to their ability to stand heat. On almost any farm there are some horses which never appear to be affected in this way, while others puff and pant when worked anyway hard on an oppressive day. Then again, some farmers have much more trouble with this than others even though they do more work with their horses. It is a common beief that a gray horse resists heat better than any other color, but frequently black horses are found that seem to notice the heat less than gray ones they are working with. Two factors seem to determine this heat resistance; these are inborn vitality and the vigor resuting from good care. If the former is present, the latter can easily be supplied by a careful farmer, and there is very little excuse for so much trouble in this regard.

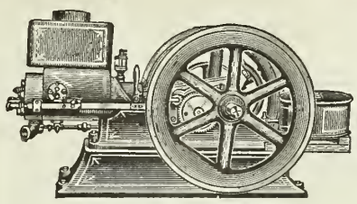
Inborn vitality is best represented by quality, and though this is usually taken as an indication of greater durability of legs and feet, it indicates equally well such things as general fineness, not only on the outside of the body but in the inside. This means greater power of digestion and greater assimilation of the food; more life and greater power of resistance, to not ony heat but any other stran that the horse may be subjected to. Consistent high selection will go further to remedy this side of the complaint than anything els.

Bones of Light and Heavy Horses.

Definite information concerning differences between the bones of light and heavy horses has been obtained by B. Hardt, of Jena University, Germany.

Upon chemical analysis of many specimens of metacarpus or front cannon bones of draught horss contain more organic matter and less mineral matter than those of light horses. There are also some minor differences in composition, but he concluded that there are greater differences in form and strength than in chemical composition of the bones of the two types. This supports the common statement of the horsemen, that the bones of light horses are generally harder than those of draught horses, for the hardness of bone and its strngth are known to increase with additional percentages of mineral matter.

Since there is a general co-ordination of structure throughout the body, the texture of the skin and hair furnishes an index to the character of the bones. Smooth skin and fine hair are generaly possessed by light horses, and particularly by those retaining sound legs to old age. When the same quality of hide and hair is found on the cannons of a draft horse, it is a fair assumption that there is a corresponding density of bone. The reputation of such horses for soundness or underpining supports that concusion.



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POULTRY

Poultry Diseases.

Egg Eating

Causes. Usually an insufficient supply of lime, or material to make egg shels. Seeing another hen with the habit and following her example.

Treatment. Go to a restaurant or hotel and have a pail of egg shells saved up for you. Dump these in the yard in front of the chickens; tramp on some of the shells and leave the others as they are. This one dose should cure the egg eaters; if it does not, get another pail of shells, and keep a constant supply of them on hand. This is a positive cure for egg eating. Do not give the hens an egg shell doped with mustard, or similar so-called cures. There is nothing to them.

Feather Eating.

Symptoms. The birds stand and pick the feathers from one another. Usually the hens pick feathers from the male's hackle first.

Causes. Insufficient exercise. Feeding too much grain and heat-forming foods. Lack of green food and mineral matter.

Treatment. If only one pen is affected drop a piece of sulphur the size of a cherry into the throat of each bird. Repeat the dose the third day. Boil oats until soft and plump, and into a pail of this mixture stir a good pinch of salt and a quart of beef scraps. If youhave not the beef scraps, boil a nickel's worth of cow's liver and cut it up fine. Feed the oats and meat every morning. Cover the floor with deep litter (preferably cut clover or clover chaff) and keep the fowls busy scratching the whole grain during the day. Give sour skimmilk to drink if you have it. Watch the feather eaters, and if they continue the practice under the new system of feeding, remove them from the pen. We have cured feather eating by giving food to cool the blood, and making the fowls take more exercise. We had quite an experience with this disease when milk-feeding chickens in small crates for market.

Gapes

Symptoms. The chick continually opens its mouth, or coughs without making much noise. It ends each cough with a twist of the neck in trying to throw up the worms in the windpipe.

Causes. The presence of small red gape worms in the windpipe. The male worm is smaller than the female which becomes filled with eggs, and when these are mature the worm dies and the eggs are thrown out on the ground in a spell of coughing. The eggs are eaten by other chickens and the young worms find their way to the windpipe of the new host.

Treatment. A gape-worm extractor, a feather stripped of al the web except at the tip or several horse hairs tied together, can be dipped in turpentine and inserted in the windpipe. By twisting the extractor around and removing it, usually from one to three worms will be found.

Probably the simplest way to cure this disease is to place an ounce of carbolic acid in a saucer and heat it over a lamp. Dense white fumes will arise in which the chicken's head is held until it is almost suffocated. The idea is to kill the worms, without quite killing the chicken. Another remedy is to puff a mixture of one ounce powdered chalk and one-half ounce finely ground camphor into the chicken's face and down its throat. Another is to nsert a few drops of oil or eucalyptus with a medicine dropper directly into the mouth of the windpipe. I have never tried this treatment, but it is well recommended and sounds reasonable. In addition to killing the worms in the windpipe it is necessary to spade up the ground, and disinfect the pramises by scattering lime around. The eggs and embyro gape worms live in damp ground, edges of pools and in and around drinking vessels. The eggs hatch in a week to a month, according to conditions.

Limberneck

The following is compiled from instructive articles on this disease which appeared in recent issues of The Standard by Mr. Cavanaugh and Mr. Young.

Symptoms. Limberneck comes on gradually and often takes several days to kill the fowl. The first sign of the disease is the swinging of the bird's head and neck; then the head hangs down and the muscles of the neck seem to have lost all power to hold up the head. At the first symptoms, the fowl may be easily cured, but at the last stages, the case is almost hopeless.

Causes. Many breeders believe that limberneck is caused by fowls eating maggots, on account of the throat containing maggots, but this is a mistaken idea. Poultry is not injured, as a rule, by eating maggots, but by eating decayed flesh and rotten vegetables. In running at large the fowls discover some dead animal being devoured by maggots, and in picking up the maggots the fowls eat sufficient decayed matter to stop digestion. It is a well known fact proven by years of observation, that when a fowl swallows unfit food, this food is retained in the crop and not allowed to pass down into the gizzard.

Other animals often have the power and to vomit unfit food, but the chicken either can't throw up or has not the sense to do so. When poison, decayed food, or other injurious substance is swallowed, the fowl will retain it in its crop, an dthe poison and the good food will remain in the crop until the fowl starves to death, or the offensive stuff is removed.

Treatment. The method we have used to cure this disease is simiar to teh one we use in curing fermented crop, cropbound, or pendulous crop. We have a fountain syringe, and catching teh diseased fowl we wrap a cloth about its bobdy, wings and legs, allowing only the breast, crop, head and neck free. After filling the syringe with luke warm water to which we have added a few drops of Zenoleum, Carbo-Negus, or carbolic acid, we insert the rubber hose of the syringe well into the crop, through the mouth and neck. We allow sufficient water to flow in so that the crop is puffed out quite large, after which we remove the hose and holding the fowl's mouth open with the forefinger and thumb on the left hand, at the same time stretching the neck out straight with the head down, we squeeze the crop with the right hand, after the fashion of a rubber ball and allow all the contents to run out. This stunt is repeated several times, or until we are certain the crop is free from the injurious matter and clean and empty. A little milk is given the fowl along with a few pieces of clean, fresh charcoal. This is a simple and almost certain method of curing limbercnek.

The above is Mr. Cavanaugh's method. Mr. Young had fifteen or more birds affected with imberneck and cured all by the following treatment. He gave each a piece of gum camphor the size of a wheat kernel, and washed it down with a teaspoonful of kerosene. This dose he repeated the same evening or in about eight hours. At noon the next day the kerosene alone was given. Mr. Young not only saved every bird, but generally cured them the first day.

Other readers have tried Mr. Young's remedy and found it a satisfactory cure in every case.

Mr. Forest has another. One tablespoonful peroxide of hydrogen in three tablespoons of water. A small syringe was used to inject the mixture down the throat and prevent waste. The pullet was in a bad way with limberneck. Mr. Forest reasoned that peroxide must disinfect the crop and remove the trouble. It did. In ten hours the pullet was singing happily.

Pip.

Symptoms. A hard tip forms on the end of the tongue, and the latter bends around in circular shape, as shown in the illustration.

Treatment. We do not know the cause, (it is said to be breathing through the mouth), but have had three cases. The first we cut off the hard tip of the tongue, as was recommended. The bird died. The other two cases, we simply softened the tongue with vaseline and fed the birds on nourishing foods. After about two weeks the tongue resumed its natural shape and the birds were as well as ever.

Roup.

Symptoms. Eye inflamed and closed and filled with offensive matter. Nostrils closed in the same way. Face swollen. Offensive smell.

Causes. Practically the same as under "canker."

Treatment. Follow the first paragraph of the treatment recommended for "canker." To treat the sick birds, take a quart dipperful of warm water, and color it purple with permanganate of potash; add a half teaspoonful of Zenoleum or Carbo-Negus to the mixture. Souce the head of every roupy bird in this mixture, so that it reaches all the passages in the nostroils and eyes. Keep the little finger of the left hand between the bird's bill and keep its mouth open. Place the sick away from the others in well ventilated coops. Give nourishing food, seasoned with ginger. Conkey's Roup tonic and hroup tablets are well spoken of by our friends for use in getting rid of the after affects of this disease. They are convenient to use.

Scaly Legs.

Symptoms. The shanks and feet are covered with light yellow, powdery looking growth that spreads all over

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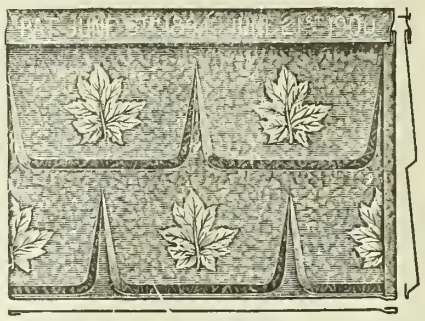

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them. From time to time particles of the growth drop and the legs present an unsightly appearance.

Causes. The disease is caused by a mite burrowing into the scales of the shanks. One fowl can transmit the disease to an entire flock.

Treatment. First take a tooth brush, soap and warm water and thoroughly wash the legs, removing all the crusts that are loose. Smear over the legs carbolated vaseline, or whiskey and sweet oil (3 ker. to 1 oil), Zenoleum and sweet oil (3 ker. to 1 oil), enoleum and oil, etc. The legs should be well cleansed with warm water and soap two or three days after the treatment. If the disease is not eradicated, repeat the remedy.

Sorehead or Chicken Pox.

Symptoms. Light colored specks, about the size of a pin head, appear on the comb or face. These specks grow rapidly into warts from one-eighth to one-quarter of an inch in diameter, and dark brawn in color. There are two varieties of pox—the dry and the moist. The dry has been described; the moist affects the eye and fills it with a frothy white substance.

Causes. The disease is caused by a fungus "aspergillus fumigatus," the spores of which are always present in the atmosphere. This is the common white mold of bread, but it works serious havoc when it attacks any living organism. The disease is prevalent in damp, cold weather. It is exceedingly contagious, but when it appears in a flock there is no necessity for isolating the afflicted bird The entire bunch is affected at once, and the birds that do not fall to the disease at once are not likely to take it later.

Treatment. Color the drinking water pink with permanganate of potash. The birds that have warts should be caught and the crust of each wart removed. The underneath tisue will bleed. Dip a clean feather in a bottle of pure Zenoleum or Carbo-Negus and touch the raw tissue of each wart with the liquid. The next morning the treated wart has a black scab over it. which dries up and falls off in two or three days. At that time the underneath flesh has healed and in a week one cannot detce where the wart had been. A white scurf appears on the comb and face. When the bird is recovering, the scurf should be rubbed off with a cloth moistened with vaseline. Remember it is absolntely necessary to remove the crust of the wart and apply the remedy to the raw tissue underneath the crust; otherwise, the raw remedy cannot get at the root of the trouble and kill the fungus.

Where the head is a mass of sores, the treatment consists in painting the entire head with pure Zenoleum three times a day. Do not try to remove the sores, but let them dry up and drop off of their own accord. This treatment will cure sorehead, even when the entire top of the head and both sides of the face are affected. We have personally proven it.

Dropsy of Wattles.

Symptoms. Wattles become enlarged and filled with fluid, either as the result of an injury, cold weather or disease.

Treatment. With a clean penknife open the wattle at the lowest point. Squeeze out the fluid, and isinfect the interior by putting the wattle in a cup of warm water with a little Zenoleum in it, and pressing the wattle. By keeping it in the water and squeezing several times, the interior can be cleansed.

White Diarrhoea

Symptoms. This is the common name of a disease or condition that afflicts little chicks under ten days old. This term is applied to this condition on account of the white discharge that passes from them, and in many cases becomes attached to the rear fluff. The chicken is then said to be "pasted up behind." It stands with wings dropping, does not move around much, and from time to time utters distressed chirps.

Causes. Numerous. The most common is a chill during the first three days. The use of decomposing food, such as wet mashes which have been left to sour within reach of the chicks. Covering the floor of the brooder with musty straw or litter. Feeding musty grain. Over-feeding. Poorly ventilated brooder house or brooders.

Treatment. Kill the chicks that are in trouble as they will die anyway. Study the conditions under which your chicks are kept with great care and try and ascertain the cause of the disease. Then overcome it. Nine times out of ten the remaining chicks can be brought beyond the danger age if the litter is removed, the brooder cleaned out and washed with a solution of Zenoleum in water. Then cover the floor of the brooder and run with 2 inches of freshly-dug black garden soil, and over the soil scatter a 1-inch layer of clean clover chaff, or clean short litter of some kind.

We spoke to a man in Kansas City who lost hundreds of chicks with white diarrhoea, because he used baled straw which was musty. As soon as he learned that musty straw was one of the causes of this disease, he tried covering the brooder floor with cut clover instead, and the white diarrhoea disappeared like magic.

Get your tinner to make a shallow trough 2 ft. long and 1½ in ch across the opening, that can be tacked to the wall of the chick pen with the upper edge about three inches above the ground. In this trough keep a mixture of equal parts of dry rolled oats and bran Let the chicks eat all they want of this food. Scatter small grains among chicks kept indoors in close in the litter above the earth to keep them busy exercising their limbs, and quarters. Fresh air is a good remedy. if you maintain the heat of the hover compartment of the brooder at 90 degrees from the first to the tenth day, you will not have any trouble with white diarrhoea. This disease does not affect chickens over ten days old, or adult stock. It is more prevalent

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"SUCCESS" :: *By J. Lee Flewelling*

(Continued from last issue.)

"Yes, I remember it very well, and I knew by the look in your eye that day, that you meant it, too. What do you say Mr. Ruddock, will you accept the position?" After a few moments of thought, Charlie said, "of course sir, I accept, and am very grateful to you for the preferment, and will try to so conduct myself, and the business, that you will not have cause for regret. What will the men say?"

"You won their esteem, I judge when you trounced their champion and displayed such modesty afterwards, and I think you will have little trouble with them. Perhaps I had better announce the matter to them myself in the morning.

There is a large shipment of goods by the boat tomorrow, for Northrup & Co. of Newburg. I will give you the memorandum now, you can put them to work on that first thing, I will probably not be down before 9 as usual."

Then rising and shaking hands "I congratulate you most heartily Mr. Ruddock. If you are at liberty tomorrow evening I will be glad to have you dine with us at 7.30, and accompany my daughter and myself to the theatre, afterwards. Mina has been teasing me to take her as it is Ada Rihan's last appearance this season."

"Thank you very much Mr. Pieno, both for your invitation which I gladly accept, and for my appointment to this honorable and responsible position."

Our young manager went home in the highest of spirits. When he told his friend the German, of the great change made in his affairs, for he had found a firm friend in the latter, that worthy (aid. "I be mooch glad for yours sake Charlie, you pe vat we say, grit to the back bone. I guess the Captain wont have to pay some of his monies for your word now. Ha, Ha."

"I think," said Charlie, "Captain Jarrows will be glad to hear the good news."

The next morning Charlie took his place in the stern, and when the time arrived, put nearly all of them on the Newburg Shipment. He had taken charge several ti es during Mr. Brown's temporary absence, at the request of the latter, so no comment was made. Some one asked concerning Mr. Brown, and the reply was, he could not be here this morning."

When Mr. Pineo came in at 9, Charlie was able to announce that the Newburg order was nearly ready for shipment. "Well done, boys," said Mr. Pineo, "I guess you have beaten the record this time."

Now men, I have an announcement to make to you. At this, all work ceased, and all faces turned eo him expectantly. Mr. Brown, our late manager has been offered a more lucrative position with another house, and with my consent, he has accepted, and will not be here any more.

I have chosen a very young man, as his successor, but one who has shown himself to be in all ways worthy of the position. I could not call any young man to so responsible a post, without having most carefully examined into his fitness for the same. I am thoroughly satisfied.

It will be necessary, that you for your parts, should give prompt obedience, and willing compliance with his orders, and I will have no use, of course, for men who will not do this.

Now let men introduce to you, my new manager, Mr. Ruddock," and Mr. Pineo bowed, and walked in towards the office, ere he reached it, the warehouse rang with the cheers of the men, led off by Mike.

The men crowded round to shake hands with their new Boss, and to congratulate him.

"Sure Mr. Ruddock, said Mike, who was the first to grasp the hand of our hero, you've made a better man of me since the day you gave me the licking, and its because you took me to "Temple of Honor" and helped me back again when I broke the pledge, and stayed my friend always, that I'm a temperate man this day. The little woman at home has taught the children to pray for you each night, and God knows their innocent prayers have done you no harm any how. It's no more Charlie, its Mr. Ruddock now me boys and the fellow that don't jump when he gives the word, must settle with Mike Daley."

"Well my men" said our young friend, "this was a great surprise to me, last night as it is to you now. I never had a thought of it when Mr. Pineo called me to the office," and with a smile, "I didn't get my discharge this time. Let us all do our duties cheerfully, in our different situations, and you will have no occasion for complaint.

Now boys let us get this Newburg order completed and Saturday night we will have the oysters at my expense."

With another cheer they all set to work with a will and the large warehouse was again a busy hive of industry.

That evening our hero put on his dress suit, and presented himself at the residence of Mr. Pineo on Fi.th avenue. He was most hospitably received by his employer, and introduced to his daughter Mina, whom Charlie found a most charming young woman, and as at dinner Mr. Pineo, knowing his cleverness, took pains to draw him out. Miss Pineo was agreeably surprised to find that she enjoyed the dinner, and the stay at the opera house, afterwards, much better than usual.

The next Sunday, as they were returning from their morning service, they met young Ruddock, who lifted his hat smilingly, in answer to her recognition.

"Papa when you spoke of bringing that young man to the house, I dreaded the encounter, I thought to find him a diamond in the rough; I knew him to be clever in business from what you had said of him, but thought he was unfitted for society; but now I think he is one of the finest gentlemen I have met.

"Yes," said her father, "Mr. Ruddock is a gentleman, and you will never have occasion to blush for him."

"Why papa, he is much better educated, I judge, than I am, on whom you have spent so much money. His conversation is most interesting and instructive too, so different from that of the ordinary young men I meet and how handsome he is too. Do you know, as I looked around the opera house last night, I thought that the handsomest old gentleman, and the handsomest young gentleman were both in our box."

"Oh! You little blarney," said her father, "I believe you are fishing for a compliment, and those who go fishing on Sunday don't deserve to catch anything, so I'll not tell you what I thought. He is a gentlemanly and clean young fellow as I took pains to ascertain before introducing him to our home and I will never feel uneasy about you when he is with you."

"Do you wish to have him with us often, papa? Your words seem to imply that."

"Yes, it will be an advantage to the young man, and it will be for the benefit of the business, too; we often need to talk over matters more fully and freely than we can at the office. I am getting along in years, and will soon be too old to have the full charge of the business, and I am greatly surprised if that young man does not prove the one I need to lighten the load for me."

The next time Charlie called, Miss Pineo chanced to have some young friends with her to whom he was introduced and the evening passed so pleasantly that he was glad to repeat his visit some time later. She introduced him to all her friends with some pride, and he was by them invited to their homes, with the result, that very soon all the best houses were open to him, and he might have become a brilliant member of society; as he said to Mr. Pineo, he did not care to go far in this direction, for late hours had a tendency to make the brain flabby and less suited for the demands upon it. Still he went now and then to some parey, that he might escort Miss P neo home, when her father did not care to remain to a late hour.

One evening as they were sauntering home from a whist party which they had attended, and whence both felt they had rather walk, as it was a lovely moon-light night, than to have the carriage which Mr. Pineo offered to send round for them, she told him something of her past life; how her mother had died when she was only ten years old, and how it had seemed to her that her father had in a large measure, taken her place so kind and affectionate had he always been.

On her return from the Seminary at Wellsley, some six months previously, she had taken the reins in her own hands and assumed the control of his household. Charlie in return told her of his past life, and the fact that he had lost both parents, at the same age at which she lost her dear mother seemed to form a bond of sympathy between them.

This passed away another year and during this time Mr. Pineo never had cause to regret that he had made choice of our young friend manager.

The work went promptly and without a hitch, and the men seemed to grow more fond of, as they termed him, 'our Mr. Ruddock.'

One afternoon Charlie came to the office, just as Mr. Pineo was about leaving, and said, "Can I have a few words with you sir if you are not in to great a hurry?"

"Certainly Mr. Ruddock, you have such a long face,—I hope noehing serious has gone wrong. Sit down opposite me and I guess we will be able to straighten matters out, if not it will be the first time we have failed to do so."

"I hardly know," said our hero, "how to begin."

"There is no difficulty with the business. It is a private matter. You introduced me to your home about a year ago and you and your charming daughter have made it so pleasant place for me that I have been their quite frequently, and especially of late, and I have thought it right to tell you that I cannot go there in this way any longer.

"It would ,scarcely be right, for me, with my prospects, to aspire to the hands of your daughter, and I have come to love her so dearly, that I fear to trust myself with her, lest

A WOMAN'S MESSAGE TO WOMEN.

If you are troubled with weak, tired feelings, headache, backache, bearing down sensations, bladder weakness constipation, catarrhal conditions, pain in the sides regularly or irregularly, bloating or unnatural enlargements, sense of falling or misplacement of internal organs, nervousness, desire to cry, palpation, hot flashes, dark rings under the eyes, or a loss of interest in life, I invite you to write and ask for my simple method of home treatment, with ten days' trial entirely free and postpaid, also references to Canadian ladies who gladly tell how they have regained health, strength, and happiness by this method. Write today. Address: Mrs. M. Summers, Box 309, Windsor, Ont.

TWO WOMEN SAVED FROM OPERATIONS

By Lydia E. Pinkham's Vegetable Compound—Their Own Stories Here Told.

Edmonton, Alberta, Can. — "I think it is no more than right for me to thank you for what your kind advice and Lydia E. Pinkham's Vegetable Compound have done for me.

"When I wrote to you some time ago I was a very sick woman suffering from female troubles. I had organic inflammation and could not stand or walk any distance. At last I was confined to my bed, and the doctor said I would have to go through an operation, but this I refused to do. A friend advised Lydia E. Pinkham's Vegetable Compound, and now, after using three bottles of it, I feel like a new woman. I most heartily recommend your medicine to all women who suffer with female troubles. I have also taken Lydia E. Pinkham's Liver Pills, and think they are fine. I will never be without the medicine in the house."—Mrs. FRANK EMSLEY, 903 Columbia Avenue, Edmonton, Alberta.

The Other Case.

Beatrice, Neb.—"Just after my marriage my left side began to pain me and the pain got so severe at times that I suffered terribly with it. I visited three doctors and each one wanted to operate on me but I would not consent to an operation. I heard of the good Lydia E. Pinkham's Vegetable Compound was doing for others and I used several bottles of it with the result that I haven't been bothered with my side since then. I am in good health and I have two little girls."—Mrs. R. B. CHILD, Beatrice, Neb.

I betray your confidence and let her see how dear she is to me."

"What's the matter with your prospects, young man?" asked Mr. Pineo. "Here you are manager in a large business, you have a good social standing, and you seem to be steadily growing in popularity with the men of the ward:— I know something of the work you've been doing among them, and if you sought Civic honors you could climb to almost any position you might wish. Besides all this, as I am beginning to feel my age, and the cares of the business, I have been thinking of offering you a partnership to commence with the new year. Talk of your prospects, how does that one suit you? And more than that, if you have won Mina's affections let me tell you man, I don't know a young fellow in this city that I would rather give her to. You had better come round to night and settle matters. If I can read the signs aright you need not have any great fears concerning the result." Charlie with tears in his eyes gripped the hand of Mr. Pineo until he made that gentleman wince.

"You are too good to me," he said, "I cannot properly express my gratitude, but if I have won Mina's heart (and I cannot help hoping) it shall be the greatest effort of my life to make myself worthy of your confidence."

When he presented himself at Mr. Pineo's residence that evening, and when he saw the glad light in Mina's eyes, and the conscious blush, he felt that her father must have given her an inkling of what was coming. As he was no laggard in love he took advantage of their being alone, and told her in manly terms, and in burning words that she long remembered how dear she had become to him and pleaded for the priceless boon of her hand. If you can trust yourself to me dear, he said in conclusion, you will gladden my whole life, and I will devote that life to you. Can you, Mina?

"Yes Charlie," she said, for I have learned to love you dearly." The next moment she was in his strong arms and their lips met in the sweet and loving kiss of betrothal.

When Mr. Pineo entered the room, Charlie led Mina up to him, and said "this dear girl has promised to be mine and we crave your blessing."

"You have it my children. May God bless and keep you and may you both be very happy.

And now Charlie, the business requires that one of us should be in Paris by the end of next month. I do not believe in long engagements. What do you say Mina; can you be ready to go with him? While I dread the journey it will be a nice bridal journey for you two, and the business will not require that Charlie will have to leave your side much, and besides it will give you a chance to know if Madam Toussian has learned you the proper French accent, or not. You Charlie, I know speak French fluently. I cannot consent, my boy, to lose my only child, I would much rather have two instead. This house is large enough for us all, and when you return, I will see that it is ready for you,and let us henceforth live together.

To this our hero readily assented, and all came out as Mr. Pineo had planned.

They were married on Christmas Eve, and started New Year's Day on their bridal tour, which was to combine business and pleasure.

They spent three weeks at the French capital and one week in London, and then embarked for home. They had a pleasant time across and enjoyed the trip, even at that time of the year. A pleasant surprise awaited them as the carriage which had met them at the pier turned in at their own gateway.

A superb arch, ten feet high, of most elaborate design, done in Fir, Spruce and other pines, circled from one massive gate post to the other and had the motto

Welcome
To the working man's friend
And his Bride.

This was the work of the firm's employes, and of other members of the labor union.

Ever since his first coming to New York, Charlie had been much interested in what might be termed the labor problem, and had in his way done what he could for the uplifting and improvement of the working men and their families, as he came in contact with them through the "laborers union" with which he had early identified himself.

This tribute, showed how much they appreciated his services, and made him resolve to continue his work along this line for the future.

He saw readily that the position to which he had attained, would give him increased facilities for doing so.

He never forgot the lessons he had learned when he was in the ranks himself.

Our hero, still continued to conduct the business of the firm, with unabated zeal, and under his able management, it expended to such an extent that in a few years ":Pineo & Ruddock" was counted one of the wealthiest, of the many wealthy firms of Pearl Street.

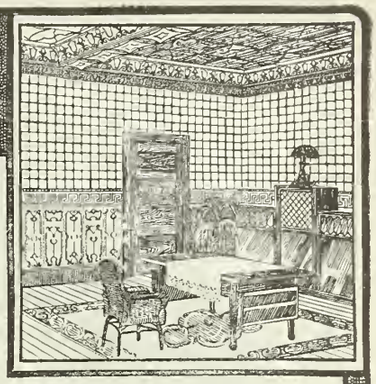
Prosperous and happy with a young family growing up around him, our hero furnishes a bright example of the fact, that poverty or humble position need be no bar to the advancement of any young man, but may rather be as it was in his case, but the incentive spur, to goad one to success.

School Improvement

The purpose of this paper is not to outline any comprehensive and original scheme for the improvement of our schools; nor to criticize, except favorably, the steps taken towards that end in the past. You will not, I assure you, hear anything you do not already know, nor is it necessry for we all know considerable about "School Improvement," although we may not have our ideas on the subject properly sorted and ordered, so as to be able, as it were, to lay our hands on the most important. With this in view, I purpose in this paper to repeat some things we all know and believe but which nevertheless cannot be repeated too often,— for we are all prone to forget. By constant repetition these truths may saturate us completely and then find expression in our daily lives.

It is important that districts should improve the appearance of their schools or should they disregard the surroundings and devote all their attention to the purely intellectual side of school life? I certainly think that the surroundings should receive even more attention than they do at present. We judge a man, and justly so, by the appearance of his property. If his property is neat, clean and tidy we may be sure that the owner has those same virtues in himself, anh we instinctively associate him with honesty and uprightness of character. If, on the other hand, his property has a dismal, slovenly or tumbledown appearance, most likely the character of the owner will be found to correspond to the appearance of his property. Can we not then without any injustice judge a district by the appearance of the School, which is their common property? I believe we can, and this is one reason why I think the surroundings of many schools suffer fram the lack of attention. I remember to have read somewhere that if one wished to visit the Schools of Prince Edward Island, one need never make any inquiries as to their location, but simply pick out the most dismal looking building in the settlement. This, of course, is an exaggeration, things are not nearly so bad as that, but the school should be the neatest, cleanest, freshest and most cheerful building in the district. Besides this, from the purely educational standpoint the surroundings of schools should be improved. We all know how impressionable children are; how they see and hear so much more than their elders. And we know too, how the ideals that will govern them throughout life are formed in childhood. If boys and girls are brought up in an atmosphere of neatness, cleanliness and tidiness, these qualities will soon become second nature to them and when they become men and women they will show forth their early training. Will not the surroundings of the school in which a boy spends almost one-third of his waking hours have a great influence on him? And will not beautiful surroundings be a great object lesson to him? Besides this, it cannot fail to be a great incentive to him to take

Sanitary, Fire-Proof Walls For Your Home



Let us show you how you can make your house more attractive, fire-proof and sanitary by using

"Metallic" Ceilings and Walls

This steel interior decoration is very inexpensive. We make it in innumerable beautiful designs that will be sure to please you. Easy to put on over old plaster without muss or fuss. Will out-last any building. Settle your wall and ceiling question for all time by erecting "Metallic" ceilings and walls. Write for complete information.

We Manufacture all kinds of Sheet Metal Building Materials. 10

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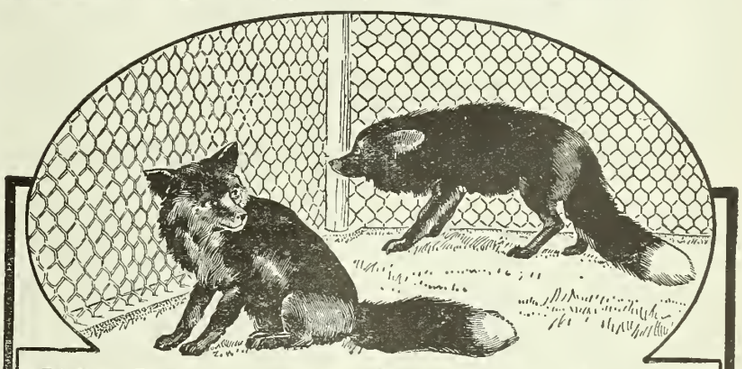


Big Money Inside The Fence

Yes! There's big money behind the wire netting of a Black Fox Farm. That's why so many owners of ranches for fur-bearing animals buy MARITIME NETTING. They want to feel positive security about the valuable animals inside the fence.

MARITIME Wire Netting is galvanized after weaving—no little places missed or unprotected crevices that will corrode and form a weak spot later on. Fur ranchers can't afford to take any such chances—therefore they buy MARITIME NETTING.

Always a good stock on hand ready for shipment and every foot of it **guaranteed.** Buy MARITIME NETTING for your poultry farm—there's none better at any price, none more strongly guaranteed. 14

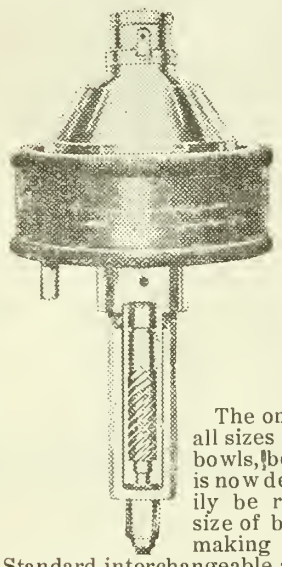
Write for special fence booklet—free!

New Brunswick Wire Fence Co. Limited

MONCTON, N. B.

MARITIME FOX, MINK, & POULTRY NETTING

See the New 1915 Model At The Fall Fairs



FOR more than three years our factory experts and mechanical designers have been working on and testing the new features on this new Model Standard. One of the new features—the interchangeable bowl—is the most important improvement in cream separation construction in many years.

Standard

The one frame now does for all sizes of Standard Separator bowls, because the bowl casing is now detachable. It can readily be removed and another size of bowl substituted, thus making the capacity of the Standard interchangeable at will. If you require a larger capacity than you first thought necessary you will not need to buy an entire new machine—just a new bowl and fittings.

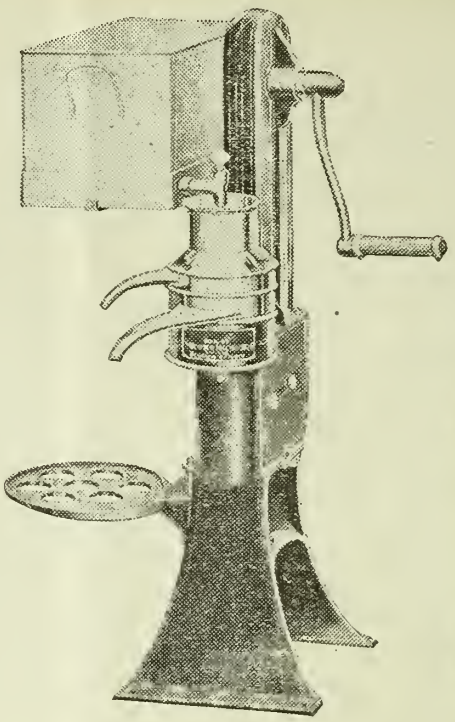
The change of capacity, please note, is not accomplished by changing the skimmers in the bowl, but by a complete change in the size of bowls, so that each bowl is constructed to do the work required of it. The interchangeable capacity thus does not interfere in any way with the Standard's famous skimming qualities. It still skims down to .01 per cent. and often less.

As a result of perfecting this detachable bowl casing, an improvement has also been accomplished in the alignment of the neck and bottom Spindle bearings, which puts the 1915 Model in a new class so far as easy running is concerned. A comparison with any other cream separator will easily prove this.

The nickel-plated cap screws which cap the bushings on the side of the casing are another new feature. They make the casing completely oil-tight and dust-proof and at the same time add to its appearance.

There is a new neat sight oil gauge too (not a clumsy oil cup or glass lubricator) which shows the amount of oil in the separator at a glance. Also a new reversible float which is without a stem to break off.

Altogether the new 1915 Model has twenty-two main features. These are explained fully in the latest edition of our Standard separator catalog, just off the press. Send for a copy. Also look for our Standard exhibit at the Fairs listed on right. At the smaller fairs the 1915 Model will be exhibited by our local agents.



FALL FAIRS!

Toronto,	Aug. 29, Sept. 14
London	Sept. 11-19
Ottawa	Sept. 11-19
Renfrew	Sept. 29, 30, Oct. 1
Charlottetown, P. E. I.,	Sept. 22-25
St. John, N. B	Sept. 5-12
Quebec	Aug. 31, Sept. 5
Sherbrooke, P. Q.	Aug. 29, Sept. 5

The Renfrew Machinery Co., Limited, Renfrew, Ont. Agencies Almost Everywhere in Canada.

OFFICE FOR MARITIME PROVINCES, SUSSEX, N. B.

Also keep your eyes wide open for exhibits of the Renfrew Standard Gasoline Engine ("It starts without cranking") and the famous Renfrew Two Wheel Truck Scale ("Every farmer should own one.")

pride in the beautifying of his own home. Then again, many of the pupils who are privileged to attend these schools will in their turn become teachers and in this way the enthusiasm will spread and the standard and tone of the schools will be raised. This, I suppose, will seem very far-fetched, but although we cannot see the gradual and snail-like movement, still I firmly believe that these are some of the results which will naturally follow the improvement of schools.

If, then, it is so important that school grounds should be beautiful, what a district must find out is, how best to improve their own. This will depend largely on local conditions, such as situation, extent of the ground at their disposal, and so forth. It is a question too, about which there can be much difference of opinion; but by comparing opinions good results should be obtained. It is my opinion that school grounds should consist of three chief parts; first, the play ground; second, the school garden, and third, the school lawn. If the grounds are large and the pupils numerous the play ground should be divided into two parts by a neat fence. Indeed, unless all the fences about the school property be neat and in good repair, they will detract very greatly from the beauty of the grounds. A great deal of the work put upon school property will be lost so far as appearances go if the fences are not creditable.

Each part of the school grounds mentioned above should have a goodly number of trees. I do not believe they should all be of the same variety, as is the case in most schools where trees have been planted, but I think districts that plant the trees should have in mind the educational, as well as the esthetic value of tree-planting. With this in view would it not be better to plant some of each of the varieties that grow in this country? In this way the pupils will have a chance not only to learn to distinguish one variety from another, but will also under the guidance of their teacher, learn the habit and characteristics of each. With the tree, instead of a text book before they, they will deem this not work but play. I do not mean, of course, to plant just one tree of each variety, but rather to have a preponderance of the more suitable varieties.

The play ground, should, of course, be in the rear of the building, while the garden and lawn should occupy the ground in front. The location of the garden will depend on the shape of the ground left after the play ground is marked off. In some cases it is best to have both the lawn and the garden run from the road or the street back to the building, but the lawn would, of course, have much more frontage than the garden. It is surprising the small number of schools that can boast of a garden. One would suppose that at the present day, when one hears so much about the teaching of Botany and Agriculture in the schools that gardens would be common. One thing is sure that to each either of these subjects successfully, a school gazden is a necessity. It is easy to see whether it is better to simply tell a boy that a certain flower has five petals or to give him the flower and let him pluck off and count the petals for himself. The first method is telling the boy something; the second method is teaching him something.

Nothing will give the school a more home-like appearance or set it off to better advantage than a well-kept lawn and clean walks. Of course, unless it is well-kept and not used as a play ground, the lawn will soon become rather unsightly and add very little to the beauty of the property.

I think it is unnecessary to mention anything about the building itself, as there can be no difference of opinion as to how it should be kept. It is superfluous to say that it should be kept scruplously clean, bright, cheerful and homelike. There are, however, just two more points I wish to mention; one is ventilation, the other, health.

Fresh air is just as necessary for health as food; for indeed air is food. Every breath we take we deprive the air of some oxygen, which is the essential part and supply in its place carbonic acid gas, which is a poison. Thus in an ill-ventilaeed school the air very soon becomes poisoned and the children listless and sleepy. Every district should see to it that there is an adequate means of carrying off the poisoned air, as well as a way of admitting a sufficient supply of pure air.

I think a very important improvement that should be made in our present system is the medical examination of children, say once or twice a year. Many a one who is now wearing glasses would never have had to bother with that expensive nuisance had their eyes been attended to in time. It is an established custom in many American schools and it appears to be a good thing. By correcting some abuse in the windows or black-board a visit to the school from a doctor might save lots of trouble. It would not cost a great deal but I believe it would be money well spent, for from such a visit, the parents could learn a good deal about the health of their children and the conditions under which they are living in school.

Paper read by Mrs. T. P. Cass, before the East Wiltshire, P. E. Island Women's Institute.

The Art that first made Britain Famous.

The earliest records of English history point to the manufacture of lace by the ladies of rank, more particularly in that portion of England now known as the counties of Devon and Buckinghamshire. In the latter, however, the industry became more and more the work of the people, and two hundred years ago the housewives of the district supplied the Bobbin for the cross of France and Spain as well as England.

During the last century the industry fell upon evil days until during the last decade the Organization known as the Buckingham Cottage Workers Association was formed, with the result that to-day hundreds of cottage workers are producing that celebrated lace that made England famous.

Below is shown a portrait of a cottage worker at the age of 81 who is one of

Just Starting Her Fifth Score Years.

those producing the very finest and highest quality of lace. Any lady reader interested in this art may obtain an interesting booklet and full particulars free upon application to Mrs. Laura Armstrong, Olney, Bucks, England.

* * * Running side by side with the English Lace industry was that of the sister workers in Ireland, in fact to many of the Overseas Dominions the Irish lace was better known than that of England, but unfortunately the knowledge is usually limited to the Boat merchants of Queenstown or the roadside workers of Killarney, and little is known of the unique productions of the Middle and West of Ireland. In order to assist the Irish Lace Makers in the development of the Irish Lace industry the Buckingham Cottage Workers Agency have offered to co-operate and assist, with the result that lady readers, interested in the Irish lace can obtain Catalogues and full information by addressing, as above, Mrs. LauraArmstrong Armstrong, Olney, Bucks, England

Rats Need not be Tolerated.

There isn't a single farmer in the entire country that hasn't been both ered with the rat at some time or other. It is one of the worst pests that the farmer has to deal with and the losses from its depredations amount to millions of dollars annually. In addition to its destructive habits the rat is known to be an active agent in the carrying of disease which makes it doubly important that it should be destroyed.

Too many farmers neglect the piles of boards and rails that accumulate around the barns. This makes an excellent rat harbor and they will be found in a place like this for they can rear their young without being molested. Clean up the barn yard and burn the piles of trash. Pile the boards and rails on a support about help to prevent the rats from making a foot from the ground and this will a home in them. Have some extra help and a good rat dog when destroying rat harbors. Kill the rodents and don't let them escape to some other place where they will multiply and be thicker than ever. They are noted for their great fecundity and their ability to adapt themselves to all sorts of conditions. They breed three, four, or even more times a year and produce from six to seventeen young in a litter. Females breed when only four or five months old. It is plain to see how many rats you will have around the place if no precautions are taken.

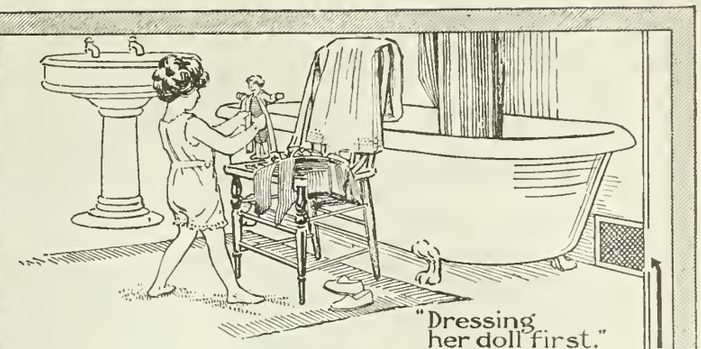
Rats have developed so much intelligence and such extraordinary caution that attemps to exterminate them have often failed. Make concrete floors and foundations and the rats won't have any place to live. Board floors in the barns, grainaries and sheds are just the place for the rats. They get under the floors and work up the dirt, making a fine place for a harbor. The farmer that has all of his buildings equipped with concrete foundations will have little trouble unless he has too many outside places where they can hide.

When a granary is built, choose a well-drained spot, and sink the walls about 20 inches in the ground, making them of concrete. Have the space within the walls thoroughly grouted with cement broken stone, finished with a rich concrete floor. Rats will have a hard time living in a place of this kind. Of course, we know that there are cheaper ways of excluding rats from either new or old corn cribs. They may be effectually kept out by the use of either an inner or an outer covering of galvanized wire netting of half-inch mesh and heavy enough to resist the teeth of the rats.

Poisons, traps and cats can render valuable service in killing off the rats that are living in a place that we cannot reach ourselves. A cat is better than a trap every time for they can easily get a rat when he gets a little to far from his nest. Cats are good for destroying the young ones in the nest and this gets them before they are large enough to run around and do damage to the grain that is stored in the barns. Every farmer can well afford to keep a few cats around the farm, for they are worth there weight in gold when it comes to the rat proposition. It is hard to catch rats in a trap for they are just a little bit to smart. About the best success can be obtained by using the wire cage trap. Place a fish head in the trap and you will catch more rats than you know what to do with at one time. We were bother with rats a few years ago and as we had purchased some fish we dicided to place a head in the wire trap and see what kind of results we would have. We placed the trap near a granary one night and to our surprise we found 24 rats in the trap the next morning. The next night we sat the trap again and caught 16. Pretty good work for one fish head. Before setting the trap again give it a thorough scalding, for the rats are very sensitive about coming around a place where they smell the blood of their own kind.

Be careful about putting out poisons for they may do more damage than good. The farm dog or some of the cats may get hold of the poison and die. Spread the poison in the runways of the rats where any animals or chickens can't get hold of it and the rodents will be poisoned without any danger. Don't let up on the rat killing until the entire place has been cleaned out. Get your neighbor to do likewise and then you won't get any of the rats after yours are all gone.—O. V. J.

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he has used Chamberlain's Colic Cholera and Diarrhoea Remedy in his family for fourteen years, and that he has found it to be an excellent remedy, and takes pleasure in recommending it. For sale by all druggists.



"Dressing her doll first."

Keep Children Healthy

CHILDREN'S ills usually begin with a cold—and nothing causes colds more surely than impure air and uneven temperatures in the home.

Fresh air, drawn in from out-of-doors, warmed to just the right temperature, and distributed so that every part of the house is equally comfortable, is the best safeguard against ill-health for both children and "grown-ups" The

ENTERPRISE Hot Air Blazer Furnace

draws in the fresh, pure air from out-of-doors, and sends it, warmed, but just as pure as ever, to every room in the house. That is why homes that are Blazer-warmed are more HEALTHFUL as well as more COMFORTABLE.

Yet Blazer Furnaces cost less to install than hot-water systems, are very economical in coal consumption, convenient to operate, and made to last a life-time. So all arguments—comfort, health, convenience and economy—are in favor of the "Blazer".

Most good dealers handles the "Blazer". Drop us a postcard and we will give you the name of the one nearest you also sending you a copy of this interesting booklet about the "Blazer".

Enterprise FOUNDRY CO. SACKVILLE N.B.

YOUR copy of Scroggie's New Fall and Winter Catalog 39 is now ready

A postcard will bring it . FREE .

SEND FOR IT TO-DAY

It brings the gigantic Scroggie Store to your very door.

W.H. Scroggie LIMITED MONTREAL.

THE HOME OF SCROGGIE'S PERSONAL MAIL SERVICE.

ADDRESS YOUR REQUEST TO DEPT F.

Farmer Ads Bring Results----Try One Today

Had a Bad Attack of Diarrhoea and Vomiting

Had the Doctor Eleven Times

BUT DR. FOWLER'S EXTRACT OF WILD STRAWBERRY FINALLY CURED

Mrs. Wesley Pringle, Roblin, Ont., writes:—"It is with great pleasure that I can recommend Dr. Fowler's Extract of Wild Strawberry. When our little boy was three years old, he had the worst attack of diarrhoea and vomiting I ever saw. We called in our doctor, and he came eleven times from Tuesday morning until Saturday night, but still no change. We expected each moment to be the last of his suffering, as the doctor said he could do nothing more. Mr. Pringle was going up town on Saturday night, and was advised to try your great and wonderful medicine. He got a bottle and about 9 o'clock the first dose was given, and was kept up, as directed, and when the doctor came on Sunday, he said, 'What a wonderful change; why! your little boy is going to get better.' Then I told him what we had been giving him, and he said, 'Keep right on, he is doing well.' 'I often think as I look at my boy, growing to be a man, what great thanks I owe to Dr. Fowler's Extract of Wild Strawberry."

"Dr. Fowler's" has been on the market for close on to seventy years, and has been known from one end of Canada to the other as a certain cure for all bowel complaints.

When you ask for "Dr. Fowler's" be sure you get it, as any substitute is liable to be dangerous to your health.

The genuine preparation is manufactured by The T. Milburn Co., Limited, Toronto, Ont.

Price. 35 cents.

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price $3.00 per acre.

Duties—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent on certain conditions.

A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price $3 00 per acre. Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land. Live stock may be substituted for cultivation under certain conditions.

W. W. COREY, C. M. G.
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—64388.

AGENTS WANTED

in every town and village, to take orders for the best Made-to-Measure Clothing in Canada.

Samples ready for shipment July 20th. Magnificent Samples.

CROWN TAILORING CO.
Dept. E. TORONTO

Advertise in the Maritime Farmer.

The Hessian Fly.

The Hessian fly is probably the most destructive insect of wheat, rye and barley with which the farmer has to contend. It seems to prefer wheat, but it is not uncommon, during seasons when the fly is abundant, for a large per cent. of tne rye and barley crops to be destroyed. Oats are seldom if ever attacked by this fly.

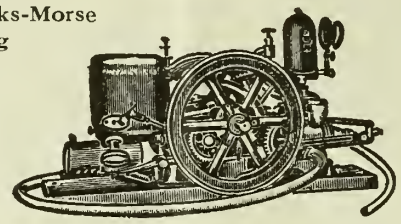
As is well known, the fly usually goes in cycles of three or four years. This is due, partially at least, to the parasites which attack them, so that we usually have about two years of abundance of flies, when the parasites become numerous enough to kill them off, and then there are several seasons when there are comparative few, and the injury is so slight that it is scarcely noticed. During these years the parasites, finding very little upon which to feed, naturally die off and this gives the few remaining flies an opportunity to breed and increase in numbers without molestation until they finally become numerous again.

For the past few years they have not done very serious damage in this state, but it is evident from the large number of letters which have come to this office during the past few months, that the pendulum is now swinging back towards the flies, and while the injury may not have been serious this season, the signs all point towards a maximum crop of flies for next year. It is for this reason that this warning is sent out at this time so that farmers may use every known precaution to protect themselves against its attacks.

Wheat is grown in every county in the State. The number of bushels raised in 1911 ranged from 23,000 bushels in Benton, which is a corn county, to 1,031,000 bushels in Posey county; the whole state yielding 34,596,320 bushels. In 1910 the yield was 36,152,022 bushels, or an average of 35,000,000 bushels in round numbers. It is estimated that an average of 10 per cent. of the crop is lost annually from the ravages of the fly; this would amount to 3,500,000 bushels which at 75 cents per bushel would make $2,625,000 as the annual loss to Indiana farmers from this source. It will be more than that this year. It is safe to say that a large part of this loss could be prevented if farmers would give more attention to a better system of farming. Some of the special crop insects, the onion thrips for example, may be held down by spraying, even wnere 75 or 100 acres are involved, but the Hessian fly is a different proposition and must be outwitted by changing the usual system of raising wheat.

Three things are necessary in raising a successful warfare against the fly, viz:—thorough preparation of the soil, so as to form the best possible conditions for germination; heavy fertilizing, if the soil is not already in good condition, so as to insure a quick and rapid growth; and late sowing, so as to compel the flies to go elswhere in order to deposit their eggs. I am aware that a number of farmers have said that late sowing has not worked this year; that fields that were sowed as late as October 15 and 18, were badly infested this season, but, we must remember that last fall was exceptional, so far as weather conditions were concerned. There were no killing frosts here at LaFayette until October 21. Farmers were plowing until the first of February; in other words the conditions were very favorable for tne late development of the fly. It is safe to say that the great majority of the adult flies are out before September 15, in most parts of Indiana. It takes about two days for the female

Fairbanks-Morse Spraying Outfit



The most satisfactory system for every spraying purpose.

It offers you the most convenient and economical means of destroying insects, curing or preventing plant and tree diseases.

Made in many sizes—both hand and engine operated.

Send for free catalogue. It tells you what and when to spray, the best compounds to use, how to prepare them, etc.

Farm Engines
Scales
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Windmills
Pumps
Water Systems
Lighting Systems

The Canadian Fairbanks-Morse Co., Limited

Montreal Toronto Winnipeg Calgary
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Ft. William Victoria

Canada's Departmental House for Mechanical Goods

Dominion Ammunition
TRADE MARK *Metallics and Shot Shells*

What to look for when buying ammunition

Accuracy, uniformity and reliability are features that can be determined only after exhaustive tests, unless you profit by the experience of seasoned hunters and choose Dominion Ammunition. More Dominion Shells are used in Canada to-day than all other makes combined. Made entirely in Canada by Canadians, for Canadians. Look for the "D" with shell and cartridge. On every box of ammunition manufactured by

The Dominion Cartridge Co., Limited
818 Transportation Building, Montreal

Send 10c. (stamps or coin) for 16 beautiful colored pictures of Canadian game.

It Pays to Advertise in the Maritime Farmer.

to lay her eggs, so that wheat sown after the 20th, in the central and first of October in the southern counties, would be very likely to escape the fall brood, especially if there is much volunteer wheat in the wheat field of the previous season. The spring brood does not usually migrate to other fields in order to find places to deposit eggs, as there are plenty of wheat plants close at hand, but a hard wind storm at the time they are laying their eggs might, and often does blow them considerable distances and might land them in fields that have been hitherto uninfested. This fact may account, in part at least for the late sowed fields being infested this season.

DESCRIPTION OF THE FLY.

It has been said that not one per cent. of the farmers of Indiana can recognize the adult fly, and that is probably true, because unless one takes the trouble to breed them out in cages, they are seldom seen. A miniature mosquito is a good, short description of the adult fly, which is only about one tenth of an inch long, dark color, slender legs and with only one pair of wings. At the present time they are in the "flax seed" stage in the wheat stubble, and if the field was not seeded to grass or clover last spring, they may be destroyed by burning the stubble. If this is not advisable then the late sowing, as stated before, is recommended.—J. Troop, Entomologist, Purdue University.

Whitewash for Various Uses.

There is nothing which will add to the interior appearance of farm buildings, especially dairy barns, make them more wholesome and attractive and furnish a bigger inducement for the owner to keep the barns clean and neat than an occasional coating of whitewash. In fact it is the cheapest substitute for paint that can be had and considering its added disinfecting properties, which may easily be greatly increased as we shall see with but little extra expense and no danger to the animal occupants of the buildings, it may well be considered of considerable importance. Slacked lime is therefore doubly valuable since it can be used to make the interior of the buihings more attractive while at the same time it is one of the most active disinfects for stable use, having the added advanage over some in one's being able to see where it has been applied.

The use of whitewashes need not end with that of interior work either. as various ingredients have been added to the ordinary lime wash enabling it to meet many and varied uses and needs. Fences and gates, milk houses and even the larger outbuildings may be treated wieh these comparatively inexpensive paint substitutes with equally good resdlts.

There are many receipts for whitewashes of various kinds and for various purposes, some of the most common and most satisfactory being included in the list to follow. The United States Bureau of Animal Industry recommends the following as a very efficient and antiseptic whitewash. Slake 7½ pounds of lime, mixing it to a creamy consistency with water. Add 15 fluid ounces of 95 per cent pure liquid carbolic acid and make the mixture up to five gallons. Stir thoroughly and strain through a wire sieve if it is to be applied with a spray.

The government whitewash recipe which is always a popular one, is as follows: Slake ½ bushel of lime with boiling water, keeping it covered during the process. Strain it and add 1 peck of salt dissolved in warm water, 3 pounds of ground rice put in boiling water and boiled to a thin paste, ½ pound of powdered Spanish whiting, 1 pound clear glue dissolved in hot water. Mix all these well together, add 5 gallons of hot water, stir and allow to stand a few days. This is to be put on while it is as hot as it is convenient to handle it with paint brushes or whitewash brushes.

For indoor work the following recipe is to be recommended: Slake lime with water and add sufficient skim-milk to make it the consistency of thin cream. To each gallon add 1 ounce of salt and 2 ounces of brown sugar dissolved in water. Stir thoroughly. If it is desired to increase the disinfecting propeeties of this wash it may be done by adding one third ounce of Calcium chloride to each gallon of the wash.

For outside work, such as fences and gates, a good whitewash is made as follows: Slake 20 pounds of lime and make it the consistency of thin cream. Add 3 pounds common salt and ½ pound of alum. To increase the disinfectant properties of this wash add ½ pint carbolic acid to each pailful. This is another government recipe.

For a whitewash which it is claimed will not rub off, the foflowing is recommended: Dissolve 2 pounds of ordinary glue in 3½ quarts of water and when it is dissolved add 6 ounces of bichromate of potassium dissolved in 1 pint of hot water. Stir the mixture and then add enough whiting to make it up to the usual consistency and apply with a brush in the usual manner, as quickly as possible. This dries in a very short time, and becomes a perfectly insoluble waterproof coating which will not wash off even with hot water and at the same time is mold proof which is not always the case with other kinds.

Were it is especially desirable to make a particular whitewash so that it will not rub off easily, one of the following methods may be employed: (1) For every gallon of the color wash stir in a pint of glue that has been dissolved in water until it becomes the consistency of mucilage. (2) To every gallon of color wash stir in a pint of well-boiled starch or flour paste, being sure that there are no lumps in it. (3) For every gallon of color wash stir in a quart of boiled sweet skim-milk. (4) Boil a pound of rice in 2 gallons of water until a smooth paste is formed, strain through a cloth and use the water the same as any other sizing. —Kimball's Dairy Farmer.

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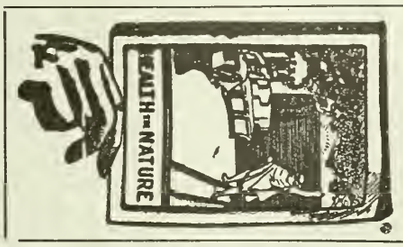

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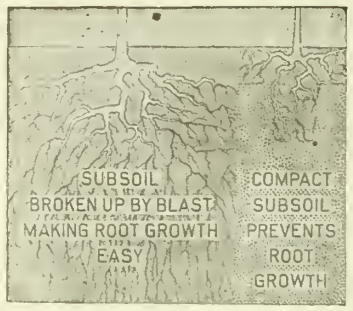

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Institutes in Nova Scotia

While there has been nothing in these columns for some weeks about the Women's Institutes of Nova Scotia, it must not be taken for granted that nothing has been accamplished. It has been because this summer has been a particularly busy one that it has been difficult to find time to sit down and tell just what has been on foot. "On foot" is a happy phrase and altogether adequate to the occasion, although used at first, without an ulterior motive. Two people have been most constantly "on foot" since the first of June, and one of them has been the Superintendent of Institutes for Nova Scotia and the other, Miss Grace Dutcher, teacher of Domestic Science in Prince of Wales College, Charlottetown. Miss Dutcher has been very greatly interested in Institute work in P. E. Island., and it is greatly due to her efforts and those of the clever and capable first Supt. of Women's Institutes in P. E. I., Miss Katherine James, that the work has grown to its present extent on that busy Island.

The first field work in Nova Scotia this summer was carried on in the southern and western counties, throughout June and the first of July. Distr cts in Kings, Annapolis, Digby, Yarmouth, Queens and Lunenburg, were visited and altogether twenty meetings were held. In nearly every case these were well attended, and the principal thing desired, that of stirring up an interest in the Institute movement, was well evidenced. The addresses on the growth and development of the Institute by the Superintendent and on the subject of "Foods and Their Value to the Body," by Miss Dutcher, were well received and outside of the fact that new work was well established, it was felt that the trip was altogether worth while.

Eleven new isstitutes were added to the list and judging from the reports received since from the secretaries of these Institutes, the idea has, as the boy on the street would say, "caught on." Before leaving Lunenburg County, Miss Dutcher gave a demonstration in Canning Fruit and Vegetables, before the Bridgewater Institute, which has been enjoying a healthy existence since the first of the year. It was easily perceivable, from the questions asked and the discussions between audience and demon strator, that a pantry well stocked with bottles of fruit and vegetables, scientifically canned was something to make the heart of a housewife rejoice.

A week later Antigonish County was invaded, six splendid meetings held and five Institutes were organized. It is too early yet to say much of these Institutes, but the opinion can be given that what the women of the Western Counties can do, the women of the Eastern Counties can duplicate. The next two counties to be visited are Guysboro and Halifax and when these have been visited the mainland of Nova Scotia will have been fairly well covered. It has been thought wiser to have a few Institutes in each county, at first, that the interest may spread from those and already the wisdom of this course is apparent. Thirty institutes to date, is not a bad record for an organization that only found a foothold in Nova Scotia one year ago The list of newly organized institutes is as follows:—

Canning, Kings Co.— Hon. Pres. Lady Borden; Pres., Mrs. Schafheitlein; Vice-Pres., Mrs. Avery; Secy.-Treas., Miss Belle Patriquin; Directors, Mrs. Harry Rand, Mrs. Peck, Mrs. Strong, Mrs. Payzant.

Lakeville, Kings Co.—Pres., Mrs.

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Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

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Reid, Vice-Pres., Miss Brown; Secy.-Treas., Miss Lily Lawrence, Directors Mrs. Eaton, Mrs. Thorpe, Mrs. Brown

Round Hill, Annapolis Co.— Pres., Mrs. Saunders, Vice-Pres., Mrs. Whitshire, Secy.-Treas., Miss Mary Fitz-Randolph; Directors, Mrs. Robinson, Mrs. Rice, Mrs. Bancroft.

Pleasant Valley, Yarmouth Co. — Pres., Mrs. T. W. Roberts; Vice-Pres Mrs. O. P. Ryerson; Secy-Treas., Mrs Ingles Gavel, South Deerfield; Directors, Mrs. John Porter, Mrs. Beryl Vickery, Mrs. Fred Whitehouse.

Dayton, Yarmouth Co.—Pres., Mrs. Bouger; Vice-Pres., Mrs. H. W. Corning, Sec-Treas., Miss Edith Dalton, Chegogin; Directors, Mrs. Walter Churchill, Mrs. Arch Blackader, Mrs. Geo. Spurr, Mrs. Chas. Doane.

Caledonia, Queens Co.—Pres., Mrs. E. C. Denton; Vice-Pres., Mrs. Claud Freeman; Secy-Treas., Miss Grace Freeman; Directors, Mrs. Mack, So. Brookfield; Mrs. Elton Smith, Central Caledonia; Mrs. Byron, Kempton and Mrs. Stewart Telfer, Caledonia.

North Brookfield, Queens Co.—Pres. Mrs. Silver; Vice Pres., Mrs. S. Wile; Secy-Treas., Mrs. Daley; Directors, Mrs. Farncomb, Mrs. Hendry, Mrs. Hunt.

Kempt, Queens Co.—Pres., Mrs. John Ford; Vice-Pres, Mrs. Samuel Lunton; Secy-Treas., Mrs. Maurice Freeman; Directors, Mrs. Ralph Lewis, Mrs. J. W. Rawding, Mrs. Ernest Dukestein, Mrs. Stewart DeLong.

West Northfield, Lunenburg Co.,— Pres, Mrs. Leroy Feenen; Vice-Pres., Mrs. W. Rhodenger; Secy-Treas., Mrs. Latimer Wile; Directors, Mrs. Geo. Hirtle, Misses Gladys Feener, Helen Feener, Hattie Arnburg.

Barss Corner, Lanenburg Co.—Pres Mrs. H. G. Mader; Vice Pres., Mrs. I. H. Verge; Secy-Treas., Mrs. J. H. Palmer; Directors, Mrs. C. R. DeLong, Mrs. Crandall, Mrs, J. L. DeLong, Mrs. R. D. Webber.

Maplewood, Lunenburg Co.— Pres., Mrs. Milburn Wentzell; Vice-Pres., Mrs. Stephen Spidle; Secy-Treas, Miss Lucy Wentzell; Directors, Mrs. H. A. Rafuse, Mrs. Hiram Wentzell, Misses Ella Baker and Vera Spidle.

Antigonish, Antigonish Co.—The ladies of Antigonish are considering the advisability of combining the Woman's Branch of the Civic Improvement League with the Women's Institute and have not definitely decided upon their officers.

Ohio, Antigonish Co.—Pres., Miss Annie M. McIsaac; 1st Vice-Pres., Miss Jennie McDonald; 2nd Vice-Pres Miss Mary Chisholm; Directors, Mrs. Wm. McDonald, St. Joseph's; Mrs. Chas. Roma, Miss Annie A. McInnis.

North Lochaber, Antigonish Co.— Pres., Mrs. Stewart; Vice Pres., Mrs. John Ingles; Sec-Treas., Mrs. Milburn Stewart; Directors, Mrs. Jas. D. Stewart, Middleton; Mrs. Allen Cameron, Misses May Ingles and Isabel Cameron.

Loch Katherine, Antigonish Co.— Pres., Mrs. Geo. MacGregor; Vice-Pres., Mrs. D. R. Henderson; Secy.-Treas., Miss Jessie M. Cameron; Directors, Mrs. Katherine Cameron, Miss Mary MacGregor, Miss MacKinnor, Miss Katherine McIntosh.

St. Andrew's, Antigonish Co.— Mrs. Angus MacIsaac; Vice-Pres., Mrs. Rod MacIntosh; Secy-Treas., Miss Janet MacDonald; Directors, Mrs. Wm. MacIntosh, Lower South River, Mrs. Donald Chisholm, Marydale, Misses Margaret Chisholm and Margaret Henderson, St. Andrew's.

Notes from Nova Scotia

Miss Miriam J. Cox, teacher of Domestic Science in the Truro School and in the Provincial Normal School, Truro, has been secured by the Department of Agriculture to give a series of demonstrations before the Institutes. Mise Cox commences her work on Wednesday, Aug. 5th, with the Institute at Martock and Windsor Forks, Hants Co. Her demonstrations include such important subjects as Invalid Cookery, Cooking of Starch, Salads, and their place in the Diet; Cooking of Tough and Tender Meats; Preparation, Cooking and Serving of Vegetables, etc.

The Department being anxious to help the Institutes to secure the benefit of a library, has decided to put them in touch with the Travelling Libraries of McGill University, and are offering to pay the expenses of the first library to each Institute in the Province. The matter has been placed before each Institute and is under consideration. It is expected that many of the Institutes will avail themselves of this offer.

The Institute at Port Williams Kings County, is very busy erecting a hall, which is to be devoted to the interests of the citizens of that busy little spot. Rooms for library, reading room and gymnasium are in the place, as well as a room for the use of the Iostitute. This Institute entertained the Canning Institute in June and an enjoyable and interesting afternoon was the result. This is a good idea for the older Institutes to follow.

Grade Pre Institute, Kings 'Co., held a very enjoyable picnic during the first week in July, at the Experimental Farm, at Kentville, through the kindness of Prof. Sandy Blair, Director of the Farm.

Another Institute to hold a picnic in July was East Leicester, Cumberland Co. The members were invited by Mrs. Wilbur Logan, Stanley, Cumberland Co., to come and enjoy the afternoon in a beautiful grove on the Logan farm. That the members did enjoy the afternoon and the kind thought of Mrs. Lagan requires no telling. This Institute has arranged a program for the remaining months of the year. The meetings should prove interesting as the subjects are well and wisely chosen.

The Wallace Bay, Cumberland Co. Institute has decided to impose a slight fine on those of its members who fail to provide the items in the monthly program assigned to them. Just a gentle hint that the program of this Institute are to be taken seriously. They are also considering ways and means of establishing a permanent library.

The Secretaries of the new Institutes report interesting and well attended first meetings and what is better, interested members. Many of these first meetings resolved themselves into a discussion of plans far the future and the Superintendent is anticipating that the reports of the future months will make very gratifying reading. Some of these new Institutes have already planned work for themselves that will prove a benefit to their district also. Round Hill, Annapolis Co., decideh to supply the schools in their district with sanitary drinking fountains. West Northfield, Lunenburg Co., is discussing ways and means of securing a suitable hall for their meetings and one of the "ways" proposed is the holding of a garden party. Canning Kings Co., is taking up the subject of beautifying their village and Lady Borden has very kindly offered her house as a meeting place for the summer months, an offer gladly accepted by the President and members.

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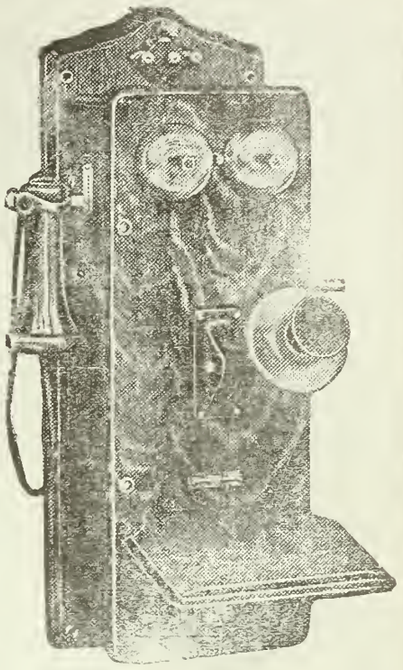

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It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information

Blacksmith Tools on the Farm

The constantly increasing use of machinery on the farms has made it necessary for all progressive farmers to have repair shops equipped with some blacksmith tools.

Farm machinery and equipment in general are subject to wear and breakage, and constant attention to repair is necessary, since the original cost of farm implements makes the frequent exchanging af old for new prohibitive. The profit realized from a machine consists of the work it does economically over and above paying for itself. The amount of service to be obtained from any article depends largely upon the care it receives. In the case of a machine, a mower for instance, the care has reference to shelter, lubrication, nuts tight, bearings free from play, sickle sharp and breakages repaired.

The extent to which the forge work should be done on the farm depends upon the ingenuity of the farmer and also upon local conditions. If there is a reliable shop nearby where repairs can be made without loss of time, it may be best to take some of the more difficult work tnere. However, this is seldom the case and breakdowns are most frequent during the busy season. The amount of time lost in making a few trips to town when the farmer is mose anxious to get his ground prepared, seed sown or harvest completed would be sufficient to convince a farmer that the shop is an important adjunct to his equipment. It is not advisable for a farmer without considerable experience to sharpen his own plows or shoe his own horses, as they require skill, practice and additional equipment.

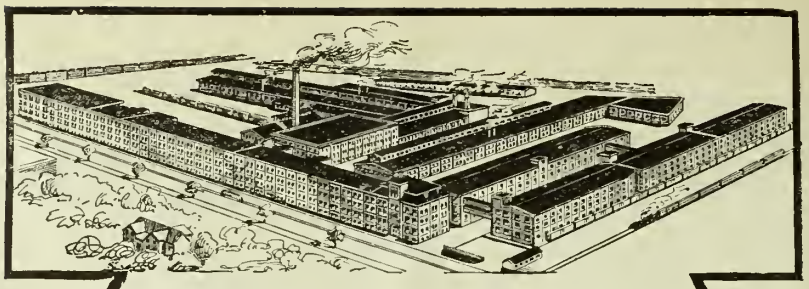
A small, well selected outfit, used to the best advantage and kept in good condition is much more satisfactory than a large miscellaneous set of tools, many of which are seldom used. In nearly all localities tools may be purchased of the local dealers. In addition, manufacturers of tools offer outfits in such combinations as makes it possible to obtain most any set desired. A small outfit of good tools to begin with and then added to as the demand increases, would be advisable. The tools needed first would be as follows Forge, anvil and hardie bracksmith hammer, blacksmith tongs, cold chisels, punches and drill bits.

A forge of the portable type with a fan blower may be obtained for $15 to $20. Anvils are divided into two classes, steel and cast iron. The steel anvils are the best and cost approximately 11 cents per lb. Howeveri a cast iron anvil, purchased for about one-half the sum, would be very serviceable. A 100-pound anvil would be most satisfactory.

An anvil hardie is used for cutting both cold and hot iron. It has a square shank that fits into ehe socket of the anvil, thus holding it securely in pos tion. It is a very handy tool around the shop and can be purchased for about 50 cents. A stationary bench vise with jaws about four inches wide, is best for ordinary work. It weighs about thirty eight pounds and costs approximately $6. A two pound blacksmith hammer which will serve for general work, costs about $1.25. Three cold chisels, ½ inch, ¾ nch and 1 inch, made of tool steel, may be obtained for about 20 cents, 40 cents and 75 cents respectively. Cast steel chisels cost less. Three punches— one-fourth inch, three-sixteenths inch and one-thitd inch at the point—cost about 15 cents each.

Two pairs of blacksmith tongs are needed: one pair of common tongs for flat pieces of iron and one pair of bolt tongs for handling round iron, cost about 20 cents per pound. Drill bits—that fit an ordinary carpenter's brace—may be secured. These are adapted for boring either wood or metal. The cost of these drills is from 10 cents upwards, according to size and quality.

There are an unlimited number of articles which can be added to the shop equipment, but those needed most would be as follows: Post drill, set of one-half dozen drills, set of taps and dies—ranging from ¼ to ¾ inch—sledge (5 pounds), riveting hammer, heavy hammer, additional tongs ,fullers, facers and swages pipe wrenches and a babbitt ladle.



Ask the Men Who Specify It!

The extensive Massey-Harris establishment shown above is only another instance where careful, foresighted business men insisted upon Brantford Roofing for their valuable plant. These immense premises represent a heavy investment. To protect their investment, the Company's officers specified the tried and tested

Brantford Roofing

Many of Canada's largest industrial plants are roofed with Brantford Roofing. The number of firms who choose Brantford Roofing in preference to all others is so large that it means more than mere coincidence. Ask yourself why the great plants of the Dominion are roofed with Brantford Roofing!

Can you do better than follow the example of Canada's shrewdest business men? Use Brantford Roofing and you can rest easy that your roof is proof against fire, heat, frost, rain, lightning, acids—in fact all the enemies of roofing. Brantford Roofing costs you no more than ordinary roofing material. Send a post card for big FREE book on roofing, and samples.

Our new patented appliance for laying Brantford Roofing is worth investigation. Positively prevents buckling or expansion.

Brantford Roofing Co., Limited
Brantford Canada
Warehouses: Toronto Montreal Winnipeg 71

The Cost of Pasteurizing Milk

With a properly designed and properly operated plant the average cost of pasteurizing milk is $0.00313 a gallon, and of cream $0.00634 a gallon, according to tests recently conducted by the United States Department of Agriculture and reported in Bulletin 85. These tests also show that the "flash" process, by whizh milk is raised to 165 degrees F. and kept there for a moment only, is more expensive than the "holder" process, in which milk is maintained for 30 minutes at a temperature of 135 degrees to 145 degrees. The "holder" process requires 17 p. c. less heat than the other and, in addition, there is a saving on the expense of cooling. For hygenic reasons, also, the department recommends the "holder" process.

Many milk plants and creameries, it was found, do not attempt to make any use of the latent heat in the exhaust steam from their engines and steam-driven auxiliaries. This heat would be sufficient in many cases for all the pasteurizing done in the plants if it were properly utilized instead of being permitted to go to waste. When exhaust steam is used, it is calculated that for every 400 pounds of milk pasteurized per hour with it, one horsepower is taken from the boiler load, with a consequent saving in fuel cost.

Another common source of waste was found to be the faulty arrangement of apparatus and leaky piping. The loss from these causes may run as high as 30 per cent of all the heat required, a loss that can be reduced to negligible proportions by proper arrangement. The use of the regenerator, in particular, by which a large portion of the heat in the pasteurized milk is transferred to the raw product, is also an important factor in securing maximum economy

In considering the cost of pasteurizing, the investigators estimated the life of the necessary apparatus at 4 years, and the annual depreciation, in consequence, was figured at 25 per cent. This is due to the fact that the whole dairy apparatus must be taken apart after each operation in order to give it a thorough cleaning. This necessarily results in rough usage. The mechanical equipment, such

as the engine, boiler, shafting, etc., has, on the other hand, been considered as depreciating at the rate of only 10 per cent per annum.

Concrete Fence Posts

A circular or square mold twelve inches in diameter is large enough for end, corner or gate posts. To make a post that will stand forever, dig a hole for the base four or five inches in diameter. In this hole put a few inches of concrete, then the reinforceing irons, which much reach up to within a few inches of the top of the post. We commonly use second-hand pipe of about two-inch diameter, old buggy axles or sometimes four steel rods of half-inch diameter. One big reinforcing iron in the middle of the post will be sufficient but if small ones are used they should be placed at the corners.

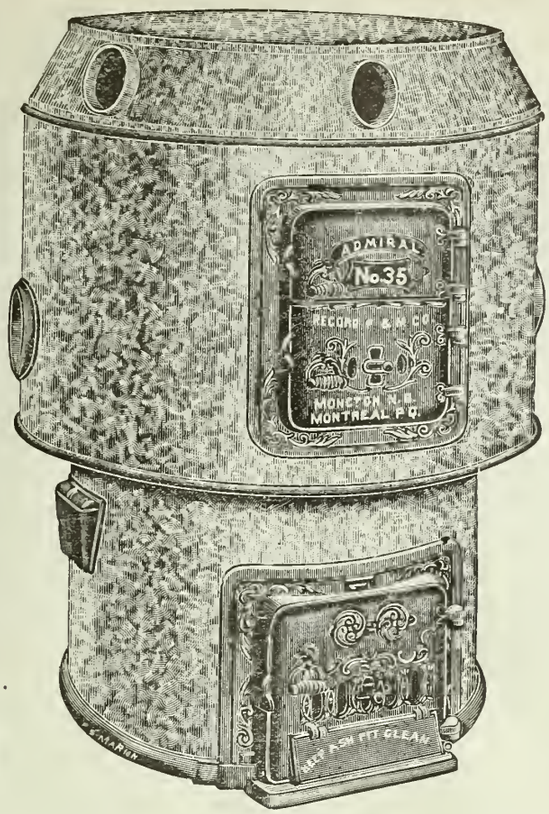
With the reinforcing in place fill the hole to the surface of the ground with good rich concrete, made wet but not sloppy; then set over the mold and complete the filling. One mold has steel hoops and is in two together with small bolts. It can be set up on each side of a wire fence and thus the fence wires can be imparts, each a half circle. It is held With a form of galvanized corrugated bedded in the midst of the post. This is a favorite practice of ours. steel lubricated with crude oil a very smooth post is made. We find it easy to put in hinges after the post is complete, making holes for them with hammer and cold chisel, and setting them with pure cement, using the kind of hinges that screw in.

We find all that is needed for braces is to place at the surface of the ground, or g little below it a cross of concrete about six feet long and eight inches in diameter each way. This is accomplished by simply excavating two little trenches across the line of the post, cleaning them out carefully, placing in them about two inches of concrete, then on that good reinforcing, say of inch pipe or rods, then filling up the trencnes to the level of the ground with good concrete. This makes the post in effect like a tree with roots and it is our experience that it will endure any stress that may be placed upon it, the essentials being that the post have depth in the earth, reinforcement throughout its length and good material.

Last spring we did a daring thing. Needing an iron for reinforcing a corner post we cut a small wild cherry tree, about six inches in diameter, stripped ir of its green bark, cut notches in its end and drove therein a lot of big spikes, placed three inches of rich concrete in the bottom of the hole and set our wooden stick for reinforcement. As it does not at any point come nearer than two inches to the outer air we see no reason why it may not endure in its place for a century or more and being perfectly green it could not swell and burst the concrete posts. We read that wood, to some extent, is being used in like manner in England.

Quality in Horses

This is a term rather loosely applied and has reference to hair, skin, tendons, muscles and bone. Good quality is shown by fine, bright, silky hair; soft, pliable skin; clean, well-defined tendons; smooth, well-developed muscles, and strong and smooth bones. Freedom from coarseness in the hair, skin, tendons, muscles and bones, emphasises soundness and guarantees durability. The best way to determine quality is to run the hand down the legs, over the knees, hocks and cannon bones. The hair and skin should feel soft and pliable to the touch, and the bones firm and smooth. The fingers should almost seem to tounch each other as they pass between the tendons and the bones, especially in the light type, where the tendons are well detatched. Soundness also indicates quality.



Good For Wood and Hard or Soft Coal

This is the furnace you require for all round heating purposes and now is the time to instal it.

Flues do not clog up with soot. Large double feed doors specially adapted for wood.

Record Admiral Furnace

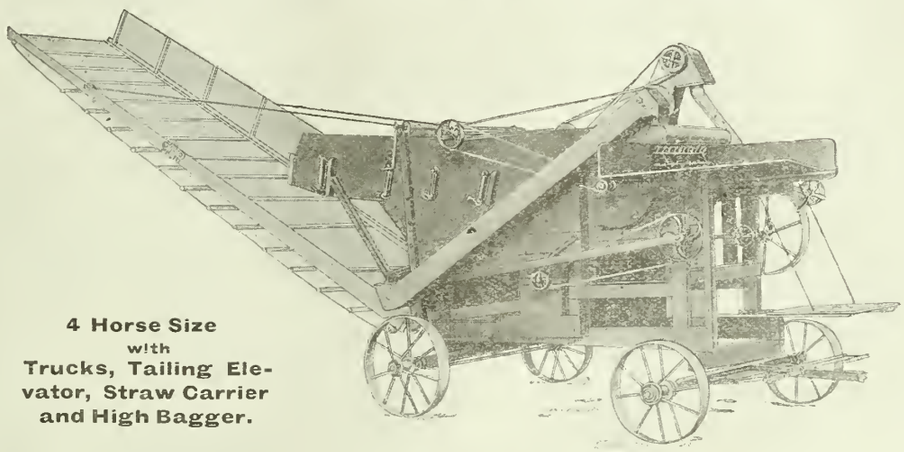
The ADMIRAL is a leader in hot air furnaces, designed to give the greatest amount of heat out of fuel with the least amount of labor or attention.

Write for catalogue of furnaces, heaters, stoves.

Record Foundry & Machine Co.,
Moncton, N. B.

The "Sussex Little Giant" Thresher

Perfect Separation, Light and Durable.



4 Horse Size with Trucks, Tailing Elevator, Straw Carrier and High Bagger.

Built to do the Work and Stand the Wear
Good Crops and a Good Thresher Guarantees Good Profits
The Best Proof of Quality is in the Using

"Can't be beaten" is the verdict of the users of the Sussex Little Giant. Up-to-date in every respect.

All bearings supplied with compresssion grease cups. 5 inch belt supplied free with every machine. Made in 4 sizes, 1 Horse, 2 Horse, 4 Horse and 8 Horse. Trucks, Tailings Elevator, Bagger, high or low, and Straw Carrier supplied if required.

And Remember: We also manufacture the Famous Trenholm Geared Level Tread Powers, 1 and 2 Horse

Hay Presses, Grain Grinders, Root Pulpers, Wood Cutters and Feed Boilers

Our guarantee goes with our machine. Write us at once and you will receive our illustrated catalogue and prices by return mail.

The Sussex Manufacturing Co., Limited, Sussex, N. B.

Ross

Ross Rifle Luck

The luck that follows users of Ross Rifles is not due to the favor of the fickle goddess but to Scientific design, encellent materials and skilled mechanics.

The combination has produced a rifle with tremendous range, flat trajectory, speedy and reliable action which have made Ross Rifles famous the world over Ross 280 Sporting High Velocity Rifles $55.00 Other models $12.00.

Sold by all Dealers.

Illustrated Catalog on request

ROSS RIFLE COMPANY

QUEBEC.

Rifle

The Slandering Know-It-All.

"There is no greater nuisance in the whole horse business than the maniac who insists that prizes go by favor in the show ring—that the judges "tie the ribbons on the men, not the horses." Who of us, even of the younger generation has not heard this batlant nuisance declare that the premiums are allotted beforehand and that such and such ownesr are bound to win, hap what may? Sometime, however, this chap is more than a nuisance. Occasionally he becomes a damage, and by pouring his mendacious trash into the ear of some novice in the breeding game prevents him from taking really meritorious stock to the shows.

"Not so long ago the writer received a letter from a small breeder in Iowa saying that he had never shown his horses at a state fair, but had decided to make a beginning this season Unfortunately, the letter continued, he did not think it would prove profitable to do so, because he had been informed by a man, who claimed to know, that the location of the premiums at the show in question was always "fixed up in a room in a hotel the night before,' and that it didn't matter how good any one else's horses were they could not win if they did not belong to the chosen few—and considerably more to the same effect. Believing that he should get the straight of it in reply, this Iowa breeder sought information.

"There are men who make a business of declaring that judging, like kissing, goes by favor and it may be that there are some few who are so meanly constituted themselves that they actually believe it. No one, though, ever heard an exhibitor with any class to him, or a breeder who had achieved any degree of success, making any such assertons. There is another pest, too, that infests the show ring and its purviews, to wit, the man who never showed a beast in his life and yet year after year loudly insists that he has at home animals far better than those to which the best premiums have been awarded. This chap, of course, is of the same family that chops its wood in the summer and pitches its hay in mid-winter, but at that his very blatancy of delivery and insistency of assertion may carry conviction to the mind of the tyro.

"Naturally the man who has crawled slowly upward from a small foundaton and has finally produced one or two animals that he thinks good enough to show, is a little rearful, first, that his own judgment may not be the very best and, second, that even if his animals are good enough to win they will be sacrificed for the advancement of interests more powerful than his own. This is fertile soil for the sowing of the seeds of distrust, but there never is the slightest occasion to waste a moment paying attention to such self-evident untruth.

"There may have been a time in the show ring when money talked with sufficient force to sway the opinions of the men chosen to make the awards, but if there was, it has passed long, long ago. The most diligent research in the personnel of the various professions and lines of mercantile endeavor would fail to discover a more high-minded, intelligent, upright, practical and honest delegation than those who are annually appointed to judge in the American show ring To begin with, it is their natural bent and inclination to do right for right's sake. Their reputations are at stake. They could not afford to do wrong, even if they wanted to, because the moment a judge's selections are seriously questioned, his usefulness is destroyed. Putting it on the lowest possible ground, no judge could afford deliberately to make a fraudulent award with four or five thousand people watching him and several hundred in and about the ring quite as capable as he of ranking the animals correctly.

"It passes belief how any man can deliberately say that a judge in the ring will not do his duty, is not doing it or has not done it. To cook up a yarn with artictic verisimilitude that is no use for some small breeder to try to win at this or that show, because the prices are all alotted the night before in some hotel bedroom, is not only an offence against common decency, but an actual crime on conviction of which the penitentiary would yawn for the offender, against whom such a statement was proved. Usually it is some self elected village oracle, some bombastic know-it-all, who undertakes, from his superior knowledge, to post his less experienced neighbors and acquaintances.

"Nvertheless, despite the magnificence of this oracular individual's station in his own estimation, the moment he shoots off his mouth in this wise, he may be set down as a malicious ignoramous who is utterly unacquainted with the most elementary principles of show yard business. Whenever you hear him start his slanderous mouthings, call him and call him good. Dare him to name an instance of the sort he mentions and you'll find that some one else told him so—that it happened some where else—and most likely his authority will be dead or in jail.

"Some people may contend that the untruth of all such statements is so obvious that it is hardly worth while making such a fuss about it. Perhaps that is true, but then again there are too many men who unthinkingly charge a judge with wrong-doing, merely to make themselves big in the esteem of the credulous fools who listn to and believe them. Sometimes men of this ill-begotten brood will leer and wink when this, that or the other award in the show yard is discussed, as much as to say that if they would, they could a tale unfold that would show how that award had been reached by a very devious course. Too mean and cowardly to come right out and charge the judge with dishonesty, they are nevertheless quite willing to absorb credit for amazing cleverness in having discovered the crookedness, but without actually saying so. If anything this breed of tomcat is more dispicable than the other.

"Fortunately, perhaps, much of this unwarranted criticism comes from an ignorance of the true state of affairs. It is not hard to see how a young chap, horsey, let us say, in his tendencies, and who, during his youth has sat at the feet of the village stud horse Gamaliel, may come unthinkingly to hand on the slanders he has heard pronounced. He does not sense that his oracle may know far less than nothing about the business or ethics of the show yard. He has been accustomed to count as gospel all that the old scoundrel may have said, but he should draw the line at repeating statements that are slanderous.

"As to the pest who has at home stock a whole lot better than the winners at even the biggest and best of the shows, he is his own worst enemy so enshrouded in self-conceit or ignorance that while he is a nuisance he is hardly worth bothering with. No one believes him. If he had better stock than wins at the big shows, some one would have heard of it before—some one would have brought it, shown it and won with it. Not infrequntly he is a good-natured sort of a chap who counts not the cost of what he says and little recks that the bystandrs are merely egging him on to have him blow his horn a trifle louder and make himself more ridiculous. There are a few hopeless cases in this category. Let us hope their tribe may not increase."—Live Stock World.

REMINGTON UMC

REPEATING RIFLES

High Power

Solid Breech Hammerless Safe

THE things that distinguish Remington-UMC Big Game Rifles from all others of their class are certain fundamental refinements invented and used exclusively by the Remington Arms-Union Metallic Cartridge Company.

The famous Remington-UMC *Slide Action* features; Six Shot; Hammerless; 22 inch Ordnance Steel Barrel; patented quick-adjustable Straight Bar Rear Sight and new design Copper Bead Front Sight. Chambered for .25 Rem., .30 Rem. and .32 Rem. cartridges.

Look for the dealer who displays the *Red Ball Mark of Remington-UMC*. He has these Remington-UMC Rifles in stock now, or he can get them for you.

To keep your gun cleaned and lubricated *right*, use Rem Oil the new powder solvent, rust preventative, and gun lubricant.

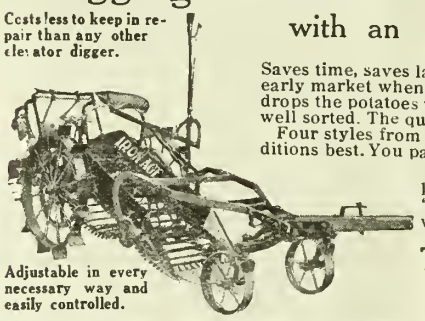
REMINGTON ARMS-UNION METALLIC CARTRIDGE CO., Windsor, Ontario

Smut Disease of Crops.

A buletin .No. 73) of the Department of Agriculture, Ottawa, Canada, gives a summary by Dr. Gussow, the Dominion botanist, of what is known of the cause and control of the smut diseases of cultivated plants. The bulletin shows that the spores of the smut fungi are distributed by wind and such farm instruments as threshing machines, and recommends the disinfection of the latter by means of formalin. The results of recent experiments demonstrate that though. generally, the spores are killed by passing through the body of an animal, this is not always the case; nor can it be stated with certainty that when diseased grain is fed to stock the animals run no risk of disease. As is now generally accepted, different smuts have different methods of infecting the host plants. In stinking smut of wheat covered smut of barley, naked and loose smut of oats, for example, spores distributed from diseased ears reach and lodge upon the grains, are sown with the seed, germinate in the ground, and produce secondary spores which infect the seedling. In other smuts, such as the loose smuts of wheat and barley, the spores, which are ripe at flowering time, are carried to the stigma of the wheat or barley flower, germinate like pollen grains thereon, and, sending down a germ tube in to the ovary, provide for the infection of the grain which is being produced in the ovary. Evidently a knowledge of these facts must determinate practice. Whereas dressing seed with copper sulphate or formalin, or treating it with hot water, is productive of good results in the former class, it is without effect when applied to those smuts in which floral infection occurs. Early sowing of autumn wheat has been shown by Dr. Mugserati to result in a considerable reduction in the

Digging Potatoes with an IRON AGE

Costs less to keep in repair than any other elevator digger.



Adjustable in every necessary way and easily controlled.

Saves time, saves labor, gets all of the potatoes, helps you get to an early market when the price is right. Digs, separates thoroughly, drops the potatoes where you want them, and in most cases fairly well sorted. The question is: Can you afford to be without a digger? Four styles from which to choose the one that suits your conditions best. You pay for and your horses draw only what you need

We have been making Diggers 10 years and know what to build for this work. Our booklet "D" tells the whole story in an understandable way. May we send it ?

The Bateman-Wilkinson Co. Limited

No. 430 Symington Ave., Toronto, Ont.

THE HALL IMPROVED UNDERSHOT THRESHER.

Is Guaranteed to run **Smoother,** clean the grain **Better.** Stand the strain of an engine **Longer.** Will thresh more grain than any 26-inch cylinder machine of its class made, and **sells for less money.**

Agents Wanted Where Not Represented

Write us for prices and particulars,

Hall Manufacturing Co., Limited,

SUMMERSIDE, Prince Edward Island.

amount of disease. Thus wheat sown in France on October 11 gave rise to only 1 per cent. of diseased plants, whereas in similar wheat sown on November 22 infection took place in 90 per cent. of the plants. From these and other experiments it may be laid down that the later in autumn and the earlier in spring wheat is sown the more the crop is likely to be affected. The gravity of smut diseases may be judged by the estimate that oat smut alone causes a loss of eight per cent. of the total crop—that is, a financial loss of uwards of £3,000,000 per annum.

Potato Culture and Potato Drying in Germany.

The German Association of potato dryers held their annual meeting in Berlin lately. The report showed that the large crop of potatoes in 1913 (54 million tons) diminished the price of dried potatoes to 66-70 cents per 100 lbs. But the same cause has long augmented the quantity of potatoes dried very considerably.

On account of the low prices that prevail and the great waste entailed by keeping potatoes over, many farmers have had their surplus stock dried at the factories. The expense of drying amounts to 4 or 5 cents per 100 lbs. of potatoes.

There were over 200,000 tons of dried potatoes prepared by the 500 potato drying factories during the year. The 733 existing machines are capable of dealing with about 1,000 tons per hour or about 1,200,000 tons in 100 days.

An interesting table was submitted showing the cost of fabrication and the financial return for the different ways of utilizing the potato industrially. In each case 100 lbs. of raw potatoes are dealt with.

Cost of Fabrication per 100 lbs.	Value of Product
cents	cents
Distillers 16	33 as potato spirit of alcohol.
Starch making 4	18 as starch.
Dried potatoes 4-5	20 as dried potatoes.

The analysis of the potatoes pulped and dried is as follows: Water, 13 per cent.; cellulose, 2.2 per cent.; protein, 1 per cent.; starch, 67.5 per cent.; mineral matter, 4.5 per cent.

The dried potatoes are liable to deteriorate if they contain more than 14 or 15 per cent. moisture.

The reduction of the raw potatoes in the process of manufacture varies according to the percentage of dry matter or solids they contain. From 300 to 400 lbs. of raw potatoes are necessary in order to produce 100 lbs. of dried pulp.

During the year some cases of fraudulent adulteration were detected. The adulteration consisted in mixing the potato starch or potato spirit offal with the dried potato pulp which they closely resemble.

The chief nutrient element in the potatoes is the starch; they cannot therefore be used as a substitute for oil cakes, oil meal, meals made from cereals, and other forms of concentrated feed rich in protein and fats that are generally used in order to balance the home-grown ration. Dried potato pulp produces a good flow of milk and may also be fed to beef cattle with advantage as it contributes to the good health of the stock.

For countries like Germany, where potatoes are extensively grown, the potato drying industry possesses the advantage of enabling potato growers to preserve their surplus stock in the years of abundance and therefore contributes to the popularization of potato culture.

The addition of 15 to 20 per cent. potato flour to rye flour renedrs the resulting bread more appetizing and improves its keeping quality.

Great importance is attached to the potato drying industry in Germany as it is capable of creating large food reserves that would fill many months in the event of war or famine.

¶ Four years ago we began to pay transportation charges on all our mail order business. Since then this business has increased five-fold.

¶ In emulation of this success, the whole mail order business of Canada is gradually measuring up to our prepayment methods.

But Our Clean-cut Policy

of paying all charges on everything in catalogue

is Still Unapproached

¶ In this last six months we have installed a complete new plant for handling our mail order business. It occupies four times the floor space of our former one and is one of the most complete and most modern equipments on this continent. This has enabled us to give all our Mail Order customers a one-day service, that is,

We Now Ship Your Order Within One Day Of Its Arrival

¶ This new speed service is now inaugurated because we are determined to deserve still greater business from our customers. It will give them a far more efficient service than has been possible in the past.

¶ Our new Fall and Winter catalogue, the most beautiful catalogue we have ever published, full of fine colored prints that show the actual appearance of the goods, is now ready. When you get your copy peruse it carefully. If you have not received a copy, your name and address on a post card will bring one by return mail.

Remembering These Four Points!

1. Every article in a Simpson catalogue is prepaid to your post-office or nearest express office.
2. Every order for goods from a Simpson catalogue is despatched within one day of the time we receive it.
3. Every customer gets the benefit of Toronto styles and prices just as if the Simpson store was in your home town.
4. Every order goes to our customers by fast train. We no longer make any freight shipments.

The Robert SIMPSON Company Limited
TORONTO

Bad Blood

is the direct and inevitable result of irregular or constipated bowels and clogged-up kidneys and skin. The undigested food and other waste matter which is allowed to accumulate poisons the blood and the whole system. Dr. Morse's Indian Root Pills act directly on the bowels, regulating them—on the kidneys, giving them ease and strength to properly filter the blood—and on the skin, opening up the pores. For pure blood and good health take

Dr. Morse's Indian Root Pills 46

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

Dates to Remember.

St. John Exhibition, St. John, N. B., Sept. 5 to 12, 1914.

St. Stephen Exhibition, St. Stephen, N. B., Sept. 15 to 18, 1914.

Charlottetown Exhibition, Charlottetown, P. E. I., September 22 to 25, 1914.

Sydney Exhibition, Sydney, N. S., Sept. 29 to Oct. 3, 1914.

Minard's Liniment Co., Limited.

Gentlemen.—I have used MINARD'S LINIMENT on my vessel and in my family for years, and for the every day ills and accidents of life I consider it has no equal.

I would not start on a voyage without it, if it cost a dollar a bottle.

CAPT. F. R. DESJARDIN,
Schr. "Storke," St. Andre, Kamouraska

FREDERICTON BUSINESS COLLEGE

Our Fall Term opens on

Tuesday, September 1st

NOW is the time to write for FULL PARTICULARS.

Address

W. J. OSBORNE
PRINCIPAL
Fredericton, N. B.

400 Apple Trees.

6 cows, pigs, poultry, all modern farm tools, machinery and crops included with 100 acre farm; only 2 1-2 miles to large R. R. centre and markets; cream sold at door; wood and timber to sell and a big yearly income from large thrifty orchard; 7-room house, running water, 2 big barns, stable and ice house; pretty lawn, maple shade; owner called away; price if taken now only $2900 part cash, easy terms; all details and travelling instructions to see this and a 135-acre farm for only $1600, and many others throughout Maine and other New England States, page 13. "Strout's Farm Catalogue 37," write today for your free copy.—E.A. STROUT FARM AGENCY, Station 2912, 294 Washington St., Boston, Mass.

FARMER ADS. BRING RESULTS

Before Sickness Comes.

It is easier and pleasanter to keep sickness out of the home than to get rid of it once it has gained a foothold, and with this end view one should strive diligently at all times to see that cleanliness reigns supreme.

Do away with dark corners and musty-smelling drawers and chests. Let light and sun and air have full sway. Moderation, cheerfulness and a simple, nutritious diet, in combination with deep breathing of fresh air spell health. Women especially do not half use their lungs.

Self-control also must come into play, for fits of anger, ungoverned jealousy, moroseness, or "blues," are most detrimental to health. You alone are responsible for keeping your individual plot of life sweet and free from weeds. Do not allow yourself, therefore, to get stirred into rebellion over another's wrongdoing, even though it seems aimed directly at you. The only way in which another can really harm you is by allowing yourself to be shaken out of the calm which is your birthright. Let their part go, but keep your own stable and sweet, and contentment and peace will ultimately be yours.

Remember that cleanliness, not only of the house, but of the body, is essential. The daily bath, either cold or tepid, is a habit which, once formed, one will never drop.

A few minutes of full, deep breathing at an open window, a vigorous rub with flesh brush or rough towel, until every inch of the body is in a glow, following a quick bath, will put one in trim for the day better than any amount of medicine. And, listen: Do not forget a few steady, true-hearted resolve about the affairs of the day before you leave your room. Get into harmony with life and the day will swing smooth and free, for this is the wonderful tnread on which a complete and happy life is strung.

Bear in mind also that the body requires a liberal supply of water inside as well as out. A glassful, hot, about half an hour before meals is a great aid to digestion, and one should for the habit of drinking at least six or eight glasses of cold water during the day.

Personally, I believe the more raw foods, such as fruits, cabbage, lettuce, celery, etc., one can work into the diet the better, and it is well to know that bran is a great regulator of the bowels if they become sluggish or irregular—the usual daily amount being from one to four tablespoonfuls, but one should regulate the quantity by individual need.

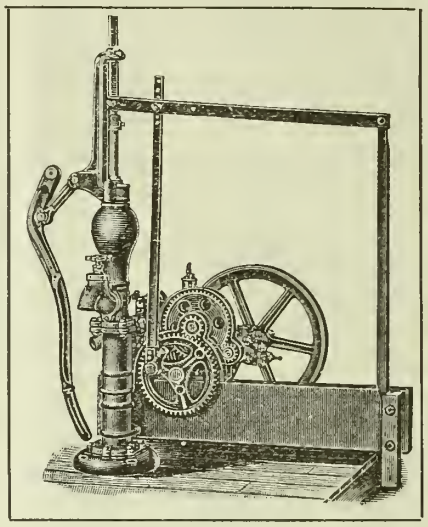
It may be taken either cooked or raw, the simplest way being to mix one or two tablespoonfuls into a glass of cold water. If faithfully persisted in, it will cure bowel trouble of many years standing.—L. D. Stearns.

To Prevent Paint Blistering

The chief cause of paint blistering is moisture in the substance painted. Wood especially, even when apparently dry, may contain a considerable amount of moisture, and if painted when in this condition it is prevented from escaping until a warm sun, converting it into vapor, raises the paint and causes the unsightly blisters. Moisture between two coats of paint has the same effect. It therefore follows that every care should be taken to see that the substance to be operated upon is perfectly dry.

THIS LITTLE ENGINE

is designed to take the place of the man at the pump and anyone who watches this outfit pump water for ten minutes will never again be willing to work the pumphandle. The operating cost is very small and a splendid feature is that this engine can be easily connected to "any old pump." The ladies often start it to pump a single pail of water. They rest while it works.



The Outfit Complete as shown sells for $70.00. The engine alone $55.00. Immediate shipment from stock.

The A. R. Williams Machinery Co., of St. John, N. B., Limited,

15 Dock St. ST. JOHN, N. B. 34 Nelson St.

TAYLOR'S SOLID LEATHER SHOES

Mr Consumer

See that the next pr. of Shoes you buy have the name TAYLOR stamped on the Sole.

Mr. Retailer

If you want to increase your Trade keep a stock of the TAYLOR solid leather Shoes.

The Red T Brand of Boots and Shoes that we have put on the market are made of **Solid Leather** and on the **latest style** of **Lasts.** Ask your dealer for the

RED T BRAND made by

The Robert Taylor Co., Limited

Halifax, N. S.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cbeggogin, Yarmoutb Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

B. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son, Chipmans Corner, Kings Co., N. S.

Milking Shorthorns.

E. W. Heurtley, P. O. Sutherland's River, N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Cheviot Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Southdown Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Shropshires

C. A. Archibald, Truro, N. S.

Yorkshires.

R. J. Messenger, Lawrencetown, N. S.
E. W. Heurtley, P. O. Sutherland's River, N. S.
Steward Bros., Murray River, R. R. No. 1, P. E. I.
J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Thos. W. Prowse, Union Road, P. E. I.
W. H. Moore, Scotcb Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
A. A. H. Margison, East Centreville, Carleton Co., N. B.

White Wyandottes

R. J. Messenger, Lawrencetown, N. S.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

PURE BRED STOCK FOR SALE

Guernsey and Ayrshire Bulls ranging from four months to twenty months old.
One Pure Bred Ayrshire Cow 5 yrs. old (Fresh milch.)
Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, - Shubenacadie, N. S.

Riverview Stock Farm
High Class Holstein Cattle and Yorkshire Pigs

Several young Bulls fit for service for sale, sired by Bob Dorindo, 9532, several times champion and a son of the well known champion Mercena Vale 5828. Dams are heavy producers and show ring winners.

D. R. NICHOLSON, Coxheath, N. S.

GUERNSEYS

Buff Orpingtons and White Wyandottes.

R. R. BLACK,
Highland View Dairy, Amherst, N. S.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, hetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

BEEKEEPERS, ATTENTION!

Do your bees pay their keep? If not it is your fault. Use modern appliances, and make them the most profitable stock on the farm. We carry a full line of Beekeepers' Supplies: Hives, Honey Extractors, Packages, etc.

Write for particulars.

E. L. COLPITTS,
PETITCODIAC, - - N. B.

HIGHFIELDS POULTRY FARM

FOR SALE

Pure S. C. W. Leghorn Cockerels from imported stock from the States and England. Orders booked now.

Also White Wyandotte Cockerels of good size and color.

Also Pure White Pekin Ducks and Drakes bred from birds specially imported from the States.

Inspection invited.

HIGHFIELDS FARM
Hampton, - - N. B.

"Meadowlands" Stock Farm

Clydesdale Horses & Shorthorn Cattle

We have for sale 3 pure bred Shorthorn Bull Calves, milking strain, 3 and 4 months old. Also 1 Bull Calf 11 months old, from good milking dam. He is a red roan and will make an extra good herd header.

MORRIS SCOVIL & SON
Meadowlands, Gagetown, N. B.

FARMS WANTED

We are now making listings for our 6th Farm Catalogue. If you have a farm for sale, we can sell it for you. Write us today. Our selling terms will please you.

ALFRED BURLEY & CO.
FARM SPECIALISTS
46 PRINCESS ST. ST. JOHN, N. B.

DURHAM BULLS

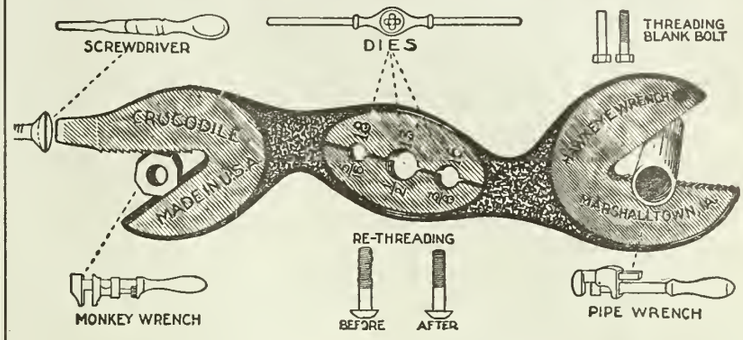
Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale. Also a number of nice calves and yearling heifers, well bred for milking qualities and in fine shape.

C. C. H. EATON,
Canard, - - Nova Scotia

Advertise in the Maritime Farmer

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wrench, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

PARTNER WANTED!

For a growing Poultry Supply Business, a good opportunity for a man interested in poultry desiring a steady income. The business at present in good paying condition and growing to such an extent that the owner needs assistance, prospects for future very bright. Books and all particulars of the Company open for inspection, correspondence invited.

Address Box 27, - - Sussex, N. B.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.
Correspondence solicited. 'Pone 111.

J. FRANK ROACH, - - Sussex, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick

FOR SALE

A handsome registered Guernsey heifer of excellent breeding. Sister to a heifer now making ten pounds of butter a week as a two-year-old with her first calf. This animal for sale will freshen in the winter, she is well grown and a promising heifer in every way. Price is $50 easily worth $75.

SARAH E. MOSES SMITH,
Woodward's Cove, - N. B.

FERTILIZERS

We carry the famous
HARAB FERTILIZERS
Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,
Moncton, - - N. B.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

HEAVY Horses for sale. Apply to F. L. GILLIS, Norton, N. B.

FOR SALE.—19 months old Ayrshire Bull, imported sire.—RALPH TAYLOR, Barss Cor,, N. S.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

FOR SALE—One pure bred Shorthorn Bull Calf, five mos. old. WM. HAWKINS, Millville York Co., N. B.

SOWS—Improved Yorkshires, splendid animals. selling for want of help. Bargains. R. G. MURRAY, St. John, N. B.

FOR SALE—At a bargain, a good "Dairy Farm" 18 cows, young stock and machinery. Apply to A. A. REID, Box 22, Oxford, Cum. Co,, N. S.

100 POST CARDS, POSTPAID. 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Two six H. P. gasoline engines, both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch, R. J. Pictou Co., N. S.

YORKSHIRES—Nothing but praise for breeding stock I have sent all over the Maritime Provinces. Book your orders at once for August litters. $5 registered at 5 weeks. R. J MESSENGER, Lawrencetown, N. S.

BARGAIN—New "DeLaval" Separators. Lbs. Capacity: 450-350-140; $63.00, $53.00, $32.00. Also one Top Buggy, used short time, $65.00. For information write.—L. A. Whitman, Box 112, St. John, N. B.

FOR SALE OR EXCHANGE.—I will sell or exchange 160 acres unencumbered land in Saskatchewan. capable of raising 50 bushels of wheat per acre. for small farm property in Maritime Provinces, near sea preferred. Particulars on application to owner.—W. E. GIRARD, Treherne Manitoba.

FOR SALE.—White Wyandotte Cockerels, 260 egg strain, large, blocky birds, grand table fowl. If you have a White Wyandotte Flock you want one to head it, and if you have a mixed flock one of these will double the egg yield. Price from $1.00 to $2.00 each.—B. V. MILLIDGE, St. John, N. B.

FOR SALE.—Registered Holstein Bull 3 1-2 years old, half-Hengervelt, quiet and sure stock getter; also Bull 10 months old, a great-grandson of Colantha's Johanna, and a Bull Calf 3 mos. old. All bred in the purple. Pedigree prices and photos on application.—J. J. McCABE, Alma, N. S.

PISGAH PLACE.

Clydesdale Horses, Ayrshire Cattle
Yorkshire Hogs

FOR SALE

A Yearling Bull from imported stock, dam is a prize winner at Halifax and St. John and last year gave over 10 000 lbs of milk. This sire is from noted prize winners in Scotland. Also a 3 mos. old bull calf, whose dam is qualified in the R. O. P. with 7492 lbs of milk and 306 lbs. of fat. His sire has qualified ancestors. Pure bred Yorkshire little pigs ready to go in October and November.

H. F. Ambrose, Stewiacke, N. S.

HORSES FOR SALE

I have Two Fast Roadsters for sale—one Stallion and one gelding. Both are well bred, handsome and good-gaited trotters. The gelding would make a very fast horse if given a chance. The stallion is one of the best road horses in the province and very speedy. Would consider an exchange for a good working horse. Also will sell a Pneumatic Training Cart (45 lbs.) good as new, for less than half price.

A. M. WILSON,
Erskine Street,
Dartmouth, - - N. S.

DR. JOHN STANDISH DEAD.

Dr. John Standish, veterinarian at the Nova Scotia Agricultural College, died suddenly at his home in Georgetown, Ontario, on Saturday, August 15th. He was ill only two days, the cause of his death being blood poisoning, which it is thought he contracted in making a post mortem of a cow that had died a few days previously. Dr. Standish has been connected with the Agricurtural College for the past seven years. He was well known all over the Maritime Provinces, and genuine regret will be felt by his many friends at his untimely decease.

New Brunswick Agricultural Societies United.

(Continued from page 782)

this organization is not to increase the use of commercial fertilizer, but rather to furnish to those farmers to whom commercial fertilizer is necessary a first class article at as low a price as possible. We wish to get in touch with all Agricultural Societies throughout the Province and it is the object of the Central Organization to issue, a little later, a pamphlet to all societies giving full instructions regarding financing of purchase, home-mixing and use of chemical fertilizers. Through the pamphlet mentioned instructions will be furnished to every Society in New runswick regarding the ingredients required to make up different mixtures.

The Annual meeting of the "New Brunswick Agricultural Societies United" will be held on the fourth Thursday in November. At this annual meeting the delegates from the Agricultural Societies, as provided for in the bill, will meet to arange business for the coming year. It will be necessary for all Societies, wishing to purchase fertilizers through the Central Organization, to hold either three annual meetings or a special meeting before the annual meeting of that organization and to be in a position to place their orders, through their delegates, at any time. It is necessary that all orders for fertilizer be in by December 1st.

REMARKABLE OFFER TO SUBSCRIBERS

The Maritime Farmer has secured a limited number of Mauser rifles, weight noly 7½ pounds. sighted for 1,100 yards, which it offers with the Maritime Farmer for one year for only FIVE DOLLARS. These rifles are models for hunters. They are sold elsewhere for a much higher figure and are easily worth from three to four times as much as we are asking for them. The first to call will get the choice.6The rifles will be sent express to your nearest express office, collect. Money must accompany all orders and rifles will only be supplied to new subscribers, or those who pay strictly in advance. They are the best lot of rifles of the kind on the market. We can also supply ammunition for the rifles in lots of 100 rounds at most reasonable prices.

An Old Adage.

Among strawberry men it is said, and it may be correct or wrong, that lime and strawberries are not congenial. I won't say it is, but the strawberry men are a little careful about using lime.—Horace Roberts, Burlington County, N. J.

Wilson's are Good Scales

WILSON Pays the Freight

The GRAND TRUNK RAILWAY have been using WILSON SCALES for 62 years. Our No. 66—2000 lb. capacity will weigh half a pound correctly. It has 16 full Jeweled Diamond Steel Bearings that are guaranteed for 20 years against wear or breakup. Every scale is tested by the Government. Write to-day.

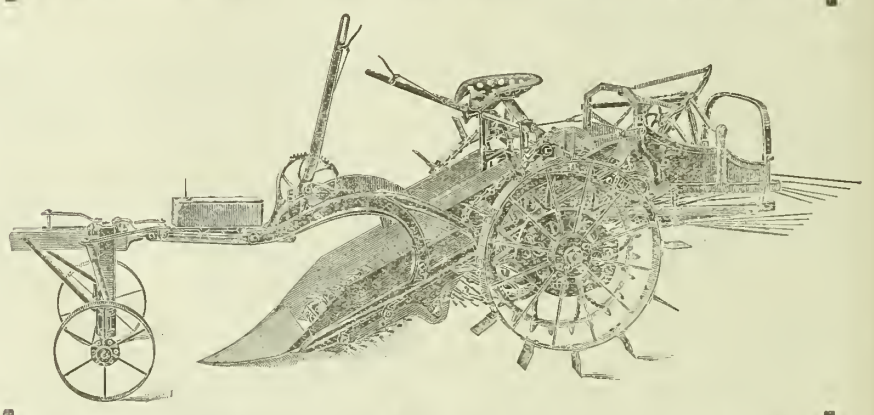
Easy Terms to Pay is the Wilson Way.

C. WILSON & SON,
61 Esplanade St. E.,
TORONTO, - - CANADA.

You will Save Time!

Save all your Crop and therefore save More Money by using the

Hoover Potato Digger



The Amherst Trading Co., Ltd.

Amherst, N. S.
General Agents

Write for Descriptive Catalogue

DEPARTMENT OF AGRICULTURE, FREDERICTON, N. B.

Honourable J. A. Murray, Minister.

Circular to Live-Stock Breeders:--

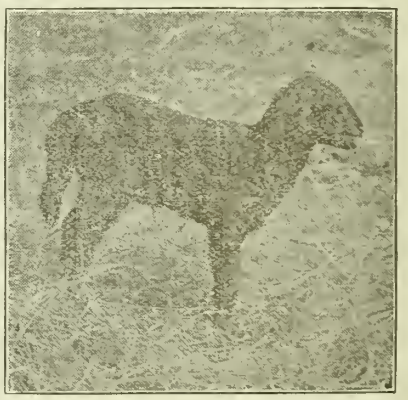
As a result of the policy of the Department of Agriculture, in aiding Agricultural Societies to purchase pure-bred stock, numerous enquiries are being received, as to where suitable breeding stock can be obtained. At the present time this Department is not in a position to give satisfactory information to these enquiries.

In order to increase the efficiency of this Department in supplying reliable information, and at the same time placing the breeder and the purchaser in closer touch with one another, it is proposed that an accurate record be kept at this office of pure-bred stock offered for sale by New Brunswick breeders.

To facilitate this work the co-operation of breeders would be greatly appreciated by this Department. by their supplying a list, together with a detailed description and the price of animals offered for sale, and by their sending a corrected list of their offerings at the first of each month. In this way we hope not only to be of service to those looking for stock but the breeders as well.

Kindly address communications to the Live-Stock Branch, Department of Agriculture, Fredericton, N. B.

Yours very truly
J B. DAGGETT,
Sec'y. for Agriculture.



Three-quarter-blood Lamb Bred on our Ranch

We handle the best strain of fur producing Karakule sheep on the Continent.

We are now booking orders for full-bloods, three-quarter bloods and half-bloods. Delivery on short notice.

Long distance connection through Sussex exchange.

THE CANADIAN KARAKULI-ARABI SHEEP AND FUR CO., LTD.,
Apohaqui, - New Brunswick.

Owing to circumstances brought about by the European war conditions, the Commissioners of the Nova Scotia Provincial Exhibition have decided to cancel the Exhibition. There will, therefore, be no Halifax Exhibition this year.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

REGISTESED TRADE MARK

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 19. SUSSEX, NEW BRUNSWICK, SEPTEMBER 15, 1914. Number 23.

SUSSEX DAIRY RECORD CENTRE

In the course of the visit to the Provincial Dairy School, Sussex, a few days ago we found Mr. H. N. Flewelling, who has charge of the Cow Testing Association in this section busily engaged in testing samples of milk for members of the Association. Mr. Flewelling has worked up a great deal of interest among the dairymen of Kings Couty in Cow Testing work and we believe the Sussex Record Centre is leading in point of cows under test.

Some of the pertinent questions and remarks that Mr. Flewelling asks the farmer in his jurisdiction are:—

Dairy herd improvement must be brought about by Seletion, Breeding and Feeding.

Do you keep a record of the production from each cow in your herd?

Do you keep a record of the feed given to those cows and the cost of that feed?

Do you know that all your cows are making a profit or are some being fed at a loss?

Do you use a good pure bred sire from a producing strain for the purpose of improving your herd?

Following is a record of general results in the Sussex Dairy Record Centre in 1913:

Complete records from 34 herds	448 cows
Average production of milk	4748 lbs.
Average production of Butterfat	193.6
Average cost of feed per cow	$46.38
Average value of production (Butterfat 29 cts. lb.)	$54.14
Average profit per cow	9.76
Average cost per cwt. milk	97¾c.
Average cost per lb. Butterfat	24c.

Highest	Comparison Average for Herds	Lowest
6834	Pounds milk	2900
271	Pounds Butterfat	104.8
$78.59	Value of production ,Butterfat at 29c. lb.-	-30.39
72.03	Cost of feed	32.10
1.43	Cost per cwt. milk	.80
.37	Cost per pound Butterfat	18½

SUSSEX BRANCH

	Herd No.	No. of Cows	Average Lbs. of Milk	Average Lbs. of Butterfat	Average Cost of Feed	Average Cost per cwt. of milk	Average Cost per lb. Butterf't	Actual Cash Receipts for Production Average Recpts.	Profit	Loss	Comparative value Average Price of Butterfot 29c Average Value	Profit	Loss
	1	30	5700	211									
B	2	20	5687	194.6	$ 61.02	$ 1.07	31½c	$ 56.43		$ 4.59	$ 56.43		$4.59
C	3	15	5355	251	54.73	1.02	21¾c	102.73	$48.00		72.79	$ 18.06	
A	4	17	6834	271	55.12	.80¾	20¼c	103.55	48.43		78.59	23.47	
	8	17	5738	222.8	54.59	.95	24c	64.61	10.02		64.61	10.02	
	10	6	4855	205.0	43.18	.91	21½c	59.45	16.27		59.45	21.88	
	12	5	5602	233.7	45.89	.82	19½c	67.77	21.88		67.77	21.88	
	13	15	3440	155.0	32.10	83½	20¾c	49.00	16.90		43.95	11.85	
D	14	14	4507	195.3	55.79	1.24	28½c	66.66	10.84		56.63	0.84	
	15	14	4992	217.2	40.96	.82	18½c	62.99	22.03		62.99	22.03	
	16	10	4000	151.1	40.35	1.00	26½c	43.81	2.46		43.81	2.46	
	19	18	4182	166.8	37.14	.89	22c	48.37	11.23		48.37	11.23	
	20	12	4757	175.4	45.83	.96½	26¼c	50.87	5.03		50.87	5.03	
	21	12	5076	187.8	40.66	.80	21¾c	54.97	14.31		54.97	14.31	
	29	15	4157	163.3	40.13	.93¾	25c	47.37	7.24		47.37	7.24	
	32	18	5329	202.3	43.03	.80½	21¼c	58.66	15.63		58.66	15.63	
E	34	10	3302	146.9	36.00	1.09	26c	42.60	6.60		42.60	6.60	
	36	12	4661	177.6	31.98	.68½	18c	51.48	19.50		51.48	19.50	
	38	11	4622	186.4	36.14	.78	19½c	54.05	18.91		54.05	18.91	
	39	15	5990	233.4	58.10	.97	25c	92.84	34.74		67.68	9.58	
						PENOBSQUIS BRANCH							
	4	14	4522	196.7	$ 41.61	$ .92	21c	$ 57.04	$15.43	$	$ 57.04	$ 15.43	
	5	15	4977	169.5	44.93	.90	26½c	49.15	4.22		49.15	4.22	
	6	18	4515	204.8	47.28	1.04	23c	59.39	12.11		59.39	12.11	
	7	15	3989	206.5	50.63	1.27	24½c	64.01	13.38		59.88	9.25	
	8	8	3569	186.3	46.22	1.29	26c	55.02	8.80		55.02	8.80	
	9	3	4750	189.0	44.66	.94	23½c	56.70	12.04		54.81	10.15	
	10	9	4061	202.7	36.17	.89	17½c	58.78	22.61		58.78	22.61	
						LOWER MILLSTREAM BRANCH							
F	1	16	5452	224.1	$ 53.36	$ .98	23½c	$ 64.98	$11.62		$ 64.98	$ 11.62	
	3	10	4741	187.1	39.67	.83¾	21½c	54.25	15.58		54.25	15.58	
	4	9	2900	104.8	34.97	1.20	33¼c	30.39		$ 4.58	30.39		$4.58
G	5	9	3985	163.6	47.82	1.20	29¼c	47.44		.38	47.44		.38
						NORTON BRANCH							
	1	14	6437	269.2	$ 72.03	$ 1.12	27c	$ 96.56	$24.53		$ 78.07	$ 6.04	
	2	18	4642	175.8	66.39	1.43	37c	69.63	3.24		50.98		15.14

COMPARISON OF EIGHT HERDS IN 1913.

Herd	No of Cows	Average yield of Milk	Average yield of Butterfat	Average cost of feed	Average cost per cwt. milk	Average cost per pound butterfat	Comparative Value Average Price for Butterfat 29c Receipts	Profit	Loss
A	17	6834	271	$ 55.12	$ .80¾	20¼c	$ 78.59	$ 23.47	
B	20	5687	194.6	61.02	1.07	31½c	56.43		$ 4.59
C	15	5355	251	54.73	1.02	21¾c	72.79	18.06	
D	14	4507	195.3	55.79	1.24	28½c	56.63	.84	
E	10	3302	146.9	36.00	1.09	26c	42.60	6.60	
F	16	5452	224.1	53.36	.98	23½c	64.98	11.62	
G	9	3985	163.6	47.82	1.20	29¼c	47.44		.38
H	18	4642	175.8	66.39	1.43	37c	50.98		15.14

RECORD OF FEED—HERD C—15 COWS

30 tons hay @ $8.00	$240.00
5 tons of straw @ $4.00	20.00
600 bushels Turnips @ .10	60.00
24 tons Corn Ensilage @ $3.00	72.00
9 tons Mixed Fodder @ $2.50	22.50
18,000 lbs. Middlings @ 1.4c	252.00
2,600 lbs. Cotton-seed Meal @ 1.9c	49.40
2,400 lbs. Wheat Bran @ 1.25c	30.00
Pasture @ $5.00 per cow	75.00
Total cost of feeding	$820.90
Average cost per cow	$ 54.73

ANALYSIS OF HERD C .....15 COWS

AVERAGE COST OF FEED $54.73

Comparatie Yield

No. of Cow	Age of Cow	Pounds of milk	Pounds of fat	Cost per cwt. of milk	Cost per lb. butterfat	Value of butterfet	Profit	Loss
1	4	5420	260 7	$ 1.01	21c	$ 75.60	$ 20.87	
2	4	5745	245.2	.95	21½c	71.10	16.37	
3	7	3629	188.8	1.50	29c	54.75	.03	
4	3	4970	226.2	1.10	24¼c	65.59	10.86	
5	7	6145	286.1	.89	19c	82.99	28.26	
6	7	5740	238.1	.95	23c	69.06	14.33	
7	5	6521	321.5	.84	17c	93.23	38.50	
8	7	5685	227.8	.96	24¼c	66.06	11.33	
9	2	5375	252.7	1.02	21½c	73.28	18.55	
10	4	6630	366.2	.82½	16¼c	97.49	42.76	
11	6	5785	301.5	.94½	16c	87.43	32.70	
12	6	6020	259.3	.91	21c	75.19	20.46	
13	13	5595	240.6	.97¾	22½c	69.76	15.03	
14	8	3850	184.3	1.42	29¾c	53.44		$ 1.29
15	4	3232	169.5	1.69	32¼c	50.15		4.58
					Total	$270.05		$ 5.87
					Balance profit	$264.18		

RECORD OF FEED—HERD B—20 COWS

70 tons Hay @ $8.00	$560.00
4 tons Straw @ $4.00	16.00
21 tons Mixed Fodder @ $2.50	52.50
300 bushel Oats @ .50	150.00
3,500 bushel Turnips @ .10	350.00
Pasture at $5.00 per cow	100.00
Total cost of feeding	$1228.20
Average cost per cow	$ 61.42

(Continued on page 824)

THE SAINT JOHN EXHIBITION

The Maritime circuit of fall fairs was opened at St. John when on Saturday, September 5th, the gates leading to the spacious exhibition grounds were swung open.

The official opening of the exhibition was held in the Amusement Hall on the evening of the 5th when in the presence of a large and enthusiastic audience His Honor Lieutenant-Governor Wood formally declared the exhibition open to the public. Short addresses were delivered by His Worship Mayor Frink, Acting-Premier, Geo. J. Clark, Hon. J. A. Murray, Hon. John E. Wilson and His Honor Lieutenant-Governor Wood.

Optimism characterized the keynote of the various addresses and the patronage of the people of St. John and other parts of the provinces showed that despite the upheaval which is shaking the whole world at the present time the people of the Maritime Provinces wish to keep matters running smoothly and devoid of all pessimistic tendencies.

The weatherman dealt out a favorable brand of weather and visitors came into the city by the various avenues of transportation until at times it was difficult for one to wend his way through the throngs.

The Main Building

Every nook and corner of the Main Building was lled with the exhibits of the various industrial houses and so tastily were the various booths and exhibits displayed that the whole building presented a very attractive appearance. The only section of the main building which was not quite up to the notch in point of exhibits was the machinery hall. The Humphrey Shoe Co. of St. John, had a process exhibit where shoes were manufactured and during the hours of demonstration the process was watched with much interest by a large number of the sight seers.

The Agricultural Hall

contained a very creditable display of products of orchard, garden, field and aipiary.

"Notwithstanding the early date the show of fruit was very creditable," was the verdict of the veteran judge, Mr. S. L. Peters. In the section for county collections the awards were: —

Albert County—1, W. A. Colpitts; Kings County— 1, A. R. Gorham; 2, F. E. & H. G. Smyth. St. John County— 1, W. R. McFate. Queens County—1, W. P. & F. L. Fox; 2, S L. Peters' Sons. Sunbury County—St. John Valley Farm & Fruit Co.; 2, Isaac W. Stephenson. Victoria County—1, Donald Innis. The best County collection was shown by A. R. Gorham of Kings County, who also had the best collection of tender fruits in natural condition. H. E. Bent, of Nova Scotia, and W. R. McFate of St. John County figured in second and third collections.

H. E. Bent had the best collection of hardy fruits with Gorham and Colpitts in second and third positions. Gorham also had the best collection of small fruits in glass. Bent and McFate carried off the second and third prizes.

The prize winners in the apples and pears sections were as folows:—

Export Barrels ready for shipment— 1, H. E. Bent; 2, A. R. Gorham.

Export boxes ready for shipment—1, John N. Chute; 2, W. P. and W. L. Fox; 3, A. R. Gorham.

Domestic barrels ready for shipment —1, H. E. Bent; 2, A. R. Gorham.

Domestic boxes ready for shipment —1, St John Valley Farm and Fruit Co.; 2, W. P. and W. L. Fox; 3, A. R. Gorham.

Domestic baskets ready for shipment —1, A. R. Gorham; 2, S. L. Peters & Sons.

Desert Varieties—

Any three varieties—1, H. E. Bent; 2, A. R. Gorham.

Any Seedling—1, S L. Peters' Sons; 2, A R. Gorham.

Decoration Exhibits—

For dining table—2, H E. Bent.

For show table and shop window—2, H. E. Bent.

Industrial Varieties—

Alexander—1, S. L. Peters' Sons; 2, John N. Chute; 3, A. R. Gorham.

Duchess—1, W. P. and W. L. Fox; 2, St. John Valley Farm & Fruit Co.; 3, A. G. Sangster.

Gravenstein—1, H. E. Bent; 2, M. E. Armstrong; 3, A. G. Sangster.

Crimson Beauty—1, I. W. Stephenson; 2, J. N. Chute.

Maiden's Blush—1, A. G. Sangster.

Red Astrachan—1, M. E. Armstrong; 2, F E. and H. G. Smyth; 3, A. G. Sangter.

Ribston Pippin—1, H E. Bent; 2, A. G. Sangster; 3, J. N. Chute.

Fameuse—1, Mrs. E. W. Darcus; 2, St. John Valley Farm and Fruit Co.; 3, A. G. Sangster.

St. Lawrence—1, I. W. Stephenson; 2, St. John Valley Fruit Co.; 3, A. R. Gorham.

Baxter—I. W. Stephenson; 2, St. John Valley Fruit Co.; 3, A. G. Sangster.

Wolf River—1, St. John Valley Fruit Co.; 2, M E. Armstrong; 3, I. W. Stephenson.

McIntosh Red—1, A. R. Gorham; 2, W. P. and F. L. Fox; 3, Mrs. E. W. Darcus.

Wealthy—1, W. P. and W. L. Fox; 2, St. John Valley Fruit Co.; 3, A. G. Sangster.

Best six fallf-1 p-Mdnua etaoinu

Blenheim Pippin—1, H. E. Bent; 2, A. G. Sangster; 3, J N. Chute.

Any other Seasonable variety—1, H. E. Bent; 2, A. G. Sangster; 3, St. John Valley Fruit Co.

Best display crab apples—1, A. G. Sangster.

Best 5 varieties Pears—1, H. E. Bent; 2, J. N. Chute; 3, A. G. Sangster.

Best six fall Pears—1, A. G. Sangster; 2, H. E. Bent; 3, S. L. Peters' Sons.

H. E. Bent won three first prizes and one second prize on plums, peaches and grapes and John N. Chute won one first and one second prize in the same class.

The Demonstration in the Handling of Bees

Perhaps no practical demonstration attracted more of the visitors at the exhibition than that conducted by H. B. Durost, Prov. Apiarist. The idea of the demonstration was to show that when properly handled, bees are as gentle and submissive as any of the farm livestock. Too many of those who are mortally afraid of bees (and most people are) it was a great surprise to see Mr. Durost, with coat off, sleeves rolled up, and with no covering whatever on face or hands, working with the bees. Many were the exclamations of wonder when he was seen to grasp the live bees up by the handful and pour them from hand to hand.

Besides handling the bees, Mr. Durost showed, and explained the use of all the various apparatus used by an up-to-date bee-keeper.

There was a nice display of apiarian products and awards were:—

Bees

Best Colony Black Bees—1, W G. Asbell.

Exhibit of Live Queen—1, W. G. Asbell.

Comb Honey—1, Miss Elda T. Smith;; 2, W. G. Asbell; 3, G. S. Peabody.

Best Liquid Extra. terd Honey, Light —1, W. G. Asbell: 2, G. S. Peabody.

Best Liquid Extracted Honey, Dark —1. W. C. Asbell.

Best Granulated Honey—1, W. G. Asbell.

Best Display of Honey—1, W. G. Asbell; 2, G. S. Peabody,

Best Comb Honey Super—1, G. S. Peabody; 2, W. G. Asbell.

Largest display articles of diet into which honey is a component part—1, G. S. Peabody; 2, Mrs. Jos McKay; 3, Mrs. Geo. McKay.

Best Beeswax—1, G. S. Peabody; 2, W. G. Asbell.

Best Apiarian supplies collection—1, W. G. Asbell.

Largest and neatest display of Apiarian Products and supplies—1, W G. Asbell; 2, G. S. Peabody.

Best general exhibit—1, W. G. Asbell.

Best general display beeswax—1,W. G. Asbell.

Harve yMitcehd .R; & M,eklv2.

Harvey Mitchell of the Dominion Dairy Division placed the awards in the Dairy Products Sections. Following are the awards with score made by each exhibitor.

Cheese

Cheese, 2 cheddar, colored—1, William Clark, 96½; 2, Adrian McInnis, 96; 3, Archie Cousins, 95½

Cheese, 2 cheddar, white—1, L. Bibeau, 96½; 2, Archie Cousins, 96; 3, Adrian McInnis, 95.

Cheese, 3 flats, colored—1, William Cousins.E—.Sec.o .SVt etoinashrdlup Clark 97; 2, Adrian McInnis. 96½; 3, Archie Cousins, 95.

Cheese, home made dairy—1, Isaac W. Stephenson: 2, Miss Clementine Drake.

Butter

Box for export 28 or 56 lbs.—1, J .P. Simmons, 96¼; 2, Farmers Dairy and Produce Co.. 95¼; 3, W. C. Lewis, 95; 4, Sussex Cheese and Butter Co., 94.

Prints, 20 lbs.—1, J. P. Simmons, 95¾; 2, W. C. Lewis, 95½; 3, Farmers Dairy and Produce Co., 95¼; 4, Sussex Cheese & Butter Co, 94.

Crock or tub, 10 lbs., private dairy— 1, Bertrand Goodspeed, 94; 2, McFarlane Bros., 93½; 3, Harvey Weade, 93, 4, J. W. Foster, 92½.

Prints, 10 lbs. private dairy—1, McFarlane Bros., 94; 2, Bertrand Goodspeed, 93½; 3, Geo. M. Holmes, 92½; 4, J. W. Foster, 92.

There was a good display of field roots and grains and garden vegetabes. The awards were placed by S. J. Moore Maritime Seed Inspector.

The awards in field grains and roots were as follows:—

Best Assortment of Potatoes—1, Bertrand oBodspeed, Penniac, N. B.; 2, John N. Chute, Berwick, N. S.; 3, Hugh A. Dickson, Truro, N. S.

Best collection of Field Roots—4 entries— 1, Hugh A. Dickson; 2, Bertrand Goodspeed; 3, John N. Chute.

Field Grains

Best collection of grain grown in New Brunswick—Donald Innis.

Field Grains—Bertrand Goodspeed, A R. Gorham, M. B. Harrison, Donald Innis, McFarlane Bros., J. A. Johnston, H. E. Bent, Geo. M. Holmes, H. S. Secord & Sons.

Sheaf Grain—D. Innis, M. B. Harrison, B. Goodspeed, McFarlane Bros., Geo. M. Holmes, A. R. Gorham, H. S. Secord & Sons.

Best collection Sheaf Grain—D. Innis M. B. Harrison.

In the garden vegetable section, Mrs. Annie Freeman had the best collection of tomatoes and Hugh A. Dickson, F. B. Waters and Bertrand Goodspeed carried of the first, second and third awards in their respective order for sweepstakes collection of produce.

The Dominion Experimental Farm had a splendid display of the various products of the Station at Fredericton. The exhibit proved very instructive and attendants in charge were kept busily engaged answering questions. An egg candling station was in opration under the direction of Mr. Hare of the Ottawa Station who clearly set forth the advantages accruing from the organization of egg circles in farming localities.

Highfields Farm, Hampton, N B. had a table in the Agricultural hall on which were displayed their various products. A casual glance at this table revealed the fact that the management of this farm is alive to the possibilities of catering to a good class of customers. There were samples of butter, Devonshire clotted cream, Coulommier cheese, Pont L'Eveque cheese, Gervais cheese, bottled fruits and vegetables and other articles. We would judge by the exhibit that the aim of the proprietress of Hampton Stock Farm is to make everything count by putting the products and by-products of the farm on the market as attractive and as appetizing as possible.

The Natural History, Economic Minerals of Canada, Fine Arts and Woman's Work Departments were well filled and much nterest centered on the exhibits in the various sections.

The Child's Welfare Association had a display in one of the galleries which proved most attractive and which showed what kind and willing hands can do for the health and happiness of the little tots.

The attractions before the grand stand and in the amusement hall were clean and sprightly and between them and the noisy pike the sight seers found ample opportunity to forget dull care.

The Live Stock

There is no part of an exhibition on which so much interest centres as on the live stock section and this was particularly true at St. John. The various encosures were thronged with visitors, who admired the magnificent horses, the beautiful dairy cattle, the fat beef cattle, the sheep, the swine and the noisy poultry. Each and every section had its admirers. The judging was rushed through as quickly as was consistent with thoughtful work so that the management was able to pay all prizes from twenty-four to thirty-six hours before the close of the show.

Horses

There was a fair showing of horses in point of numbers and good in point of quality. E. Watson, Manager Mount Victoria Stock Yards, Hudson Heights, Que., placed the awards on the lighter breeds and John Vipond, Whitby, Ont., dispensed the prizes in the heavy horse classes.

THOROUGHBREDS were shown by Geo. Carvell, St. John, Geo. M. Holmes, Amherst, E. L. Woods, East St. John, Jas. Watters, Marsh Bridge, and R. J. Armstrong, St. John. Carvell's Melsino by Meltonian shown in the aged class carried off the male championship.

Nancy Brown shown by E. L. Woods was the best mare, 4 years old or over and best with her C. R. W. Foal by her side and champion.

STANDARD BREDS—Four aged stallions wheeled around the track in the Standard Bred class. H. C. Jewett's Canadian Prince led the way and captured the stallion championship. W. J. Alexander was second with Dan Gilbert and W. Brickley's Golden Result, a brother to Bingen, was third, while C. R. W. stood in the fourth place.

Jas. B. Stentiord, of St. John, showed Dodd's Princess, by King Dodds, the only two-year-old filly. She was good enough to capture the female champion.

HACKNEYS were shown by R. A. Snowball, McFarlane Bros., W. H. Burnett and W. M. Johnson.

Model Performer, Sedgewick Enterprise and Stampede were placed in their respective order with the former carrying off the championship diploma and Canadian Hackney Horse Society Medal.

W M Johnson's Ardimersay May Queen was first in the aged mare cass and champion and also first with her Model Performer foal. Her only competition for these honors being Snowball's Chatham Lily with her foal by Cock o' the North.

CLYDESDALES—McFarlane Bros. and R. A. Snowball were the largest exhibitors of Clydes.

n the aged Stallion Class McFarlane Bros.' Baron Squire, H. C. Jewett's Day Dream and G. C. Cossar's Dunure Crag were the prize winners in the order named.

Snowball's Baron's Own had no competition in the three-year-old class as was the case with McFarlane Bros.' imported Boreland Crest by Baron's Crest in the two-year-old class. Boreland Crest carried off the male championship diploma and the Canadian Clyde Association prize. Jewett's Day Dream carried off the Association prize for best Canadian bred stallion.

Snowball's aged mare, May Lothian was champion female and his Miss May was best Canadian bred mare. McFarlane Bros. also showed the nice two-year-old imported filly, Ballmangan Belle. Snowball's May Lothian foal by Baron Balgreddan was first in this class.

John Sharp's Clydesdale Baron Balgreddan was first with six of his get, all breeds competing.

Shires—There was only one shire horse on the grounds.

PERCHERONS were few in numbers D. P. Cayton's Indican and Jewett's Gresham were awarded first and second prizes in their class while a third stallion shown in the ring was awarded the goose egg unless the judge changed his mind later and placed the award.

Samuel Jones and G. W. A. Chamberlain showed one three stallion and one two-year-old. stallion. respectiely. W. S. Allison and Geo. Chamberlain showed all the females in the class.

SUFFOLKS—Two three-year-old Suffolk Punch stallions Belmont Royal George and Belmont Sovereign were shown by G. F. Stephenson and Samuel Jones of St. John, and prizes were awarded in the order named.

Beef Cattle

Shorthorns were shown by R. A. Snowball, C. A. Archibald, Isaac Chipman & Son, A. N. Griffin and G C. Cossar—a strong competition. Archiebald's herd was out in good shape although their owner claims that they were loaded direct from the pasture abroad cars without any special fitting. Snowball's Gay Archer led the way in the aged bull class with Archibaid's Prince Imperial, Chipman's Victor and Cossar's May Dawn in second, third and fourth places.

Griffin's two-year-old Proud Monarch by Stately Monarch had no competition in his class but was good enough to capture the male championship. There was an excellent showing of young bulls. The strongest competition in females was in the senior calf class in which nine beauties appeared before the judge.

Snowball's Roan Mina, the first prize two-year-old heifer carried off the female championship. Griffin's Proud Monarch was first with three of his get. Snowball's Chatham Bell was first with two of her offspring and Archibad's Rosabella captured the special award in this section which was donated by the Dominion Shorthorn Breeders' Association. The biggest honor in the class, the breeders' young herd prizes were won by R. A. Snowball and Chas. A. Archibald and in both cases Mr. Archibald's faorite expression obtains "We breed our winners and sell them too."

HEREFORDS—Wm. O'Brien & Sons and Jas. E O'Brien were over from Windsor Forks, N S. with a nice string of well-fitted white faces but met no competition worthy of ther steel.

ABERDEEN ANGUS—A nice, well-fitted herd of doddies was shown by J. M. Laird & Son, Kelvin Grove, P. E. I. and they too had no competitors.

Dairy Cattle

Ayrshires—Clifford Creighton, McIntyre Bros., A. McRae & Sons, Geo. Retson, C. A Archibald and P. Blanchard were exhibitors in the ever popular Ayrshire class. Jas. Bowden, Danville, Que., placed the awards. Creighton sprung a surprise on his competitors by being again back in the ring in battle array. Mr. Samuel Creighton, his father, was one of the old timers in the Ayrshire show ring but he dispersed his herd some years ago. At the time of his sale he withdrew a young heifer from the sale when not more than $60.00 was bid for her. This young heifer was a daughter of J. Frank Roache's famous White Heather and from the offspring of this cow Creighton has again buit up a herd that is second to none and has clearly demonstrated what a farmer can do, by persistent breeding, in a few short years.

In the aged bull class, Creighton's Cherry Bank Cicero by Netherall Milkman led the way with McIntyre Bros. Grange Kelly and McRae's Hobsland's Trumphies Heir in second and third places.

Cherry Bank Ccero carried off the male Championship and was first with three of his get and sire of Association Specia prize for get of sire. Creighton's White Heather, of Siler Falls, the first prize cow in the aged calss, was champion femae and first with her offspring and the dam of the pair that captured the Ayrshire Association Special for progeny of cow. Creighton, McaRe & Sons and McIntyre Bros. had the best aged herds in their respective order while McRae & Sons led the way with young herd closely followed in second and third places by two splendid herds shown by McIntyre Bros. Blanchard's Miss Peter Pan was first in the dry 4-year-old-cow class.

JERSEYS were shown by Clifford Creighton, H. S. Pipes & Son and E. J. Young. Mr. Young was formerly of the firm of Josslyn & Young. The Pipes herd was at St. John fresh from their victories at the Quebec exhibition where they had won the choicest prizes there offered. R. R. Robertson placed the awards.

Pipes' senior yearling Purple Blue, succeeded in landing the male championship and J. E. Young's Fox's Kathleen, shown in the four-year-old class walked off with the female championship.

Creighton, Pipes and Young won pri es in their respective order on aged herds and Pipes won first and second on breeders' young herd with J. E. Young in third pace. Fox's Katheen was first with two of her offspring and Creighton's Brampton Phra was first with three of his get.

GUERNSEYS—Hugh A. Dickson, Truro, N. S. and Roper Bros. had every thing their own way in the Guernsey cass. Dickson's Conqueror of Willow was the champion male and was first with three of his get. Roper Bros.' Rosalind was the champion female. Dickson led the way in the senior herd, bull and three of his get and cow and two of her offspring casses. Roper Bros. showed the best young herd.

HOLSTEINS—Lea & Cark, J. S. Gibbon and W. S. Harding were the only exhibitors of Holsteins. The Lea & Clark herd was out in particularly good fit. Harding made no especial preparation although his herd was in good working form. Lea & Cark's aged bull Ida Rooker's II Vale was the champion male and their three-year-old cow Ida Rooker's Johanna was champion female. The reserve female was Lea & Cark's Aggie Nig De Kol.

DAIRY GRADES—There was a good showing of dairy grades and prizes were awarded as will be found on other pages of this issue.

Sheep

There was a nice display of well-fitted sheep. C. E. Bain, Taunton, Ontarrio placed the awards.

Geo. Retson, Brookside Farm, Truro, N. S., captured the siver cup donated for the best judging of sheep by an amateur.

COTSWOLDS—Geo. Retson had the most prize winners in the Cotswold class. Geo. Thompson captured a third prize on aged ewes, a second prize on shearling ewe and second pen of lambs.

LEICESTERS brought out some stiff competition between two Boswall flocks, the Cossar farm flock and Retson's flock. The Boswall flocks carried off the biggest share of the money.

LINCOLNS were shown by Albert Boswall and C. D. Pugsley. The Boswall flock carried off all first prizes and Pugsley came in for a good share of the seconds and thirds.

OXFORD DOWNS—J E. Baker & Sons and J. M. Laird & Son were the only exhibitors of Oxfords. They were all out in show shape and every inch of the way to the prizes was contested.

SHROPSHIRES—Two Boswall flocks and a few representatives from Cephas Nunn's flock were in the ring. The aged ram shown by Geo. L. Boswall was imported recently from Fred Nock, a noted English breeder.

The Bronze Medal for

SOUTHDOWNS—The Bronze medal for the grand champion ram of the show, all breeds competing, was won by Cephas Nunn, with a two year old ram of his own breeding which argues well for Mr. Nunn's qualifications as shepherd and breeder. The honors in the Southdown cass were contested for by Messrs Cephas Nunn and J. E. Baker & Sons with fairly even results.

DORSETS were exhibited by Geo. L. Boswall and M. K. Boswall.

HAMPSHIRES—Cephas Nunn and Almon Boswall were the only exhibitors of Hampshires.

CHEVIOTS—Nunn and Symes divided the honors in the Cheviot class.

SUFFOLKS—The Boswalls had the only Suffolks at the fair.

FAT SHEEP—J. E. Baker & Sons, Geo. L. Boswall, L. Bibeau, Cephas Nunn, C. D. Pugsley and Almon Boswall carried off all the awards in the fat sheep class.

Swine

One of our contemporaries in reporting the Dominion Exhibition at St. John a few days ago reported "the swine were all judged in five minutes and that the judge had time to talk between classes." Were it not for Geo. Callbeck of Summerside, who was over with a fine string of Yorks the same report might have been applicable to this year's Swine show. Thos. Barrett, of East St. John also showed some nice Yorkshires and J. E. Josselyn showed a few Chesters. Callbeck's typical, well-grown, well-fitted. clean looking pigs were the subject of much favorable comment. Callbeck captured the Boar Grand Championship Bank of Commerce Bronze Medal as well as the silver cup for the best judging of swine by an amateur. James Bowden, Danville, Que., placed the awards.

Poultry

The poultry classes were judged by Seth Jones, Poultry Superintendent for the New Brunswick Dep. of Agriculture. There was a good showing of turkeys, ducks and geese but in the other classes the competition was not so keen. At this early date, few, if any of the birds were in good feather.

THE PRIZE WINNERS

HORSES

Thoroughbreds.

Stallion, 3 years old and upwards—1, Geo. Carvell, St. John, N. B.; 2, Geo. M. Holmes, Amherst. N. S.

Stallion, 1 year old—1, Jas. Watters, Marsh Bridge, N. B.

Mare, 3 years old and upwards—1, E. L. Woods, East St. John; 2, R. J. Armstrong, St. John; 3, Geo. M. Holmes.

Filly, 2 years old—1, Jas. Waters.

Filly, 1 year old—1 and 2, Geo. M. Holmes.; 3, Jas. Watters.

Foal of 1914—Geo. M. Holmes

Brood Mare with Foal by her side—1, E. L. Woods; 2, Geo. M. Holmes.

Stallion, any age, Diploma—Geo. Carvell.

Female, any age, Diploma—E. L. Woods.

Standard Bred

Stallion, 3 years old and upwards—1, H. C. Jewett, Fredericton, N. B.; 2, Wm. J. Alexander; 3, Wm. Brickley; 4, E. L. Jewett.

Mare, 3 years old and upwards—1, Filly, 2 years old—1, Jos. B. Stentiford. Geo. M. Holmes; 2, Hugh Yearwood.

Foal of 1914—1, Geo. M. Holmes; 2, Hugh Yearwood.

Brood Mare with Foal by her side—1, Geo. M. Holmes; 2, Hugh Yearwood.

Stallion, any age, Diploma—H. C. Jewett.

Female, any age, Diploma—Jos B. Stentiford.

Hackney

Stallion, 3 years old and upwards—1, Snowball, Chatham, N. B.; 2, McFarlane Bros., Fox Harbor Pt., N. S.; 3, W. H. Burnett.

Mare, 3 years old and upwards—1, W. M. Johnson, Chatham; 2, R. A. Snowball.

Filly, 1 year old—1, R. A. Snowball; 2, W. M. Johnson.

Foal of 1914—1, W. M. Johnson; 2, R. A. Snowball.

Brood Mare with Foal by her side—1, W. M. Johnson; 2, R. A. Snowball.

Stallion, any age, Diploma and Canadian Hackney Horse Society Silver Medal—R. A. Snowball.

Female, any age, Diploma and Canadian Hackney Horse Society Silver Medal—W. M. Johnson.

CLYDESDALE

Stallion, 4 years old and upwards—1, McFarlane Bros.; 2, H. C. Jewett; 3 G. C. Cossar.

Stallion, 3 years old—1, R. A. Snowball.

Stallion, 2 years old—1, McFarlane Bros.

Stallion, 1 year old—1, R. A. Snowball.

Mare, 3 years old and upwards—1 and , R. A. Snowball; 2, McFarlane Bros.

Foal of 1914—1, R. A. Snowball; 2, McFarlane Bros.

Brood Mare with foal by her side—1, R. A. Snowball; 2, McFarlane Bros.

Stallion, any age, Diploma—McFarlane Bros.

Mare, any age, Diploma—R A. Snowball.

Special Prizes Offered by the Clydesdale Asociation of Canada.

Best imported Clydesdale Stallion, $40.00—McFarlane Bros.

Best Canadian bred Clydesdale Stallion, $40.00—H. C. Jewett.

Best imported Clydesdale Mare, $35.00—R. A. Snowball.

Best Canadian-bred Clydesdale Mare—R. A. Snowball.

Percheron

Stallion, 4 years old and upwards—1, D. P. Clayton, Fredericton; 2, H. C. Jewett.

Stallion, 3 years old—1, Samuel Jones.

Stallion, 2 years old—1, Geo. M. Chamberlain.

Mare, 3 years old and upwards—1 and 2. Wm. S. Allison, St. John.

Filly, 2 years old—1. Geo. A. Chamberlain.

Filly, 1 year old—1, W. S. Allison.

Suffolk Punch

Stallion, 3 years old—1, G. F. Stephenson, Golden Grove; 2, Samuel Jones, Marsh Bridge.

Roadsters

Stallion, 3 years old and upwards—1, J. F. Kelly; 2, Geo. M. Lawson; 3, Wm. Brickley.

Colt of Filly, 2 years old—1, Jos. B. Stentiford; 2, Colin Taylor; 3, John B. Wood.

Matched Pair, any age—1, Geo. M. Holmes; 2, P. H. Nugent.

Carriage Horses

Single Horse, Gelding or Mare—1, W. M. Johnson; 2, Geo. M. Lawson; 3, H. C. Greene.

Heavy Draught Horses

Mare or Celding, 3 years old and upwards—1 and 2, R. A. Snowball; 3, McFarlane Bros.

Colt or Filly, 2 years old—1, McFarlane Bros.; 2, R. A. Snowball.

Team, Mare or Gelding—1 and 2, R. A Snowball; 3, Manchester, Robertson & Allison.

(Continued on page 838)

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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SEPTEMBER 15, 1914.

DATES OF ISSUE

September 15-29
October 13-27

A CLERGYMAN'S EXAMPLE

We glean the following from one of our Prince Edward Island exchanges. We trust every clergyman in the Maritime Provinces will read it and having read see what they can do to follow the example that is set by Rev, Dr. Gauthier.

"Prof. Ross, who has returned to Charlottetown from Western Prince, where last week he had been judging the fields of standing grain, reports excellent crops of all kinds. Not for many years has the hay crop been so heavy, he says, and most of it has been gathered in excellent condition. A good many of the grain fields are patchy on account of the cold, wet spring, but the crop will likely be a heavy one. The show thistle and the hawkweed are however abundant. The former is now general all over the Island and is becoming a serious menace to our grain crops. The turnip and potato crops give evedince of being very heavy. The latter is this year blooming very prolific, much more so than ordinarily. Even within the short space of one year Prof. Ross notices very considerable improvements. Rev. Dr. Gauthier is continuing his experiments and demonstrations. In one field he has sown three varieties of Oats, Old Island Black, 50 lbs., black and Ligowo. The first named is much the best, the Ligowo comes second and the 50 lbs. third. Besides, the 50 pounds is quite rusty, and this strip of oats, running through the whole of a large field, can easily be noticed as one drives along the road, and the Rev. doctor is kept busy explaining that it is a different variety and seems to be more susceptible to rust. Dr. Gauthier's other demonstrations of rotations and clovers, etc., have been very successful and with the exception of one field which is now in process of treatment, the parochial farm is intensively cultivated and can challenge the Island in crop production. The kind of crop grown, too, makes for the improvement of the parish. They are fed to live stock on the place, and his excellent herd of Holsteins is the pride of the commuuity. Not only is the reverened doctor directing the spiritual welfare of his parishioners, but he is testing for them the latest agricultural practices, demonstrating the best methods and leading the way to better and more remunerative agriculture.

OUR DUTY TO ONE ANOTHER.

"The following from the New Glasgow Enterprise is very timely:

"Now that war is on let us consider our duty towards our neighbor. At no time is it more incumbent upon us to do so. Henceforth till peace return there is no longer Tory or Liberal, capitalist or workman. There is only an old nation proud in arms facing as one a conflict which is not of its seeking. Our brothers by the hundreds of thousands must face death. What can we who from age or other reason are out of the fighting line do to prove ourselves worthy of them and to help.

"Let us wring the last drop of selfishness from our hearts. Let us each and all resolve that no action of ours shall add to the perplexities in an unwonted situation. If food is rising in price, let not those who are well to do and can afford to pay the high price seek to lay in stores, for by so doing they will make things harder for the poor people who have to buy by the little. We must help to make their cents go as far as possible.

"If you have bank accounts do not let us embarrass our bankers by panic stricken drawing, in order that we may have cash in the stocking. If our credit is good, we shall be able to get the things necessary to our existance and the need of ready money will be lessened, if we are content to remain quietly at home. Again if any be in our debt let us not choose this moment to press him for the settlement of his debt. It is easy to break a man by pressing him in a moment of difficulty, while forbearance may enable him to weather the storm, and in the long run prove os profit to creditor, who io his legal rights, adds the security of an honorable obligation.

FOR BUMPER 1915 CROPS.

In the last issue of The Maritime Farmer, under the Caption of "If England Dies You Die;" we drew the attention of our readers to the pressing need for extensive preparations this fall in the line of getting every possible acre of soil in readiness for the sowing and planting of farm crops next spring so that, other conditions being favorable, harvests will be reaped in the Maritime Province in the fall of 1915 such as was never before known in our history.

Since the article in question was published we have received many flattering Commendations of the policy we have outlined.

Anent this subject we glean the following cable and references thereto, from a recent issue of one of our exchanges:—

"Ottawa, Aug. 30 (Via Gazette leased wire)—That the farmers of Canada can do the Empire a good turn, with profit to themselves, by largely increasing their wheat acreage for next season's crop, is the belief expressed in a cablegram just received from a number of members of the Liverpool Corn Exchange. It is pointed out in this message that the area likely to be sown to wheat in Europe will be seriously reduced, owing to the mobilization of nearly twenty million men. The Dominion government is strongly impressed with the desirability of increasing the wheat acreage in Canada.

"In discussing the Liverpool cable Hon. Martin Burrell, minister of agriculture says:

"Apart from the practical certainty that wheat next year will yield a large financial return to the grower, there is the great fact that the Canadian Farmers, who by extra effort, enlarge their wheat acreage, are doing the best thing possible to strengthen the Empire in its day of trial."

While wheat is the only crop referred to in the above article, the term may truthfully be extended to include all farm and garden crops.

COMMUNITY MARKETING.

"A. D. Wilson, Director of Agricultural Extension and Farmers' Institutes, University Farm, St. Paul, says:—

"Co-operation in marketing and in buying is, we believe, essential to the economical distribution of products. Large quantities of uniformly good products can be sold much more advantageously than can smaller quantities of products, each sample of which may be good in itself but which when brought together are not uniform. When every farm was manufacturing its own butter, and each of the hundred or more farmers in the community was trying to sell butter of a different quality, the price of butter was comparatively low. Where butter is manufactured in one plant, the manager of the creamery has at his disposal large quantities of a uniform product and can sell at the best possible price

"If the products of a community, such as grain, potatoes and live stock, can be made uniform by co-operation among the members of the community in production, and then these larger quantities of uniform products can be sold by one man, the same advantages that come to the large farmer, can be secured in other enterprises on the farm.

THE N. S., A. C. WORK CARRIED ON AS USUAL.

Despite the fact that wars and ruinous of wars are disturbing business interests throughout the whole world, the Nova Scotia Agricultural College, Truro, will as usual carry on its good work. The 1914--15 classes will find the college doors open on November 3rd., and on January 5th., the Farmers and Farmers' wives and daughters of the Short and Domestic Science Courses will be received. Present indications we are told point to a large attendance and should it be that subsequent developments should lead to a reduced attendance, the smaller number of students will have extra advantage of the attention which they will receive from the members of the faculty. It makes no difference what profession a boy intends to follow he will be a broader-minded and better citizen in after years if he takes advantage of the excellent training afforded by spending a year or two at the N. S., A. C.

Present Status of the Dual-Purpose Cow in Britain.

In the last issue of the Maritime Farmer we published an article under the above caption credited to Hoard's Dairyman.

In this issue we are publishing an article which was written by Prof. Thomas Shaw, who has been in England purchasing milking Shorthorns for the United States. The article in question under the caption of "Sacrificing Good Cows" was prepared for the Live Stock Journal and relates to a condition of affairs all too common in the Maritime Provinces as elsewhere.

Commenting on Prof. Shaw's article the Farmers' Advocate, and we agree with the sentiments, says:

"Too many good stock and milk cows are turned off to the butcher at the very prime of their lives, simply because their lactation period is at an end and their owner, who is a city milk producer, does not want to wait for the beginning of another."

Here is what Prof. Shaw says:

"While there is very much to be admired in the practices followed by the breeders of live stock in Britain, one that I have noticed in regard to the same is, I think, peculiarly unfortunate. The reference is to frequent sales of valuable cows that are made to dairymen who supply milk to the large cities, and who find no other use for a cow than to sell her for slaughter when her lactation period is over. This evil is present in the United States as well as in Britain, but relatively in a less degree. The cows thus sold are quite mongrel in their breeding, and therefore are less valuable than the beautiful grade milking Shorthorns that prevail to so great an extent in England.

"This drain, I am told, is continuous, and it goes on through all the year. An intelligent farmer at Penrith stated only a few days ago that the sales of these cows, or at least the shipping of these from Penrith, would average not fewer than fifty a week. It would be interesting to know the aggregate of these sales in a year; without a doubt the record would be startling. The loss to the country, could it be stated in figures, would be appalling.

"Why should the loss be stated thus? Because of what it really represents. The buyers of cows for the uses named prefer young cows, and for the reason that they sell for a good figure when the lactation period is completed. They may, and do, buy some old cows, but they are much more anxious to get them when they are young. Suppose a cow is bought at six years old; she is milked one season by the city dairyman, after which she must die; she is cut off in the zenith of her youthfulness. The milk which such a cow would produce subsequently for several years, if she were spared, is not forthcoming, of course. But, what is more to be regretted, the calves which she would produce to perpetuate her kind remain unborn. While the business is perfectly legitimate, it does seem unfortunate that it exists. Milk could be supplied from the farms without the slaughter of cows n their prime.

"Do the breeders of England know that the demand for non-pedigreed milking Shorthorn cattle is going to be brisk in the near future? The bars are down, insomuch that non-pedigreed cattle can be taken over now. American farmers will want them because of the fact that the practice in England has been to milk them for past generations. This is a guarantee of their good milking qualities, and they are all so capable of producing animals that will be good producers of beef. It is animals such as these that the American arable farmer now wants, and it is animals such as these that he does not now have.

"Why are cattle of the dual class so few in America to-day? Because of the fact, first, that many of the teachers in the agricultural colleges persisted in teaching that dual-purpose cattle cvannot be bred; because many who were interested in dairying proclaimed the same truths, and because the dairy press aided in the dissemination of such erroneous teaching. The success of this unfortunate crusade—for it was a crusade—was aided by the low prices of meat in America, and the high prices relatively of dairy products. Meats have become very dear—nearly, or quite, as dear as in Britain. The farmers cannot supply the demand. The dairy cattle whih prevail so extensively can only supply but a small portion of it. The supply from Western ranges is sensibly decreasing, because of the breaking up of much of the Western ranges into arable farms. The population is increasing at the rate of 2,000,000 people each year. Where is the extra supply of meat to come from but the arable farm? What class of cattle must furnish it mainly? It must come from dual cows, for such cows will bring more money to the owner than can be obtained from straight beef cows kept under arable farm conditions.

"Will the growers of dual-purpose cattle in Britain, whether of the pedigreed or non-pedigreed sorts, make due preparation for the market that is thus opening up to them for non-pedigreed cattle? The chief fear is that the demand may exceed the supply. Those cows that are being thus sold in numbers so largely to city dairymen would serve a much better purpose by reproducing their kind in America. The time is nigh when they will want these cows. Can nothing be done to prevent them being thus sacrificed?"

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The Canadian Seed Growers Association in New Brunswick.

Editor Maritime Farmer:—

At the annual meeting of the Canadian Seed Growers' Association held in Ottawa it was decided to ask the several Provinces to undertake the work of field inspection and extension. Hitherto this part of the work had been done by the Field Officers of the Dominion Seed Branch. Recent addition to the staff of most of the provincial departments of Agriculture, and the increased duties of the Seed Branch Officers have justified the step.

The New Brunswick Department of Agriculture has agreed to undertake the work in this province and has placed in charge, Mr B. T. Reed, who is prepared to visit or communicate with farmers who may be considering membership or who are interested in the production of seed grain. New Brunswick is naturally well adapted to the production of seed of good quality, particularly of oats and potatoes, and it is felt that the membership of the Association should be extended. In 1911-12 there were only four operating members, although a number had signified their intention of joining.

Prince Edward Island, which has made a name for its oats in the Upper Provinces had at the same time twelve operating members; of these, nine are selecting the "Banner" oats.

Another instance of success attained by following the methods of the C. S. G. H. is that of the corn growers of western Ontario. Some ten years ago, very little seed corn, and almost none of good quality, was produced in Canada. Since that time, very largely the influence of the Seed Growers' Association, the industry has developed so that now practically all of our seed corn is produced in that district. The result has been beneficial both to the growers and to the users of seed corn in Canada.

A word with regard to the objects and methods of the Canadian Seed Growers' Association may not be out of place. The movement was begun in 1904, as an outgrowth of the Macdonald-Robertson Seed Grain Competition. Membership is confined t o farmers who make the growing of see d a special branch of their farming operations, and who wish to have their seed registered in the records of the Association at Ottawa in order that they may reap a fuller reward for their labours should they have a quantity of such seed to sell.

The system of seed growing followed by the members is, briefly, as follows:

The member is advised as to the variety to use and is enabled to obtain through the Association enough registered seed to give him a start if it is thought advisable for him not to begin on his own seed which he already possesses. His work consists in keeping pure and in multiplying the sort under the inspection and direction of the Association. This is accomplished by giving each year a special "seed plot" from which is selected a sufficient quantity of typical plants to give enough seed to sow another plot the following year. This "hand-selected" seed is then threshed by hand, every precaution being taken to keep it pure. The remainder of the plot is harvested and threshed separately and used for sowing a special field the next year.

Seed which is grown and handled by members in accordance with the regulations of the Association may be registered in the records of the Association as "Registered Seed," and certificates for registration may be issued for such quantities as may be offered for sale.

Farmers who are interested should communicate with the Secretary, Canadian Seed Growers' Association, Canadian Building, Ottawa, or with B. T. Reed, Agricultural School, Woodstock, N. B.

Club Root of Turnips.

A Sackville, N. B. farmer writes:—I have a one-half acre plot of land on my farm on which all roots grown are usually badly affected with club-root. What does this land require to eliminate this trouble or can it be eradicated? The soil is very rich and gives abundant yields when occupied by other crops but turnips, cabbage and other roots are only masses of club-roots. Potatoes grown on it are fine and clean as can be.

Ans.—Club-rootof thet urnip, cabbage, cauliflower and related plants is a fungous disease which is also known under the name of Club-foot and Finger-and-Toe disease. As its name indicates this disease causes distinct and marked swellings or "clubs" at certain portions of the root system of the cabbage and related plants; when the attack is severe, the roots are apparently all united into one large swelling wholly distinct from the normal growth of the plant. The fungus causing the disease may remain active in the soil for several years, and the young plants are frequently very seriously attacked even before they are set in their permanent quarters. Affected plants appear weak and sickly, they grow slowly or not at all and are disinclined to form heads. Where land becomes seriously infested with Club-root, like the plot in question, it is best to discontinue for three years or more the growing of the crops on which it lives. This ordinarily is cheaper and quicker than to endeavor to destroy the pest by direct means. For instance, the disease may be lessened somewhat by thoroughly dressing the land with an air slaked lime, at the rate of 75 bushels per acre; but it is usually cheaper and always more effective, to cease the growing of turnips, cabbage, etc., for three or more years and grow other kinds of crops in the land and thus starve it out of the soil. All material which is capable of encouraging the growth of the fungus should be destroyed and the spread of the disease should be checked whenever opportunity offers.

Experimenters find that manure from cows fed on affected roots will, if applied to a clean plot of land, convey the disease germs so that it may become badly infested. Implements used in cultivating the plot in question might also convey the germs to plots formerly clean and subsequently cultivated with the same machines unless such machines were thoroughly cleaned before using.

In 1894, soil from a cabbage field which was seriously infected with club-root, was sown in the hills of a cabbage field at Cornell University. The soil was clay. The plants were ruined by the disease.

In 1895, cabbages and turnips were grown on the area. Five-sixths of the cabbages were ruined. About 10 per cent. of thet urnips were affected, but not seriously. In 1896 the area was fallow, with good tillage until late summer, when turnips were sown. Again the turnips showed a little disease. In 1897 and 1898 the area was occupied by general vegetable crops, other than cabbages, cauliflower and turnips. In 1899 cabbages and cauliflower were again grown on the area and they were free from the disease. The region from which the soil was imported still suffers from Club-root; but here it was starved out in two or three years.

While talking with one of the most observing farmers in this vicinity a few days ago we were informed that he had had some difficulty with Club-root. In fact he was obliged to discontinue turnip growing for a few seasons and grow corn instead for his cattle. He and several other gentlemen were accustomed to purchase their turnip seed together in bulk. Although the farmer in question was so seriously troubled with club-root the other farmers grew clean crops which goes to prove that the trouble was not caused by the seed sown.

We understand the New Brunswick Department of Agriculture is going to probe the Club-root question and issue information for the benefit of the farmers of the Province.

The Six-O'clock Man.

Did you ever notice that the man who sits on the fence for ten minutes waiting for the hands of his watch to get around to seven o'clock before he starts the day's work on the farm, and the man who would unhitch his horses at the far end of the field when the bell or whistle announced the hour of six p. m., are usually the poorest men in the field between the hours of seven and twelve and one and six? No man who is taking the interest he should in his farmer employer's work is so particular to a few minutes morning or evening. Do not think for one moment we are advocating long days. Not at all. As a general practice they are a detriment to progress; but at this season of the year conditions may arise which make it necessary for the best interests of the farmer and his men in getting the crop harvested to work a few days a little early or an hour late. Only a few such days may or should arise on a well managed farm. It is not often necessary to draw in longer than ten hours, and reaping is a short work on most Eastern farms, but it may be that a certain field is in fine condition to go in the barn, and in fact may all be harvested but a load or two at six o'clock. The wind may be blowing damp from the southeast with an overcast sky threatening a heavy rainfall. The six-o'clock-under-all-conditions man lays down his fork and quits. Unless other willing workers are plentiful the remaining two loads gets soaked, possibly partially spoiled. Here is where a good system which should show in some cases a little more elasticity is overstretched. On the other hand no one can blame men for not wanting to work from daylight until dark. Just be reasonable. Quit at six as a general rule, but do not object to an hour or two later if conditions demand it.—Farmers' Advocate.

Cattle with Cracked Heels

Farmer.—Keep the cows from wading through filth or grit. Cleanse the parts, then ' poultice for 3 nays with hot flax-seed meal and then cleanse again. Afterwards paint the sores freely once a day with balsam of Perd.

HORTICULTURE.

Parasites on Army Worms and Tent Caterpillars.

From many sections of the Maritime Provinces came reports this season of the ravages of the army worm. The worm was a so prevalent in many other setions of Canada. The following letter from Prof. L. Caesar, of the A. O. C., Guelph, is a recent issue of the Farmers' Advocate, will be of interest to our readers:—

"Seeing that none of us were thinking of thearmy worm last year, but had our intention centered on other insect pests, no denite data was acquired beforehand as to the cause of the present outbreak; so anything that I can say is solely conjecture, baed on what I know goes on in the case of such insects as the tent caterpillars.

"I may say in the first place that last Monday, when I was examining the army worms that were still feeding on the corn, I was surprised at the large number of parasites of various kinds that were attacking them. These consisted of Tachina flies Ichneumon flies. Braconid flies, and a disease either of a fungous or bacterial nature. I have not determined which. This disease is at present the least important control factor, though in moist lands, such as a swamp down at Whitby, which I visited, it had done considerable good.

"Of the insect parasites mentioned above the Tachina flies are evidently the most valuable, as they are also the most conspicuous. They are of the size and general appearance of the house-fly, but have a bristly abdomen. These are most persistent creatures, and will wait for an hour, as we could see, to lay their eggs on the neck or back of the caterpillar. Anyone who gets a chance should watch this interesting operation. The fly faces the side of the caterpillar, and sends its very long ovipositor right through between its legs and past its head until it reaches the back of the caterpillar and drops the egg in place. I counted several caterpillars with as many as 23 eggs on them, and on opening one side of one of these caterpillars counted 8 magots alive inside and feeding on its juices.

"The Ichneumons and Braconids are less conspicuous, the latter being very small, not more than half the size of a mosquito. There are apparently three species of Braconids and two of Ichneumons attacking the caterpillar. The Braconids increase very rapidly, and, as they have had plenty of material to feed upon, I have no doubt that there will be great numbers of them ready to attack the new brood of army worms which will begin to appear in September. The eggs of both Braconids and Ichneumons are laid inside the body of the caterpillars, and therefore are not visible.

"I think it is probable that the very dry weather last year and this has been the favoring cause in the increase of the army worms, because moisture appears to favor diseases. There is, in my mind, no doubt that for several years these insects have been gradually increasing in the low marshy lands. The moths can be seen in considerable numbers almost any year. About four years ago there were so many of them that I should not have been astonished if the outbreak had come sooner. I did not happen to be collecting any last year or the year before, so cannot say from actual experience how many there were, but as I said, I think there must have been very many.

"The parasites meantime were not numerous enough to control them in their native feedingplaces. This is the reason why tent caterpillars have been so bad for several years but from some study I have made of these I feel satisfied that in at least Eastern Ontario, where the study was made, the tent caterpillars have been almost destroyed by the parasites. Nine out of every ten examined were parasitized or diseased. There will be a few next year, but scarcely one the next is my prediction. So it is in the case of the army worm, but as there are two broods of this in a year the parasites are able to increase much more rapidly than on the tent caterpillars with only one brood. After the army worms nearly all perish, the parasites will perish too, or all but a very few of each."

The Largest Apple.

The largest and heaviest apple ever grown in the world, says an English paper, has been raised this season in England. t is a Gloria Mundi, and was produced by the same grower who a few seasons ago raised the famous gant apple of the same variety, which measured 26 inches in circumference and weighed 27 oz. Sent for sale in Covent Garden on October 19, 1909, it realized the astonishing price of £14 ($70) by public auction, breaking all previous record. The new record breaker weighs no les than 32½ oz. This wonderful apple was grown in an 11 in. flower pot, the tree producing six mammoth fruits at the same time. It was this very tree which bore the giant of 1909.

Inspector Vroom Making Collections of Nova Scotia Fruit Forgrimsby Conference.

"Come for an auto ride to Berwick." With this invitation on Wednesday morning from Capt. G. H. Vroom it was not difficult to leave our office for a few hours. G. F. Freeman and Prof. Raymond Barss were fellow passengers.

With perfect weather, charming scenery, a fine car skilfully handled and agreeable company what more enjoyable than a morning trip in the Annapolis Valley.

From Middleton to Aylesford the road is very bad being sandy. From Aylesford to Berwick the roadway is fine but the bridges poor. With good bridges this would be an elegant stretch of roadway.

The fruit crop appears light on the Post road from Middleton to within a couple of miles of .erwick. But at Berwick the crop is heavy.

Arrived at the orchard of S. B. Chute the object of Inspector Vroom's trip becomes apparent, Insp. Alcorn is already on hand and they together proceeded to select a couple of barrels of the best fruit in Mr. Chute's big plantation and Mr. Vroom evidently knew where to find the good fruit for Mr. Chute has a fine crop of clean apples.

The varieties chosen were the early Williams, Duchess, Crimson Beauty and Astrachan. Insp. Vroom explained that he purposed taking these apples to the Dominion Fruit Conference to be held at Grimsby, Ont. Sept. 2nd, 3rd and 4th.

This conference will be made up perhaps of fifty representatives from all parts of Canada four of them being from Nova Scotia. The Hon. Martin Burrill who called the conference desired a collection of apples from each fruit district of Canada.

Mr. Vroom is also taking a couple of Nova Scotia barrels, a few apple boxes and the various sizes in plum and berry boxes all of standard make. The adoption of uniform standard packages for the fruit of Canada is one of the subjects the Minister of Agriculture wishes considered at the Grimsby conference.—Middleton Outlook.

The Potato Trade in Cuba.

Mr. Ralph N. Clark left on Monday last for Havana, Cuba. His mission is a part of the forward movement of the United Fruit Companies of Nova Scotia and is designed to advance the success of our great co-operative movement.

For nearly fifty years, or ever since the Reciprocity Treaty was denounced in 1866, the West Indies have been the chief market for Nova Scotian potatoes Fortunes have been made out of that potato trade, but, like the fortunes made out of the apple shipping business under the old regime—before the days of co-operation—the producer has not benefited.—Potatoes have been purchased in the Valley at a price agreed upon by those who had the monopoly of the trade and sold at a price which was "all the market would bear," but of the size of that price, or the profit involved, the producer knew nothing. In the words of the politician, "It is time for a change," and to effect the change the United Fruit Companies have decided to place a representative in the West Indian field.

Mr. Clark has no easy task before him, but he goes with the full support and confidence of the Co-operative organizations of Nova Scotia and in a positon to guarantee to purchasers the good quality and proper handling of the goods he offers. As in the export apple trade, time will doubtless be required to effect the desired changes in [illegible] of marketing potatoes in the West Indies but those changes are bound to come and when they come the farmers of the valley will be able to realize more fully the advantages of producing more and better potatoes.—The Register.

Running up and down stairs, sweeping and bending over making beds will not make a woman healthy or beautiful. She must get out of doors walk a mile or two every day and take Chamberlain's Tablets to improve her digestion and regulate her bowels. For sale by all dealers.

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If you wish to start a Savings Account do not hesitate because you have only a small sum to begin with; you will be welcome at our office. Some of our large accounts began as deposits of $1.

It is our aim to have customers come to us with the feeling that we will attend to their business with pleasure. 23

The Bank of Nova Scotia

Capital - - -	$ 6,000,000
Surplus - - - -	$11,000,000
Total Resources -	$80,000,000

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies. Boston, Chicago and New York

THE RAVINE, EXPERIMENTAL STATION, KENTVILLE, N. S.—ONE OF THE BEAUTY SPOTS OF THE MARITIME PROVINCES

Sussex Dairy Record Centre

(Continued from page 817)

ANALYSS OF HERD B..... 20 COWS

AVERAGE COST OF FEED $61.02

Number	Pounds milk	Pounds Butterfat	Cost per cwt. Milk	Cost per lb. Butterfat	Val e of Butterfat	Profit	Loss
1	6250	210.1	$ .97½	29c	$ 60.92		$ .10
2	7510	259.6	.80	23½c	76.28	$ 15.26	
3	7412	253.5	.82¼	24c	73.51	12.49	
4	9060	295.8	.67¼	20½c	84.88	23.86	
5	5250	198.2	1.16	30¾c	57.47		3.55
6	7810	257.4	.78¼	23¾c	73.73	12.71	
7	4270	155.3	1.43	39¼c	45.03		15.99
8	5100	162.0	1.19	37¾c	46.98		14.04
9	6266	219.6	.97¼	27¾c	63.68	2.66	
10	7164	258.0	.85	23¾c	74.82	13.80	
11	5430	164.5	1.12	37c	47.70		12.32
12	5720	210.8	1.07	28¾c	61.13	.11	
13	3290	119.9	1.85	50¾c	34.77		26.25
14	4510	158.8	1.35	38¼c	46.05		14.97
15	7360	229.3	.82¾	26½c	66.49	5.47	
16	3150	104.3	1.93	59¼c	30.24		30.78
17	4450	146.9	1.37	41½c	42.60		18.42
18	6330	213.3	.96¼	28½c	61.85	.83	
19	4360	170.3	1.39	35¾c	49.38		11.64
20	3060	114.7	1.96	53½c	33.26		27.76
					Total	$87.19	$175.82
					Balance Loss		$ 88.63

In the fore going tables there is much food for thought. Compare the records of the various individuals in the herds and see to it that you so keep records of your herds in order that you may by a system of selection, feeding and breeding build up a herd to a high standard of profit producing efficiency.

Milk record forms and feed record forms may be obtained free of cost by applying to the Dairy Commissioner, Ottawa.

Anent this subject of record keeping under the caption of "The Hole in the Bottom" the following coliloquy appeared in a recent issue of Hoard's Dairyman.

"How much does it cost you to produce a quart of milk?"

"Oh! I don't know. More than I get for it."

"How do you know that?"

"Feed and everything is so high and cows cost so much. We don't get enough for our milk."

"Would you mind letting me look over your books?"

"Your record books where you keep track of the cost of feed and labor and the amount of milk produced by each cow, your crop records and other records you may have."

"Oh! We haven't time to fool with such things. We have to work to make a living on this farm. If our milk checks come to more than enough to pay our feed bills and our hired man we are ahead of the game. If they come to less we are running behind. That's all the books we need."

"But how can you tell where your loss is if you don't keep records of your work. How do you know but that you might make money if you could locate the loss?"

"Look here, mister, you may be a shark with figgers but I can tell you we used to make money with these same old cows. When we could get a hired man for $18 or $20 a month and feed cost us about $20 a ton the farmers around here made money, but now we have to pay $35 for a man and feed is about $35 a ton. Cows cost us a hundred dollars now that used to cost $65. We only get a little more for our milk now than we used to get. If we can't reduce the price of labor, feed and cows, we will have to get more for our milk, that's all there is to it and it don't take no bookkeeping to find that out."

The argument at firstt glance looked good and we backed off. Later when we had a place where we could do a little figurng we tried to find the hole in it. We didn't believe he was right and yet the more we figured the harder it seemed to disprove his statement. Going back to his original statement of profit we started agin. "If the milk check comes to more than enough to pay our feed bills and our hired man we are ahead of the game." In other words, if the milk would pay for the purchased feed and the hired man, what was left over would be the pay for the feed grown on the farm and the time of the farmer and his family.

It seemed that there must be some factors left out in this man's calculations. He had been in the dairy business for a good many years. He once made money but was now losing money. We know of dairymen who are making money today, and this fact did not accord with this man's conclusions. The next day we went back to see him again.

"You claim that you cannot make anything under present conditions. How do you account for Mr. Blank's success over in the next town?"

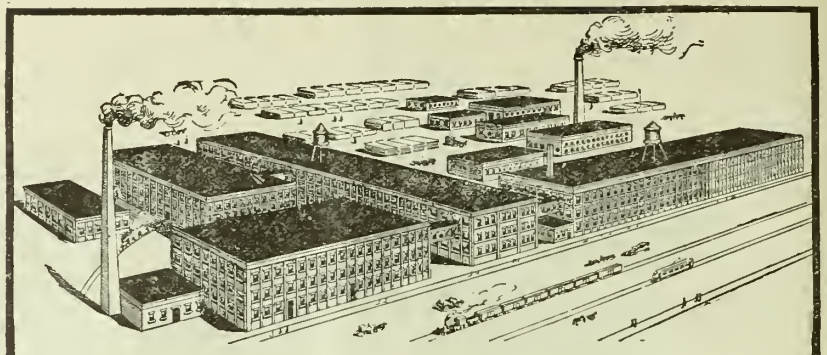
"What do you mean, books? What books?"

"He gets 20 cents a hundred more for milk than I do. He has a special price that our company will not pay."

"If you got 20 cents more how would you come out?"

"Let me see, I sold 9,000 lbs. of milk last month from my 20 cows; 20 cents more would make $18. That would have just paid the amount I was short and $2.50 more. I wouldn't get rich at that rate very fast, would I? I'll tell you I don't believe that. Blank isn't getting rich out of the milk business. It must be something else."

"Supposing we go over and see him and hear what he has to say about it."



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This great plant of The McLaughlin Carriage Co., Limited, Oshawa, Ont., was roofed entirely with *Brantford Roofing.* The Company, having in mind what a heavy investment their new plant represented, wanted a roof that would be fireproof first of all; but also proof against frost, rain, heat, chemical fumes and other unfavorable conditions. They chose

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in preference to all others, because it met their demands on every point mentioned. Furthermore, it has a reputation for durability that common roofings cannot earn.

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Warehouses: Toronto Montreal Winnipeg 72

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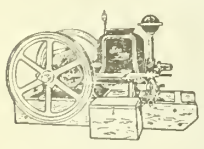
always do "*stay right*" because we have done away with a lot of springs, hooks, trinkets, etc., common and troublesome in many makes of engines.



When you get a "*Sta-Rite*" you are sure that it will always be 'on the job" when you want it—"*they start right*" and "*Sta-Rite.*"

Mail the coupon at the bottom for the book that tells you why.

If you are interested in a Separator learn about the *Empire*—or, if your herd is small the *Baltic*, the smallest of which sells at $15.

Active Agents wanted in territories where we are not now represented. 68

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Don't lose any any of it by wasting it for expensive hand labor to harvest your crops.

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will save its cost in no time by its saving of labor. The purchase of such a machine is one of the best investments the farmer can make. It will repay him dividends of larger profits for years.

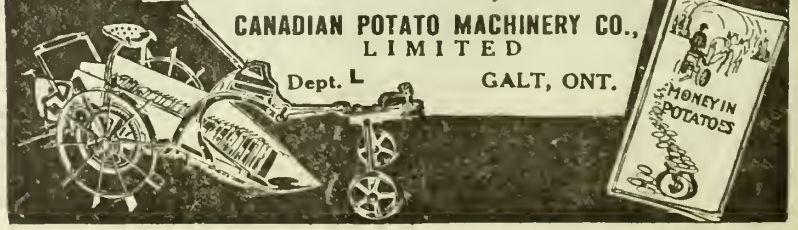
The O.K. Canadian Potato Digger is exceedingly simple in construction and operation. It is designed to avoid undue strain on any one part and built throughout of steel and malleable iron. It digs *all* the potatoes without damaging them and lays them in a row ready to be gathered.

Investigate the O.K. Canadian Digger and you will see that you cannot afford to be without it. 26

Write for our booklet "*Money in Potatoes.*"

CANADIAN POTATO MACHINERY CO., LIMITED

Dept. L GALT, ONT.



It certainly does pay to use-

Windsor Dairy Salt

116

"All right."

On the way over my farmer friend didn't have much to say, that 20 cents a hundred had been a disappointment to him for it did not show any quick way to wealth. As we drove into the yard Mr. Blank came out of his office and greeted us "Good morning, gentlemen," and to my friend, "I hear you fellows are going to organize to boost the price of milk over in your neighborhood. How about it?"

"Well there is some talk of it. I was in for it, but I don't know. some way it don't seem to reach the right spot. We came over to see you and to find out how it is you seem to be so prosperous. I can't see how 20 cents a hundred makes the difference."

"How many cows are you milking?"

"Twenty."

"How much milk did you sell last month?"

"Nine thousand pounds."

"What did you get a hundred?"

"Dollar fifteen."

"How much feed did you have to buy?"

"Ninety-four dollars."

"And you paid $35 for a hired man?"

"Yes."

"Your milk came to $103.50. You were short about $15.50 for the month?"

"Yes."

"Come into the office, I want to show you something. I am milking 60 cows at present on a farm just the same size as yours and my feed bill at the store for the 60 don't cost as much as your 20. I have here an itemzed statement of the cost of producing 100 lbs. of milk from my herd. Inorder to make it easy to compare with yours I will give you the figures on 20 cows. These twenty produced 16,000 lbs. of milk where yours produced 9,000 lbs. The milk sold for $1.35 per hundred bringing $216.00 where yours brought $103.-50. My feed bill at the store was $30; yours was $94.00. I notice that you figure on the hired man's time, on the principal, no doubt, that your chief increase is from milk and the hired man's work is indirectly all for the benefit of the herd. In order to make our comparison fair I will put in one hired man at $40.00. This makes the charges for feed purchased and labor, $70.00; yours is 129.0. Ihave a profit of $146.00 and you have a loss of $15.50. My farm of 200 acres produced a profit when figured on this basis of $438 for the month, yours showed a loss of $15.-50 for the same sized farm."

"How do you cut your feed bill down so much?"

"I grow alfalfa, corn silage, corn and barley, and have to buy very little feed. If I couldn't grow alfalfa I would grow cowpeas, soy beans, vetch, sweet clover, red clover, or some legume. I wouldn't think of running a dairy unless I could grow a legume successfully. Silage is one of the best feeds to go with legumes. With alfalfa and silage you need very little grain."

"You say you got an average of 16,-00 lbs., or 26 lbs. of milk per day per ow? How in the world do you do this?"

"I raise my heifers from selected cows and use only the best bull I can find. It took me a little while to get the average up to this point but now it is easy to maintain. The profits in dairying come from the inside, not from the outside. You fellows over there can win some dollars to be sure, in boosting the price but your chance to make money is to breed and feed better. It is a fact that I am making dollars where you are making dimes and it can't be acounted for in the difference in price."

My friend was again silent as we rode back to his place, but when we reached the gate, he said, "We have been a lot of muddle headed fools. I am going to get into this thing right. I am much obliged to you for taking me over to Mr. Blank's. It has taught me a leson. Watch my dairy farm grow."

The hole in his first argument showed up big enough now. The trouble with a lot of fellows is that they are still farming as they did 25 or 30 years ago. Conditions have changed and they have stood still. The old methods don't work now. When milk was the product of summer pasture, little or no grain was fed; labor was cheap and there was some profit in the business apparently, no matter what kind of cows were kept. Today the same farmer is buying grain, feeding and milking in winter, and the same old cows turn a loss instead of a profit. The hole is big enough and the profits all run through. There are a lot of dairy farmers who need to plug this hole up before they will see a profit again.

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Milking and the Milker.

There is a great difference in the effect that a change of milkers will have upon different cows. Some cows will allow themselves to be milked by almost anyone who approaches them, but no cow will milk equally well with all persons. Some cows will dislike, or fear, or kick with three out of five persons who try to milk them. They will often refuse to yield their milk to any other than the milker to whom they are accustomed. Owners of dairies cannot afford to overlook the preference that cows have for certain milkers. It is a preference that is based on nerves, and neither the cow nor the milker can control it. The cow in perfect accord with the attendant will show her feelings by her actions. When one whom she does not like approaches her she shows her dislike by standing perfectly still, or by turning her head away, or by moving away. The dairyman should discover the likes and dislikes of his cows as early in their careers as possible. The milk and butter-fat they will produce will depend largely upon the milkers he provides to draw their milk. The point is that the cow is a highly sensitive and nervous machine. She can do her best work only when her nerves are in their normal condition. The milker whose presence, touch or voice throws her into a state of fear or excitement will never be able to produce milk in the largest quantity or of the best quality.

The Massey-Harris Separator Gives Satisfaction

Satisfaction follows the use of this Separator

These are the Reasons Why

It saves more of the cream at all temperatures than any others.

It is easy to fill—easy to turn—easy to clean.

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It is a neat, symmetrical, nicely finished machine—one you will take pride in having and using.

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THE 3 COUNTIES EXHIBITION
THIS YEAR (1914) AT
KENTVILLE, N. S.
OCTOBER 7, 8, & 9
Kings, Hants and Annapolis Counties

Fruit, Farm and Garden Produce; Live Stock, Poultry, Apiary; Fancy, Domestic and Educational Work.

Fruit Growers and Farmers should not miss the Greatest Fruit Show in Canada. Write for Prize List.

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LIVE STOCK.

Smaller Herds, Better Cattle.
(Western Experience)

Let's have less trust busting and more regulation based on the actual production cost.

We may say with certainty that the day of the old-style range and ranch is past. That beef-production must be carried on in small inclosures, approximating more and more to general eastern farm conditions. The element of cheap land for grazing is steadily decreasing as an important factor. If land in the semi-arid states is at $15.50 per acre and it takes twenty acres to graze one cow per year, the land upon which that cow must pay interest is to be booked at $300.00 and as the interest rates in those short-grass districts are high the interest cost of the grazing land will aproximate at least $25.00 per annum. (Between legal interest and side premiums anywhere between eight and fifteen per cent. actual cost. We are giving an inside minimum. It wil be some time before the short-grass country will more than hay feed in winter and it will cost two tons of hay or other fodder to economically winter a cow and the cost of that hay will seldom be less than five dollars per ton. Wherever the cost, in favored or distant-from-market places is a dollar less per ton, or four dollars as is true of a limited number of places that may be pointed out, ten places where it will be from one to five dollars per ton higher can be pointed to with readiness. To these basic charges must be added the interest on the cost of the cow, and personal taxes, labor, salt, etc., to say nothing of the cost of improvements.

The production of beef on the old ranch and range plains cut up into grazing farms cannot by any process of fair bookkeeping be less than as follows:

Interest on cow per land per annum	$25.00
Two tons of hay per cow per annum	10.00
Interest on cow's value ($75), per annum	7.00
Labor and salt, say, per annum	5.00
Actual cost of calf weighing 400 lbs	$47.00
or $11.75 per cwt	

Nothing for the loss of a per cent. of the calf crop, by abortion, by failure to get promptly in calf, or by the death of the cow. In olden times a large per cent. of the cows, left to shift for themselves without shelter or feed, died, and that was costly. But with the old times big herd feed and shelter was an impossibility. Likewise, 400 lb. calves were an impossibility, on the average, less than ten per cent. of the crop approximated this. But under the smaller-herd-and-better-cattle conditions possibly today this weight of calves for fall delivery can be increased from 100 to 200 lbs. per calf but that entails additional care and feed. For the cow must be bred to calve in shelter in February or March and summer crops produced, to which the calf has access and the cow excluded. Two quarts of corn per day, (or its equivalent in kaffir, cotton cake or the like) for 166 days will take ten bushels of the golden grain worth, delivered on the ranch, at least 75 cents per bushel.

Counting then that the cow regularly produces a calf in March and that she was well cared for with feed and shelter till grass would support her flow of milk, and then the calf had an intelligent herasman, (for economy preferably the proprietor) who placed regularly its grain allowance, we will find:

Keep of cow as per above tabulation	$47.00
Grain for the calf 10 bu. @ 75c.	7.50
Additional labor	2.50
Actual cost of calf weighing 600 lbs.	$57.00
or $9.05 per cwt.	

With a good grade of Hereford cows and a good Hereford bull these weights and grains are within the reach of any careful cattleman. But as a matter of fact that calf will go some. Counting it to have weighed 100 lbs. at birth, it must from its birth say, March first, gain approximately 2½ lbs. per day to weigh its 600 on October 1st. If he were weaned and well fed and cared for his November and even December keep would be costlier but the feeder might play even. At 600 lbs. no beef the equal of this Hereford ever entered the mouth of man. To ship this calf long distances to market and again after fasts and to the finishing barns of another feeder incurs a heavy shrinkage and although the increased weight that might result would add to the quantity at some expense of quality, if the original breeder got cost, the subsequent feeder's probable profit or loss would be purely speculative.

With the 600-lb. perfect young beef, journeys on foot should be limited to the very shortest possible. Its traveling should be on the hooks in refrigerator cars, not that it needs refrigeration or ripening, for it will be ripe as soon as it is free from animal heat. But that its perfection may be retained. A piece of the neck of this carcass is better than the tenderloin of mature beef of the dairy interests. There will be insignificant waste.

Now the producer of this perfect human food is entitled to a profit and a dollar a hundred is little enough. Six dollars per cow. True, he has had, according to our table, interest on all investment and payment for labor. But nothing for insurance, upkeep, or various other expenses that are inseparable from his plant and business. If he can make somthing by producing a part of all his manufacturing needs, well and good. We have not forgotten the manure. It is as silly to compel him to take this for his profit as it would be to force the storekeeper to make his profit from the pins in the sweepings added to the waste paper, old packing boxes, etc. These have a value but they are perquisites.

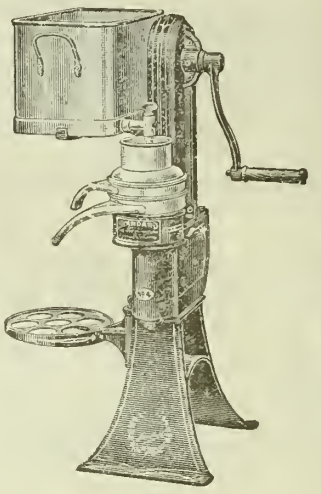
With first-class packing plants at most central cities capable of utilization of this wasteless beef and to accept them as a sufficient profit for slaughtering, there is diminishing need for long journeys of beef on the hoof and with a much needed fraternity between the producer and the packer, the future of early ripened meats is the one great boon that beckons the best gray-matter farmyard. It is the packers place to encourage the production of this wasteless beef and to solve the method of its uniform distribution throughout the entire year. It is the governments place to see that the packer and the producer interests are carefully guarded along cost of production, and preservation routes, that the consumer be righteously treated and yet taught to understand that he has no rights to a product, no matter what it cost him, that has been produced or handled at a loss somewhere along the line it took to reach him. A producer, somewhere between the calving and the slaughtering,has hitherto suffered an actual loss in beef production. Where profits to one element have occurred they were offset by other been only fits and starts, booms and boomerangs. The meat maker's hope is in the settled conditions that a population of over 100 millions overtaking and passing production of steadily decreasing herds and flocks, and of the stationary agricultural acreage.

The past has been one in which a surplus of meats requiring export encouraged speculation. The future looks exceedingly bright for fair trade with profits that will encourage production. We will not only see two blades of grass grow where one grew before, but the growth of grass will support fourfold the meat-making animals that the hap-hazard ways of the past have permitted. While world-readers are studying the soundness of the figures submitted above the writer hopes they will adapt them to the con-

My! How Easy It Runs!

THAT'S the sort of exclamations we hear from people who turn the 1915 Model Standard for the first time. It runs so easily that it seems as if a hidden motor must be doing most of the turning. That a cream separator should run so remarkably easy is considered to be a wonderful thing. But it is only one of the new features of the 1915 Model

Standard



Cream Separator. There is the interchangeable capacity feature, too. The one frame of the 1915 Model Standard accommodates all sizes of bowls, the frame and gearing being sufficiently heavy to drive our largest capacity bowl. Think of the wide margin of extra strength and durability this means for the smaller bowls.

If after buying the 1915 Model Standard you should increase your herd you will not need to buy an entirely new machine of larger size. Just get a larger size bowl and fittings. An allowance will be made for the used bowl and fittings. This is the most important improvement in cream separator construction in years, and it is fully covered by our latest patents.

The other new features are explained fully in the new edition of our catalog, just off the press. The results of the tests of the Standard at Government Dairy Schools and Creameries are also shown.

Write for a copy.

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Mr Consumer

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If you want to increase your Trade keep a stock of the TAYLOR solid leather Shoes.

The Red T Brand of Boots and Shoes that we have put on the market are made of **Solid Leather** and on the **latest style** of **Lasts.** Ask your dealer for the

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ditions that obtain upon the higher priced lands of the rain belt. In a later Hereford edition of the Live Stock World the writer hopes to present some suggestions as to the cost of profect beef in Cornland—T. F. B. Sotham in Live Stock World.

Stomach Worms in Sheep.

August and September are the months when stomach worms do most damage to sheep and lambs. and the time when flockmasters should be continually on the lookout for these animal parasites.

Frank Kleinheinz of the Agricultural Experiment Station, University of Wisconsin, has found that lambs are the greatest suffers from stomach worms. Occasionally, however, older sheep will also be attacked by the deadly little pests.

The presence of worms in a sheep is shown by thinness of flesh. a dull look, a tendency to drag behind the rest of the flock, harsh, dry wool, and the eating of an unusual amount of dirt. When any of these symptoms are noticed, the flockmaster should catch the animal and turn back one of the eyelids. If the inside of the lid is very pale or colorless, it is an almost sure sign that worms are sucking out the life blood of the sheep or lamb, and unless treated immediately the animal can live but a short time.

This treatment for stomach worms is recommended by Mr. Kleinheinz: Take the affected animal away form the flock in the evening and keep it over night where it can get neither food nor water. In the morning, give it a drench made up of five to six ounces of cow's milk, one tablespoonful of gasoline for a lamb or one and one-half tablespoonfuls for am ature sheep, and one tablespoonful of raw linseed oil. Shake this mixture thoroughly and give it to the lamb from a long, narrow necked bottle (a pint catsup bottle is very satisfactory.)

This treatment must be repeated for three successive mornings, when the lamb should be cured. After its drench in the morning, the animal may be turned out on pasture with the rest of the flock during the day.

Lice on Live Stock.

Farm animals, especially those housed in stables more or less infested with insects and vermin, are commonly troubled with lice. Animals in good health resist the insects, but those already in a non-thrifty condition do not fare so well. Lice cause a good deal of annoyance to farm stock, inasmuch as they bite the skin, suck the blood, and thus cause considerable irritation. Lice can be seen with the naked eye. Infestation, as a rule, takes place in filthy quarters, and the best means of disinfecting such places is by the use of a spray or kerosene. One of the best means of applying this to hogs consists in rubbing posts, which are constanty smeared with kerosene. In this way the hogs are induced to treat themseles. Infested hogs may also be treated by pouring kerosene directly over the infested parts, like the neck, shoulder and back. Dipping tanks, made of cement or wood, are frequently located in the run yards in which is placed some disinfectant fluid. Hogs use these small tanks as wallows, and in this way they disinfect themseles.

For horses and cattle a good remedy is made as follows: Boil for an hour 8 tablespoonfuls of arsenic, 8 tablespoonfuls of soft soap in two gallons of water. After being prepared by boiling, add enough water to make two gallons. When cool, wet the animal all over with a little of it, using a brush or curry comb to get it into the skin. Another good remedy is made of boiling staves-acre seeds, 1 part to 20 parts of water, for an hour, and let it simmer for another hour; then add water to make it up to the original bulk. This applied to the affected parts brings quick relief. It is advisable to repeat the application in a week or ten days, so as to catch any new lice from any eggs that were not caught by the first application. A very common treatment is secured by mixing a pint of linseed oil, 8 tablespoonfuls of oil of tar, and 8 tablespoonfuls of sulphur. This is then rubbed on the affected parts once a day for two days and allowed to remain for a few days, after which it is washed off with soap and water. In serious cases the application should be repeated within a week or so.—Exchange.

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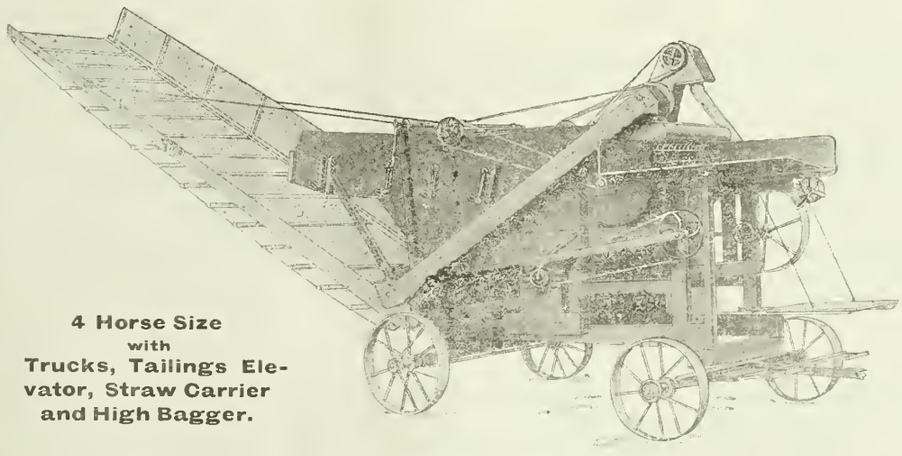

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THE HORSE.

Curb and Curby Hocks.

Briefly, curb is an unsoundness and common cause of lameness arising out of injury to certain ligamentous structures connected with the movement of the hock joint. The exact structure involved is a matter on which difference of opinion exists. It is really very difficult to decide, but what is of most importance to the horseman is the appearances presented externally, and the means of recognising the existence of a curb. Curb is a proturberance some 4 in. below the point of the hock on its posterior aspect, a slight convexity rising from the back of the bone, and it is best detected by looking at the joint in profile—that is, by standing exactly at right angles to the line of the back of the leg, when any marked deviation from the perpendicular is apparent. Standing behind the animal the deviation from the straight line may escape notice, while if a stand is taken further to the front prominence of one of the bones may be mistaken for curb.

Valuations.

Curbs vary a good deal in size, and also in the degree of hardness of the swelling. Hardness is generally an indication of the length of standing of the case. In recent cases there is usually heat and tenderness to touch, with more or less lameness, and a tendency to knuckle forward at the fetlock. Unless the hock is "sprung" there is rarely any severe or continued lameness in mature horses, but curb in young animals is often a most tedious business, and prevents them being put to work for a long time after they are expected to be earning their living. Unbroken colts will often "spring a curb" as a result of galloping or jumping when at pasture. The conformation of the hock joint largely governs the liability to curb. Over-bent or sickle-shaped hocks, small hocks, and those with long calces are most liable. There are "curby" hocks that are congenital. They cannot, of course, be looked upon as disease, but they undoubtedly constitute a deformity conferring a liability of disease.

"Unsoundness" for Breeding Purposes.

By many authorities curb is included among hereditary unsoundness, but this means that there is an inherited tendency for injury to result, when strain is placed on the part, that would be less apparent in an animal with clean, straight, thin hocks, and not that curbs are necessarily congenital. Horses are, of course, often foaled with the defective hocks of their progenitors; and, therefore, animals that present the defective shape of hock-joint which judges of horses recognize as "curby" should not be used for breeding purposes.

Treatment.

The treatment of curb necessarily varies with the individual case, and the age of the animal and the duration of the lameness are points of importance in deciding what measures to adopt. An aged animal to which antiphologistic treatment is applied may be fit for work in two or three weeks after having "sprung a curb,'- while a young one may be lame and defy all sorts of treatment for a year, especially if when it seems a little better it is rushed into work. Even when there is no lameness it is not advisable to work a young horse. Rest is most essential, and Nature must be given time to strengthen the structures which the occurrence of a sprain like curb have shown to be unequal to what has been required of them. In recent cases rest, and a high-heeled shoe to relieve the strain on the parts involved, and throw them more completely into a state of rest, are the first indications. We have known aged horses, treated for a day or two by cold-water irrigation or the application of a cooling lotion and then painted once in two days with a dressing of 10 grains of perchloride of mercury dissolved in 1 oz. fluid of rectified spirit, to be at work again in three weeks, apparently little the worse for the accident. On the other hand, we have known colts that derived no benefit at all from exactly the same treatment, or for the matter of that, from any other, including blistering and firing, until time had resulted in consolidation and repair. For the removal of the thickening, iodine is useful, and the ointment is, perhaps, the best form in which to apply it. A small piece should be rubbed into the curb twice a week, stopping the treatment when the skin becomes scurfy and tender, and resuming it agin when the part has hardened. Iodine is slow in its action, and it is idle to expect immediate results from its employment, or that a few applications will remove all evidence of a curb at once. The perchloride of mercury should be used in the same way as the iodine—that is, the hair should be closely clipped from over the enlargement, and the dressing confined to it alone. The object is not to blister, but to excite absorption. Too frequent stimulation may cause sloughing of the skin, destruction of the hair follicles, and a permanent blemish. When lameness persists, and blistering is determined upon, a combined ointment of cantharides and biniodide of mercury is recommended. One drachm of biniodide of mercury and half a drachm of powdered cantharides to 1 oz. of lard is a useful strength The usual precautions should be taken to prevent the animal interfering with the blisterd surface.

Firing.

If firing is resorted to, owing to persistent lameness, the thermo-cautery gives the best results, and leaves the least blemish. Sometimes both hocks are fired when only one has a curb. This is commonly done to deceive a possible purchaser at any time the horse may come into the market. At one time it was quite a common thing to fire the hocks of young horses to strengthen them and prevent curb and spavin. The idea that the burning of the skin where the iron was drawn through caused the integument to shrink and form a natural bandage or elastic stocking seems to have been at bottom of the practice. The notion is exploded now, but in some parts of the country, and notably in Ireland, this firing to strengthen the hocks is still resorted to. Thus the marks of the cautery do not necessarily indicate existing or previous unsoundness, especially in horses of the hunter class, hocks should always be viewed with suspicion, and carefully examined as to their shape and action. Everyone condemns firing to strengthen hocks that may never become the seat of disease as cruel and unnecessary; but the firing of both hocks when only one is diseased, the object being to make them both alike and to deceive the unwary, is worse. Some little judgment is needed in buying a horse with a curb. Hard, cool curbs, being merely the remains of previous disease, may not prove detrimental to the animal's working powers, but careful attention should always be paid to the shape of the hocks and their action. Sometimes horses are capable of light work in special shoes when they would be lame from curb or ordinary shoes. Raising the heels to the extent of 1½ in. will often cause a lame animal to do fairly well. Galloping and jumping are, of course, likely to cause curb, and the repair should be quite complete before any such strain is placed on the joint as these exercises entail.—Veteran.

Some Diseases of the Nervous System.

Paralysis in the horse, in the great majority of cases, arises not in the brain, but in some portions of the spinal cord. For example, when a horse hurts its back by an accident, the spinal cord is not infrequently so damaged as to be divided in halves, and then paralysis and insensibility follow. Whenever paralysis results from an injury or disease, it shows itself posterior to the lesion. For instance, if in the lumbar region the hind legs are paralysed; if high up in the neck, as in pithing, death results immediately from paralysis of the muscles of inspiration, diaphragm, etc.

Hemiplegia, when only half of the body longitudinally is paralysed, is rather a rare disease in domestic animals. The symptoms are distinct and obvious, usually occurring suddenly. The most manifest is the want of command over the limbs of the side, which remain immovable. At the same time the limbs are perfectly flexible to external impulse, to which they offer no resistance. Hemiplegia is always due to disease of the brain, and, remember, in whichever side of the brain the cause exists, paralysis always occurs on the opposite side.

In the case of a valuable animal, perhaps one might place it under good nursing, which would include, possibly, slinging, etc., in the hope that the cause is ephemeral—e. g., rupture of a blood vessel, bursting of an abscess, etc., but in most cases it is quite hopeless.

Paraplegia—i. e., when one-half of the body is paralysed transversely—usually arises from injury to the spinal cord, and comes on suddenly. This is the most common form. It usually af-

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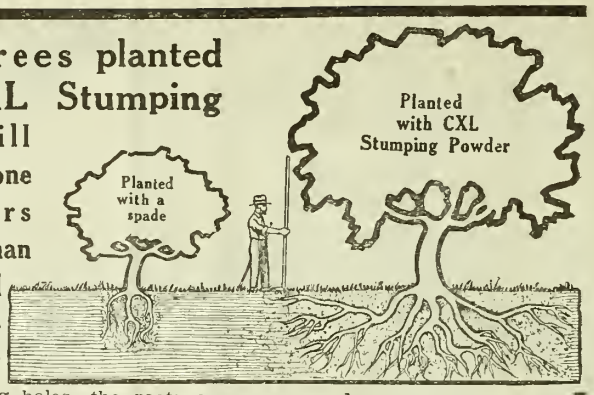

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fects the hind limbs, the animal being unable to rise. The loss of power and sensation is sometimes apparent at once. These cases are incurable. Paralysis may occur to old animals from hardship, cold damp. Cows suffer from partial paralysis during the later days of gestation. This disappears after calving. It is seen, also, in parturient apoplexy. Reflex paraplegia may arise from blood poisoning, as for instance, in azoturia, or from eating poisonous seeds or grasses, such as darnel, flax, ryegrass, vetches ergotised seeds, etc., or from lead or its salts; constipation, or from uterine irritation during the period of oestrum; or, in the dog, from indulgence in rich food and insufficient exercise, presence of worms, teething. In considering the number of causes one is often unable hastily to advance an opinion about treatment or its results. All cases of reflex palsy are hopeful. The first object is to find out the eccentric cause, and effect its removal if possible; for this purpose purgatives are usually employed—aloes or linseed oil in the horse, Epsom salts or other salines in the cow; belladonna or aconite if inflammatory trouble is suspected; fomentations with hot water to the loins; a light, sloppy diet, good nursing, the use of patient to massage, warmth to extremities by bandages, and later on, if persistent, a course of iodide of potassium. In the above cases it is probably due to the action of the sympathic or vaso-motor nerves narrowing the calibre of the blood-vessels supplying the spinal cord with nourishment.

Various Forms.

Spinitis (the affix "itis" is always employed to signify inflammation) may be acute or chronic, and is due to inflammation of the substance of the cord, or its membranes, and shows itself in paralysis if acute fever is present; but this is not easy to differentiate from the relax form.

The chronic form is, in its early stages, very difficu[illegible] recognie. The animal turns with apparent pain, and it may easily be confounded with rheumatism. Later on, as the disease advances, there is knuckling over at the fetlocks, a fear of lying down, and a difficulty of rising. These cases gradually get worse, and death ensues from the disease if not mercifully hastened by the poleaxe.

Slight Paralysis.

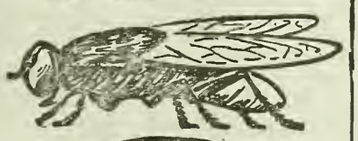
Paresis is the name given to a slight incomplete paralysis affecting motion, but not sensation. This form occurs as dropped lips; one or both hang flaccid and powerless And as the horse depends upon his lips largely to gather his food (unlike the ruminants who depend more upon their tongues), he has great difficulty in feeding and drinking. This is due to injury to one or both of one pair of cranial nerves. Here treatment is generally successful, although patience may be required. Feed with sloppy food out of a pail, remove all pressure from the head stall, etc., apply friction along cheek, stimulants to sides of head and later on perhaps mild blistering. Paresis occurs also in the tongue, sometimes caused by brain disease, sometimes by injury to the member itself in giving medicines or even by malicious intent. In this case first return tongue to its place between the teeth, and plug a bandage around the muzzle loosely, but sufficient to keep in place. The animal's strength must be maintained with eggs and milk.

In finishing, let me point out a pitfall that even a veterinary surgeon with much experience amongst hunters and racehorses may fall into—that is, a sprain of the psoœ muscles, the name given to the two inside muscles of the loins. This sprain much resembles paralysis or broken back, and many horses have been unnecessarily destroyed when treatment and patience would have permanently cured them

The action of these muscles is to draw the body from the last ribs to th thigh, and when from injury or severe [illegible] on these muscular fibres are broken or stretched, and they are unable to contract, you have "roached back." But not the difference between spinal trouble and muscular injury. Although the animal has a difficulty in getting up when down, it can still flex or extend its limbs, showing that motor and sentient power are still intact. In this case slinging—if the animal can or will stand in them—is indicated, otherwise lying down in a loose box with plenty of short straw; blistering, patience, good nursing, and „ later on, a run at grass will complete the cure.

General Treatment.

In all cases a good aperient dose of linseed oil of Epsom salts should be given, followed up by ½ oz. doses three times daily of bromide of potash, to which in a few days 30 grains of iodide of potash should be added. After about a fortnight of treatment as above nerve tonics should be tried, and ½-oz. doses of tincture nux vomica given twice or three times daily, to which, later on, 1-oz. doses of Parrish's food may be added.—Southern vet.



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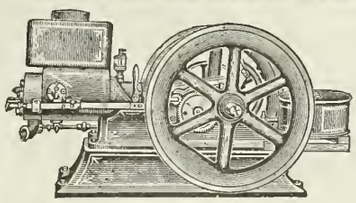

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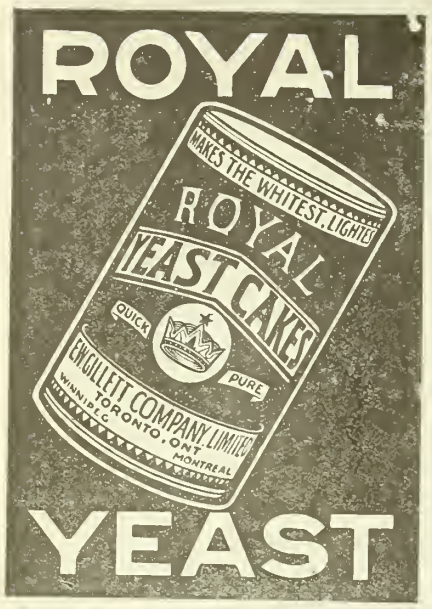

POULTRY

Mineral Elements in Poultry Feeding.

The majority of people who raise chickens have the idea that grit and oyster or cam shell is necessary, and most of them believe that the oyster or clam shell supplies lime, from which the hen makes the egg shell. True, the egg shell is largely composed of calcium compounds, but there are other mineral compounds found in all parts of the body and hence, we appreciate the need of fowls for mineral elements.

Notwithstanding the last fact, but little attention has been given to the matter, beyond providing a sufficient quantity of mineral matter, regardless of its composition.

The supply of mineral elements, however, is very important and it has a very direct bearing upon the growth and development of the chick. Food builds and maintains the structure of the body, and defincies in the amount and kinds of nutrient available may affect, not only the size, but also the character of the growth of birds. The animal body is constructed from fourteen elements contained in foods, but all foods do not contain the fourteen elements in amounts sufficient to sustain growth. Many foods, such as the grains, do not contain nearly enough of the mineral elements; wheat bran and linseed meal, on the other hand, are rich in mineral elements. The mineral substances entering into the composition of animals constitute the ash and the importance of the mineral salts in the vital processes of the animal cell lies almost entirely in their physical properties. These substances must be in solution and when we consider that the mineral elements in the body are most of them strongly acid or basic, we know that their compounds have a tendency to become exceedingly actively active when in dilute solution. Thus through their peculiar attributes the mineral elements maintain a very important relation to practically all the vital processes and they enter into the composition of every tissue and fluid of the body.

Calcium, phosphorus, sulphur and iron are used in the formation of the essential structures in the body. Iron also, through its affinity for oxygen, becomes a carrier of gaseous products and functions in the liberation of energy. Sulphur and phorphorus give rise to sulphuric and phosphoric acids, and these acids are neutralized through the equilibrium existing in the blood between the alkali carbonates and the phosphates. Again, mineral salts establish certain degrees of acidity or alkalinity which affect the activity of the enzymes, which function in building up and tearing down the animal body. The proportion of calcium, magnesium, sodium, and potassium salts acting upon the voluntary and involuntary muscles, accomplishes their control. Among other functions, the mineral salts serve in the movement of liquids throughout the body and its tissues, they facilitate vital processes involving the proteids and they keep in solution certain nitrogenous constituents in the ilquids of the body.

Cacium in the blood is esential to its coagulation.

Concerning the variety of functions the mineral elements serve in nutrition, it is also interesting to note that animals can live but a few days on food that is practically free from mineral matter; in fact, animals will live longer if given no food at all.

Not only must fowls be given a sufficient quantity of mineral food, but it must be of the proper composition, for it is the composition and not the amount of ash constituents that is important in bone formation. Bran, for instance, is rich in ash and it has been advocated as an excellent ash food. It contains about 3.3 per cent. phosphorus pentoxide and only about 0.3 per cent. lime, and is, therefore, quite unsuitable for bone formation.

Seeds of all kinds contain slightly more phosphoric acid than lime, though the bones of animals contain about 50 per cent. more lime than phosphoric acid. It is quite evident then that the grains do not contain the mineral elements in the proper composition for best results in growth, flesh or egg production.

Other inorganic elements are required by the animal body in the building up of its tissues. The digestive secretions also demand inorganic elements; the gastric juice contains chlorine, potash is present in saliva and the blood, iron is present in the blood and its presence is most important, and flourine is present in the teeth and bones.

All these mineral elements must be supplied in adequate quantities or the normal functions of life cannot be properly fulfilled.

The Weeding-Out Process.

It has become a custom of late years amongst poultry-breeders to discard all fowls in their poultry-yard which reach the age of two years. This weeding-out process takes place according to the time the pullets are able to take place of the two-year-old hens. If the egg basket is to be increased, all birds in their third year must be dispensed with, excepting such hens as have shown special merit as layers, and these are only needed for reproduction. None but promising pullets should be kept—that is, birds which from their sprightly appearance, build, and comb, give promise to be good layers. Then, for show purposes, the seleceted birds, must have white skins, and carry plenty of breast meat, with the least amount of offal and bone. Much might be said against discarding as useless the 2-year-old hens; their eggs are larger and heavier, the chickens strong and healthy, and are raised at a minimum of cost and labor. Although the cost of feeding an increased stock may have to be considered, and the vigor of the chickens raised. Besides, a hen that averages 150 eggs the first year, and 100 the second, besides raising two or three broods of chickens, may well be said to have earned her own worth, and been a lucrative source of income to her owner. As it is, however, under ordinary conditions, adult birds do not require so much food as younger growing stock, and if given their iberty will forage for their own keep, and for their offspring.

Only the Best Strains.

On many farms where from 50 to 100 birds are kept all the year round for various purposes, they receive no more attention than one ration of grain in the morning and are left to find their own living for the rest of the day. Under such haphazard conditions disease is unknown in the farmer's poultry yard, nor do losses often occur, except by sudden and violent depradations of rats or cats. Therefore, it may be held with justice that if only the best strains are kept in any poultry yard, these hens may be kept,, even to the third year, and if mated with vigorous, young, pure-bred cockerels, results will be equally satisfactory. Exhibition birds noted for show or utility purposes are not infrequently known to breed true up till the fourth year, and their stock show strength, vigor, and immunity from disease. But this applies only to stock carefully selected from the best strains of breeds noted for their laying qualities or table properties, and kept for stock-raising either as pure-breeds or profitable first crosses. Then, again, there is a good deal rests on results when the birds are "acclimatized." Birds raised on the same

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premises for several years become, as it were, accustomed to their surroundings, which vary considerably in soil and temperature, according to climate and district. The introduction of new blood in such cases has been found to strengthen good and vigorous qualities already gained. How interesting and advantageous it would be if a breeder of poultry should know right off what fowls are best suited to his own particular district and clime, in regard to their laying and other properties!

Adaptation to surroundings goes a long way in poultry-rearing (says a writer in the "Scottish Farmer"), and it would save no end of time, labor, and even expense to their owners, in their choice of breeds, were the breeds best adapted to certain known surroundings so far reliably ascertained and fixed. The various properties of certain breeds of fowls necessarily differ under certain conditions, and from unacowner in discovering his mistake in the quaintance with these cases the dipappointment that too often accrues to the choice of breed he has made. The road to successful poultry-farming is not reached by leaps and bounds, but by patient observation and practice, and by following natures lines as closely as possible, by skill, knowledge, wisdom, and patience, the art is brought to perfection.

From these remarks, one can gather how important the 2-year-old fowl may be, and after she has won honors in supplying the table with eggs and chickens beyond the two-year limit, she may be made profitable when fattened for the home larder or the wholesale poulterer.

Buy Good Cockerels.

Something must be said in regard to the males kept for breeding. Here change of blood is esential and desirable, especially if the hens are of a mongrel type. The shortcomings of the male bird are nearly always reproduced in the offspring, and therefore it is false economy to go in for cheap or impure male birds. New blood to remedy defects must be infused in the poultry yard, as well as in the stable, the sheep cot, or the byre. In buying stock for the poultry yard the breeder has to use caution in case of disease being imported by strange birds. This has been infrequently led to many a prize breed being entirely extirpated, to the disgust and disouragement of the breeder. The golden rule in buying stock can't be too emphatically repeated—"Buy good cockerels, and mate them with the survival of the fittest only"—and the money and the time so devoted will not prove ill-spent.

Poultry Keeping for the Beginner.

Selecting Stock Birds

Discard the wasters.—To afford young stock the opportunity for development the first point is rigidly to weed out the wasters. I have already mentioned the importance of doing so in previous articles, but I should like to emphasisc the necessity of weeding out where the selection of future breeders is concerned, thus leaving plenty of space for the most promising chickens. To hamper or retard their growth by allowing them to breathe impure air or to run on contaminated ground, will spoil the characteristics that are so essential to success in those from which it is intended to breed. Very frequently mis-shapen, badly colored, or otherwise faulty birds are allowed to exist to the detriment of the remainder. It is, however, perfectly true that when ve reached the age of ten or twelve weeks the temptation to keep them to killing age is very great, but the initial mistake was in keeping them so long. They should have been disposed of before this age.

The most promising chickens are not necessarily those that are the most attractive in appearance. For instance those which at a very early age have grown their adult plumage, and look trim and neat, almost perfect in their premature "finish", seldom reach the standard size of the variety to which belong; nor do they prove of much service when selected for the breeding pen. It is better to keep for stock purposes those that big-boned, angular, and somewhat ungainly in appearance, and seem to be growing right away from their feathers. These birds are developing their frame quickly and their internal organs more slowly, and the more gradual development takes place in the latter, the better. It is not always the very early laying pullets that are the most suitable for spring breeding. Therefore, the growth of the pullets in the early stages should be observed, and it will be invariably be found that those which mature slowly when this stage is reached are the more perfect.

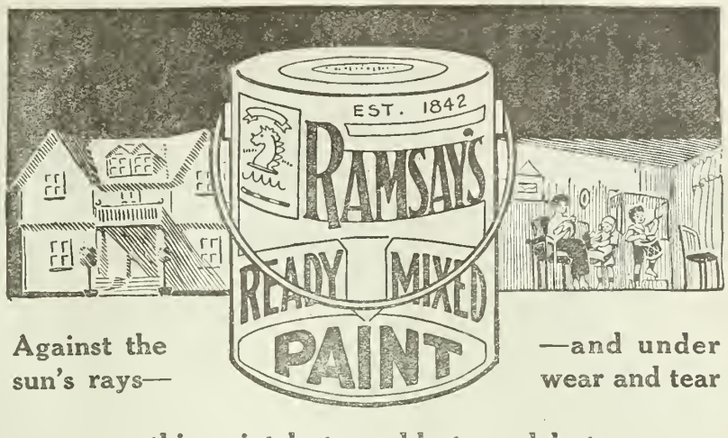
Delay in making selection.—There are many poultry-keepers who make the mistake of leaving the selection of the breeders until almost the actual time of breeding has arrived, with the result that it is done so hurriedly that due consideration cannot be given to the necessary characteristics essential in breeding stock. Of course, I do not mean to imply that future breeders should be selected when they are chickens, but an eye should be kept on those that show signs of future value, and it will frequently be found that these birds figure very prominently when the time arrives for the final seletion.

Type in utility stock.—When selecting birds for breeding purposes it is absolutely necessary that the type of the particular variety should be strictly observed. The utility man is very often tempted to ignore the standards, and regard them as purely matters for the fancier. This, however, is a mistake, and one that very often leads to failure, since many of these so called arbitrary points have economic value, and when the standards—that is external points—are neglected it will invariably be found that the birds will not breed true to their economic characteristics.—By "Practical Poultry-farmer," in Feathered Life.

Experience in Poultry Keeping.

While it would be in vain to attempt to enumerate all the many causes of failure in poultry-keeping, it is well to emphasise from time to time common mistakes, several of which generally mean, if not actual failure, at any rate, considerably less profit than might reasonably be expected. That poultry keeping may be conducted with profit requires no verification here. Everyone, no matter what the station in life is, may secure a wonderfully good return in proportion to the extent of his operations—a return that is unequalled by any other individual branch of farming.

But to make the utmost out of this or any other occupation, it is absolutely necessary that every detail in the management may be turned to advantage. Perhaps more failures are attributable to want of experience than to anything else. I do not mean to insinuate (says a writer in an exchange) that unless one has had a thorough training in poultry culture, one should not keep fowls, or, if one does, that failure is the inevitable end. It is only when a start s made on a very large scale, without knowledge or experience, that failure is almost sure to follow. The man who starts with a few fowls and undertakes the work himself, gains experience day by day, and when his establishment develops, he is well able to face any emergency that may arise, and to overcome difficulties that would entirely overwhelm the man who had started on a large scale with little or no experience.



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A Matter 'O Business.

I.—A Strange Request.

"He is made that wey, an' he canna help it," remarked Roderick Macpherson to his neighbour, Donald McTavish, as they stood at the latter's farm gate, where the high road takes a sharp dip down into the glen.

He referred to Wattie McNab, who had just passed, and to his character, more than his ill-shapen dwarfed figure.

They had both said "Good-morning," cheerfully, and Wattie had grunted in reply, "Ay, tae some folks."

"He's a queer cratur, is Wattie," replied McTavish, "an' has a tongue like a razor."

"Maybe, but he has a guid deart a' the same. There's no muckle wrang wi' that part o' him, or his heid, either." Macpherson responded.

"I grant ye that; but a' the same I dinna care tae hae muckle dealin' wi' the cratur. I feel somehow as if I never can get tae the depths o' him.

At that moment a young lady drove past in a trap and the farmers lifted their hats.

"I wunner what the Laird means lettin' his dochter drive that pair o' greys alane. They hae tae muckle bluid for a young girl tae manage," exclaimed Macpherson critically, as he scrutinised the fiery pair.

"I'm thinkin' the dochter takes the bit intil her ain mouth, an' its a mair difficult handfu' for the Laird than his horses. Young wummen nowadays are no easy managed," was the answer.

The words were scarely out of his mouth when suddenly, to their horror, they saw the horses shy at an empty potato-bag which had been blown against the dyke and was flapping in the wind. The girl by a quick tug at one of the reins just saved the trap from being upset against the opposite wall; but in doing so she let the other rein slack, and one of the horses caught it under its tail. Then they bolted down the hill. The road had several turns in it, and the two farmers ran across a field to a point from which they had a clear view of the highway, which for nearly a quarter of a mile descended in a straight line, and then turned at right angles along the steep bank of the river.

"They'll gang straight intil the dyke at the foot, an' she'll be pitched richt over intil the water," panted Macpherson to his friend.

Then they held their breath in amazement.

Right in the path of the runaways stood Wattie McNab, one hand outstretched as if he meant action.

"What can the cratur do?" exclaimed McTavish, "he'll be killed."

"I'm no sae sure," replied the other. "What he lacks in legs he mak's up wi' arms. Did ye never notice what an uncanny length they are, an' as strong as iron? He is meanin' tae dae somethin' wi' them noo."

In another instant the horses were on top of the dwarf, and with a shudder the onlookers saw him go down beifore them like a shot, and they looked to see his mangled body on the road behind. But there was nothing there except a flying cloud of dust.

"Where has the mon got tae?" asked McTavish in amazement.

"Losh, juist look at him noo!" exclaimed Macpherson.

Wattie had gripped part of the harness of one of the horses, and by the strength of his arms had drawn himself up until he flung his leg over its back. Then he gripped the reins of both horses and pulled with all the might of his iron muscle. His strength and purchase power were so great that he almost brought the creatures on to their haunches. They recognized the master touch. With a jerk the speed stopped, and the trap brought to a standstill. The horses stood trembling but the strength of Wattie's arms had calmed them with a new confidence.

"Mon, that was bravely done!" Macpherson said in his admiration. "Ye canna say onything against Wattie noo."

The two farmers hurried to the spot, and found that the Laird himself, who was shooting in a neighbouring field had been witness of the scene.

He was profuse in his expressions of gratitude, as also his daughter, who had received a great shock.

"I don't know how we can ever repay you for this," he said as he wrung the rescuer's hands.

"I'll drive ye baith hame, an' we can think o' that then," was Wattie's matter-of-fact reply.

He had been brought up among horses, and he had no fear of them, if indeed this strange little man feared anything. If his body was small his heart was big, and he loved all animals. The princely greys seemed to understand him as he reached up and stroked their noses and they allowed him to handle them as he liked.

During the drive home the Laird was puzzling himself how he should reward this gallant deed. Many suggestions passed through his mind but as he looked at Wattie, somehow he felt that any of them might be deemed an insult. Wattie owned a small croft which he had inherited from his uncle, and possibly the fact that he was his own master as well as the twist in his character gave him that singular air of independence which was evident in his acts as his words.

When they reached the castle and the horses were handed over to the care of the groom, the Laird invited Wattie into the library.

"Now, Wattie, I must say again," he remarked, as he offered him a seat, that I do not know how to thank you for saving my daughter's life to-day. If the horses had not been stopped, they would most certainly have dashed into the stone wall at the foot of the brae, and she would have been pitched over the precipice into the river. I know you are the kind of man not to think of yourself in the matter of a reward, and that makes it all the more difficult for me to think of what to offer."

"I'm feer'd Laird, ye dinna ken me," was Wattie's unexpectd interruption.

"I am very glad to hear that," responded the Laird, smothering his astonishment, "for after all I would like to give you something personal. It will make it very much easier."

"I'm no sae sure o' that," was the enigmatical retort.

"Well, Wattie, I am glad to hear you speak in that way, for I wish to reward you very handsomely for to-day's work, and if I could put it into —er—er a money form the cheque would be a large one. In fact, Wattie, I shall leave the matter in your hands. Mention what you consider a reasonable amount, or say what you want, and it shall be given unto you."

"Unto the half of my kingdom," Wattie rejoined, as a slight smile broke over his wizened face. "Ye manna forget Herod an' mak' his mistak'; but I'll tak' ye at yer word, Laird, an' I ken ye wullna gae back upon it. Noo, I nae nae hesitation in tellin' ye what ye wish, since ye are sae guid as tae promise that ye'll dae it for me. It will no cost ye a single ha'penny. In fact, it will pit twenty poonds a year intil yer ain pocket."

"That will be a queer kind of reward," interposed the Laird with a smile. "But what will it do for you?

"I'm no much carin' aboot that," said Wattie. "After a' I hae naethin' I need, but I dinna think ye hae the richt tae refuse a twenty-poon note tae yoursel' every year, foreby keepin' up the value o' the estate, an' what I'm goin' tae ask, ye'll admit wull dae that an' mair."

"Well, Wattie, you are the right kind of person to offer a reward to. I hope you will not prove another Herodias. Let us hear the demand."

"Weel, I've been thinkin'." Wattie began in a deliberate tone, "that the farm o' Lochbend cud be made a great deal mair o' if ye wad tak' it intil the hame fairm. That wud gie ye anither hundred an' fifty guid acres, an' it wud hardly mean ony mair expense, for ye hae mair horses the noo than ye need for the hame fairm. Am I no richt in sayin' that ye cud mak' twenty pounds mair if ye took it intil ye ain hands?"

"You are quite right, Wattie. I believe it would be worth that to me over and above its present rent."

"Then as the lease is oot at the May term the reward I ask for what I hae done the day is that ye tak' it intil yer ain haunds, an' I'll keep ye tae yer promise."

The smile died away on the Laird's face and he gave his moustache a twist of annoyance.

"I'm afraid that will be a difficult thing to do, Wattie. You see Mrs. McLeod is tenant of it at present. Ever since her husband died I have kept her in the farm, and I had no intention of disturbing her, even though as you say it would be an advantage to myself. It has been in the hands of McLeods now for two generations: besides, what could the poor widow do, if in this way I took her livlihood from her?"

"She's got a son oot in Canada, an' cud gang oot tae him a' richt."

"But at her age, think what it would mean to break up all the ties of home."

"She's nae older than mysel', fifty-sax, an' mony a one gangs at a greater age. She'll dae fine oot there. But onyhow, a laird maun think o' his estate."

"That's a strange doctrine from your lips, Wattie," said his host essaying a laugh to try and humor his strange guest.

Wattie's features, however, did not relax. His mouth was firmly set.

"Ye canna brak' yer word, Laird, an' I'll no tak' onything else," he said with determination.

"It looks as if you had something against the woman."

"I hae nothin' agin her. She's been a guid, God-fearin' wumman a' her days an' has tried tae dae her best. I wish there were mair like her i' the parish."

"And yet you want to turn her out of house and home. It seems very strange," remarked the Laird.

"I dinna care hoo it looks. The Creator saved me from makin' that mistak' when he gave me this ill-shapen body. I've learned never tae care hoo a thing looks, or tae judge by appearances. But if ye are no a mon o' yer word, Laird, ye had nae richt tae ask me in here."

Wattie rose with an action of indignation from his seat.

Meantime the Laird scrutinized him very closely. There was no relenting about the face, but Wattie had one vulnerable spot, his eyes. They were true peep-holes into his soul, and could not wear screens. Something the Laird saw there brought a look of relief into his face, and he responded in a kindly tone.

"Your wish will be carried out. I will take Lochbend into the home farm."

II.—Its Reason.

Some days later Wattie sauntered into the joiner's shop in the little village. He chose the hour when the apprentices were away for their dinner, and Big Rory, as he was locally known, was busy finishing some extra work. Rory McCallum was a hard-working man, and skilled in his trade. He was reputed to have made lots of money, and no wonder, for he toiled incessantlyq, allowing himself but half time for meals.

His home was guarded by two sisters. Both were tall. bony and masculine. When Rory left his workshop and passed into the house he became their prisoner and did not reappear from custody until daylight called him to his task. On Sunday they walked one on each side of him to church, and he sat between them in the pew. Many pitied him, some blamed him, but all agreed that now he had not the spirit

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Chesterville, Ont. — "I heard your medicines highly praised, and a year ago I began taking them for falling of womb and ovarian trouble.

"My left side pained me all the time and just before my periods which were irregular and painful it would be worse. To sit down caused me pain and suffering and I would be so nervous sometimes that I could not bear to see any one or hear any one speak. Little specks would float before my eyes and I was always constipated.

"I cannot say too much for Lydia E. Pinkham's Vegetable Compound and Liver Pills, for there are no medicines like them. I have taken them and I recommend them to all women. You may publish this testimonial." — Mrs. STEPHEN J. MARTIN, Chesterville, Ontario, Canada.

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Mr. Charles Pettit, 256½ Richmond Street, London, Ont., writes:—"I feel it my duty to write you a few lines in regard to your Milburn's Laxa-Liver Pills. I have been bothered with Biliousness and Sour Stomach for twenty years until a year ago I started to use Laxa-Liver Pills, and I have not been bothered since. I wish to let it be known to all those who suffer as I did."

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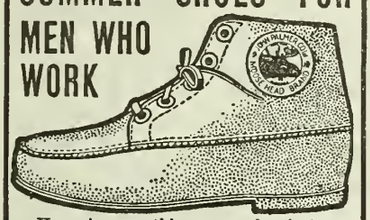

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to break his bondage.

"That's gey sad news aboot Mistress MceLod," said Wattie, seating himself on a pile of boards. "The Laird is pittin' her oot at the term."

The big joiner took a firmer grip of his saw and drove it with more fierceness than skill through the wood he was cutting.

"If the Laird does that he'll repent o' it," was the surly answer.

"Weel, that wull no dae Mrs. McLeod muckle guid. She'll be o'er the seas lang afore then."

"What for shud she leave the parish?" asked Rory, looking round with anger on his visitor.

"You're forgettin' her son Airchie oot i' Alberta," responded Wattie, as he began to whittle a piece of stick with a knife.

"An' what kind o' hame wull that be for his mither?"

"A shack wi' verra lettle comforts for ony wumman, forby ane that has been brocht up like Mistress McLeod," was Wattie's reply. Then he continued, as he casually turned the stick over in his hands,, "It's a gey cauld place i' the winter. Just think o' saxty degrees o' frost. Mon, Rory, she'll no staund it at her age."

"She's no sae auld as ye're makin' ott," interrupted the joiner with some irritation in his voice.

"Maybe, but onyway I'll no gie her lang o' that climate. The fact is atween oorselves, Rory, it wull be the death o' her."

The joiner by this time had laid down his tool. He was no longer fit for work. Besides, his big, clumsy brain was beginning to think.

"Ay, it's murder," he said slowly, "an I'll tell the Laird sae mysel'."

"Ye'll dae no guid but only anger him. His mind is made up. He's gaein' tae tak' Lochbend intil the hame fairm, an' I hae no doubt, if he's let alane, he'll gie the mistress fair compensation. Noo what you an' I hae got tae do is tae try an' be o' some kind o' practical help tae her; an' that reminds me o' what brocht me here. I hae made up my mind tae gie her the chests she'll be needin' for takin' oot her things, an' I'm gaein' tae gie ye the order for the makin' o' them. Mind ye, they are tae be o' the verra best material, an' ye'll hae tae do it reasonable."

"What size o' boxes wull be wantin'?" asked Rory in a half-absentminded sort of way.

"That's just it. I canna tell ye mysel'; but ye'll gang up the nicht tae Lochbend an' see the mistress, an' tak measurements. She's tae get a' she wants, and ye maun be quick about it, or ye'll no get your siller."

"Ay, I'll gang the nicvht," said Rory in a voice that sounded far distant from his thoughts.

When Wattie was gone the joiner went mechanically on with his work, and forgot all about his dinner, until the strident voice of Sarah, his sister, startled him from the doorway.

"What are ye standin' glowerin' at when the dinner has been ready these ten meenités. Come awa' this instant an' no keep Betsy an' me waitin'."

Big Rory followed meekly; but the meal was a silent one, and the sisters little guessed the resolution that was forming in the stolid head of their brother.

All the afternoon he was in the same mood, and the apprentices began to take liberties, until to their astonishment he told them to go home an hour be fore the usual time.

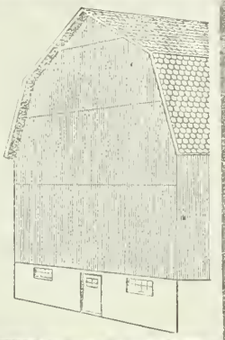
"Is the supper no ready yet?" Rory asked impatiently of his sisters, as he entered the house before even a cloth was laid on the table.

"What's a' the hurry the nicht?" noon daein' nothin' but starin' oot o' the workshop seems tae hae gi'en ye a greater appetite than workin'. Weel, it wull just be a' the sharper for anither half an hour's waitin'."

(Continued on page 836)

"Metallic" Corrugated Iron Barns are Lightning, Fire, and Weather-Proof

Lumber and labor are too expensive to be used in farm buildings; besides, wood buildings are easily destroyed by fire and lightning. "Metallic" Corrugated Iron makes buildings that last a life-time; that are warm and dry; and proof against fire, lightning and weather.



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You save money on labor and lumber when you use "Metallic" Corrugated Iron. Write for complete information before you buy any building material. We can save you money. Our corrugated iron is made in galvanized or painted sheets, straight or curved. 7

THE METALLIC ROOFING CO., LIMITED
MANUFACTURERS - King and Dufferin Sts., TORONTO

They use Maxwell's Churns in Denmark—

Fancy! Denmark—the great butter-producing country of the world—send all the way to Canada for Maxwell's Churns! Also used in Australia, New Zealand and S. Africa. Convincing proof, this, of the excellence of these well-known churns. Best of all is the—

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"FAVORITE" CHURN (with Bow Lever)

Notice the adjustable handle on the bow lever. No other churn has this. Handle can be moved to centre or either side, whichever is most convenient for driving.

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MAXWELLS LIMITED ST. MARY'S, ONTARIO 1

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Take advantage of our 'Personal Mail Service'

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Containing Tuition Rates and full information respecting course of study, etc., is now ready for distribution.

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No better time for entering than just now.

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MONCTON BUSINESS COLLEGE

"I will study and prepare myself and some day my chance will come." So said Abraham Lincoln. And his chance came. Opportunities always come to those who study and prepare. Come to the Moncton Business College and prepare for the wonderful opportunities in business.

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G. J. SCHMIDT,

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Mailed direct to your home anywhere in the Maritime Provinces at these prices.

1,000	1	lb.	Printed	$2.50
500	1	lb.	Printed	1.68
1,500	1	lb.	Plain	2.17
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All goods shipped parcel post.

THE MARITIME FARMER
SUSSEX, N. B.

An article that has real merit should in time become popular. That such is the case with Chamberlain's Cough Remedy has been attested by many dealers. Here is one of them. H. W. Hendrickson, Ohio Falls, Ind., writes "Chamberlain's Cough Remedy is the best for coughs, colds and croup and is my best seller." For sale by all dealers.

Farm House Food.

The two following receipes are sent out by the Royal Horticultural Society:

Preserving of Beans.—Secure earthen jars with wide mouth and clean thoroughly with boiling water. Pick the beans when dry or dry them before the fire, wipe them with a cloth, tear away the strings and slice them as for cooking. Sprinkle layer of clean kitchen salt at bottom of jar, put in a layer of beans, then more salt, and so on until the jar is full and heaped up. Cover jaw with clean plate on which a weight is placed. Next day remove any dirt on top of jar, add more beans and salt till jar is full. Once or twice in the next ten days uncover and remove any scum. Finally, cover with bladder tied down To prepare for eating, take out the beans and soak thoroughly in several changes of water until free from salt. Boil for rather a shorter time than for fresh beans. To increase the food value strain off the water when the beans have boiled soft, add a piece of dripping or butter to the pot stir for five or ten minutes, and dish out.

Fruit Bottling.—Choose wide-mouthed bottles and clean them thoroughly. Pick just ripe fruit clean and dry. Place in bottles. Apples and pears should be sliced in quarters, plums and damsons put in whole. Fill the bottles with clean water. Stand them up to their necks in water in a fish kettle or open boiler. The bottles must be open. Slowly raise the water to the boil and let it boil for twenty minutes or half an hour. Take out the bottles singly, and without the smallest delay tie the mouths with clean bladder whilst the water in the bottles is at boiling heat. If corks are used instead of bladders, scald them first. Insert them and seal the tops with sealing or bottle wax. Remember to boil the water gradually. Store the bottles in any cool place. Blackberries can be preserved with a smaller quantity of sugar than other fruit.

Garden Steward (Girton) writes to the Times:—"Fruit may be preserved without sugar by the following methods: (1) In special glass jars with screw tops. These should be filled with fruit and water, almost to the top. The lid and screw should then be loosely put on, and the jars placed in cold water up to the neck. The water should be slowly heated to 180 deg. Fahr., and the bottles then removed, placed on a wooden table or board, and the lids screwed up firmly. It is an additional safeguard to the sterilization and an aid to the subsequent removal of the lid, if a little grease, such as lard, be run inside the screw. (2) In ordinary glass jars, which also should be filled almost completely with fruit and water. Then a piece of soft wet blader whould be tied on the top and the bottles submerged in water heated to 180 deg. F. Fruit thus preserved may be stewed, or made into puddings, with a small quantity of the cheap sugar which is unsuitable for the making of jam.

Srewed Mutton With Carrots and Rice.—Take one pound of the neck of mutton, two large carrots, half a pound of rice, one pint and a half of hot water, pepper and salt. Cut the mutton into neat pieces and put them into the saucepan over the fire with the hot water and let it boil; add salt to throw up the scum; skim thoroughly, and add the carrots scraped, washed and cut into slices, cover with a lid and let all simmer for one hour;then skim again. Have the rice very well washed, add it to the contents of the saucepan and cook again for half an hour without a lid upon the pan; by this time the rice will be quite soft and have absorbed all the moisture. Dish up the mutton on to a hot dish, smother with rice and garnish with the carrots.

Tomato rice.—Set 1 oz. of butter in a frying pan and cook in it slowly a tablesuoonful of chopped onion till it smells strongly. Then add a teacupful of washed and dried rice and stir constantly till slightly browned. Take nearly a pint of mashed and strained cooked tomatoes, and mix with nearly the same quantity of stock. Add this to the rice, etc., in a clean stew-pan, season highly with pepper and salt, and cook slowly till the rice is perfectly tender and the broth quite absorbed. Just before serving stir in a tablespoonful of butter and season to taste. Arrange the rice in a flat mould, with the boiled mutton in a circle on it, and round the mould pour a little thick, rich gravy.

Dominion
Ammunition
TRADE MARK
Metallics and Shot Shells
Start a gun club among your friends
Learn the fascinating game of trap-shooting—a healthful, out-door sport that requires all the skill and posseses all the excitement of shooting live birds "on the wing."
We are in close touch with the most successful Canadian gun clubs and have aided many of them in getting started.
Let us help you.
Dominion Cartridge Co., Limited
818 TRANSPORTATION BUILDING
DOMINION No. 12 IMPERIAL
303 L-M

Equal Partners.

I firmly believe that the only right way to run the farm is on a co-operative plan, where husband and wife are equal partners, working and planning together, and both sharing the profits after expenses are paid.

Every true farmer's wife should take an interest in the out-of-doors side of the farm, and help her husband all that she can. The husband, also, should take as much interest in his home and the rearing of his children as he does in his barns and thoroughbred stock.

However, it is a fact that there are farmers' wives who do not know or care anything about the farm management or their husbands' part of the work. There are also husbands whose homes mean nothing to them except a place to eat and sleep; and I doubt if some of them know their own children, they pay so little attention to them.

I can truly say that my husband and I are trying to run our home and farm on the co-operative plan. We both have faults and both make mistakes but we try to not make the same mistake twice.

We are trying to pay for our farm and we haven't found our path all "sunshine and roses," either. We both know what hard work and economy mean, but we try to make the best of what we have, and are looking forward to better things..

My husband is progressive in his methods of farming and likewise I try to be progressive in my methods of housekeeping. He improves farm conditions and buys labor-saving ma-

If you knew of the real value of Chamberlain's Liniment for lame back, soreness of the muscles, sprains and rheumatic pains, you would never wish to be without it. For sale by all dealers.

chinery as fast as we can afford it, and I try to improve the house and get articles to save myself all the unnecessary labor I can.

? can't understand the philosophy which doesn't teach that a farmer's wife should have a cozy sanitary home with modern labor-saving conveniences, just as much as her husband should have a sanitary, up-to-date barn and all modern machinery.

My husband is just as proud as I am when, after careful saving, I am able to install some new comfort or convenience in our home. I think he is the "best ever," and I don't intend, not does he want me to drudge myself to death so that some "Miss Spinner" may take possession, as as outlined in the story "The Lord Giveth."

The Ill-Matched.

Some time ago I noticed in one of my home papers a pathetic appeal from a sister whose husband mentally her inferior, was uncongenial and unsympathetic. She was bound to life upon a farm, instead of town life, which she preferred. The care of several little ones excluded all social pleasures, and she found herself very unhappy, longing for the liberty and privileges she, as a teacher, enjoyed before her marriage.

It was with the deepest interest I read the several replies which appeared in a later issue, every one of which contained censure and blame without stint, but hardly a word of that sisterly comfort and advice for which she asked. She asked for bread and received a stone.

Foolish, indeed, she had been to form an alliance with one whom she must have known to be her inferior; wicked, perhaps, in her rebellion at the results of such an ill-advised step nevertheless, a sister in dire distress, and as such entitled to the best that could be offered her. Unfortunately her case is not an unusual one. All over the land exist indifferent husbands, discontented wives, unwelcome little ones, irksome home duties. Their name, alas, is legion!

In this particular case the wife complained that her husband cared nothing for reading, while she possessed a decided literary taste. Having been a teacher, she can, no doubt read well aloud, and this should prove an important factor in creating a better literary atmosphere in the home. Very likely her husband, in common with all men, has a hobby, and I would suggest that in looking over their home papers, she mark such articles as might be of interest to him, and draw his attention to them, or read them to him, particularly if they coincide with the opinions he may chance to hold upon the subject.

I do not consider it a sin for any woman, especially one isolated upon a hill farm, to long for the society of her kind, or to crave the pleasures of an occasional concert or lecture; and I know by experience what it is to miss the church and social privileges to which, from childhood, I had been accustomed in town. Not all women are so constituted that they find the highest pleasures and ideals in life in flocks of chickens and turkeys as one sister suggested in connection with this case. I never did, and I have looked upon many a goodly flock of my own raising, with justifiable pride.

THE BLESSED LITTLE ONES.

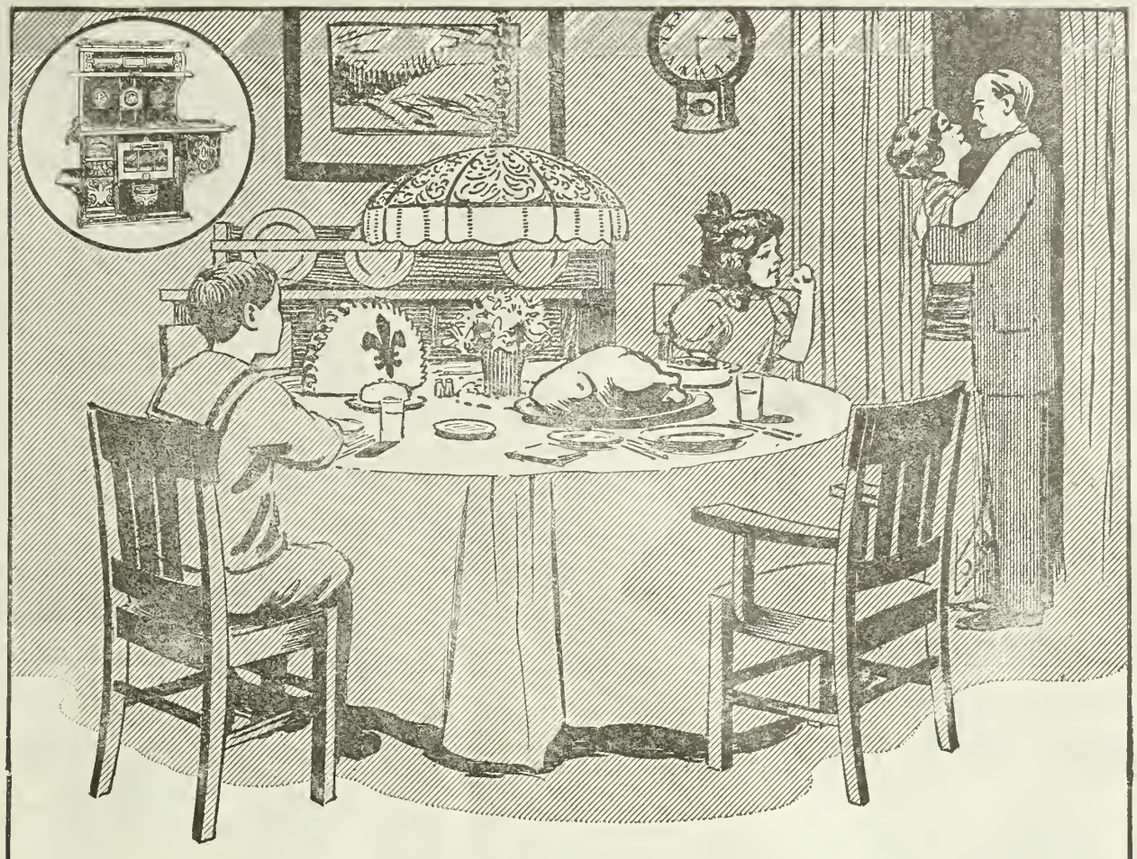
But when it comes to the little ones then and there must all rebellion and discontent be crushed out of our lives for their dear sakes. All that is sweetest and best in a mother's life is their lawful heritage and nothing short of that can satisfy their just claim.

So let me suggest to this dear sister (and others similarly situated) that in setting about to better her domestic conditions she begin first with her own heart.

Look upward with an abiding faith and trust in God's overruling power and wisdom and see if you cannot discern in these trials a corrective influence for many a fault in your own character. Open your heart and let in the sunlight of God's wondrous love, and see how quickly it disperses the gloom of rebellion and discontent. Then will you look out upon your life with a quickened vision, and old things will become new.

The fact that he is the father of your children will clothe that uncouth husband with at least respect in your eyes and see if he does not respond to the sweet, womanly, helpfulness you extend to him by an effort to better measure up to your ideals and standards. No man ever yet failed to be proud of his wife's superiority, secretly perhaps, but that chord exists in every man's heart and will vibrate if touched by the finger of wifely love and sympathy. Then, too, will the care of the little ones be no longer a burdensome task, but a sacred trust, and all these other othside things, good and proper in themselves, will be no longer essential to your happiness.

Perhaps, the future years may hold in their grasp some of the privileges you crave. Then accept them as God's good gifts, not as your rightful due. This is no theory I am advancing but a knowledge born of personal experience. Believe me, 'tis the only way. Try it and be convinced.—Helper, New York.



The whole family appreciates a Monarch

Every member of the family notices and appreciates greater promptness in meal-time, better cooking, and a happier Mother when there's an

ENTERPRISE
Steel
Monarch Range

in the kitchen. By robbing cooking of all its inconvenience, and much of its labor, the Monarch does a great deal toward preserving a happy home. Just how it does this is too long to be told here. We have published a booklet, however, describing the Monarch fully—from its oven thermometer, heat economizer, anti-scorch cover, removable reservoir, controller-damper, and removable towel-rod to the polished steel plate of its body and its generously big, inter-changeable firebox. You will find this booklet very interesting. It tells about the many ways in which the Monarch makes cooking easier.

Write for this free booklet.

Enterprise
FOUNDRY CO. SACKVILLE, N.B.

ST. ANDREW'S COLLEGE

A RESIDENTIAL AND DAY SCHOOL FOR BOYS

Boys prepared for the Universities, Royal Military College and Business

UPPER and LOWER SCHOOLS

Calendar sent on application

Autumn Term commences Sept. 10th, 1914

Rev. D. Bruce Macdonald, M.A., LL.D.
Headmaster

A Real Lever Simulation

GOLD WATCH FREE.

A straightforward generous offer from an established firm. We are giving away Watches to thousands of people all over the world as a huge advertisement. Now is your chance to obtain one. **Write now**, enclosing 25 cents for one of our fashionable Ladies' Long Guards, or Gents' Alberts, sent carriage paid to wear with the watch, which will be given Free (these watches are guaranteed five years), should you take advantage of our marvelous offer. We expect you to tell your friends about us and show them the beautiful watch. Don't think this offer too good to be true, but send **25 cents** to-day and gain a Free Watch. You will be amazed.—WILLIAMS & LLOYD, Wholesale Jewellers (Dept. 59), 89, Cornwallis Road, London, N., England.

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead Price $3.00 per acre.

Duties—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent on certain conditions.

A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price $3 00 per acre. Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land. Live stock may be substituted for cultivation under certain conditions.

W. W. COREY, C. M. G.
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—64388.

Dates to Remember.

St. Stephen Exhibition, St. Stephen, N. B., Sept. 15 to 18, 1914.

Charlottetown Exhibition, Charlottetown, P. E. I., September 22 to 25, 1914.

Sydney Exhibition, Sydney, N. S., Sept. 29 to Oct. 3, 1914.

A Matter 'O Business.

(Continued from page 833)

When the meal came it was another silent one, and Rory seemed as anxious to have it over as he was to get it. When they rose from the table Betsy said:

"See here, Rory, I want ye tae hold this keino ' wool for me while I roll it into a ball."

"Ye'll hae tae wait a wee, as I'm gaein' upstairs the noo."

It was the first note of rebellion on the part of the younger brother, and his sister looked after him in amazement as he left the room.

"What can he be after the nicht?" remarked Sarah to Betsy ten minutes later. Rory's bed-room was over the dining-room, and as the house was old, they could hear every footfall above.

"He'ss pullin' oot drawers as if he were dressin' himsel'," was the answer in tones of suspicion.

Could they have looked through the ceiling they would have been dumbfounded at the actions of their brother. He was standing before a mirror, and on his table lay a selection of neckties, which he had long been forbidden by his sisters to wear on the Sunday because of their bright colour. He had chosen now, the flashiest of the lot, and with bold determination was tying it into a neck-knot.

When at last he was dressed to his satisfaction he very quietly opened his door and began to creep stealthily down the stairs. But it was impossible to keep the boards from creaking under fourteen stones' weight. He had almost got to the bottom and was within reach of the front-door, safety, and liberty, when his sisters emerged from the dining-room and confronted him with their stern faces of disapprovel.

"What on-goin is this?" asked Sarah sharply, as if her brother had committed an unpardonable sin.

"My word, he's got his Sawbbath claithes on," Betsy joined in.

"I'm gaen oot," said Rory, boldly, although his courage was beginning to sink.

"Is there a Kirk meetin' or coffin' the nicht?" Sarah demanded, for these were the only occasions that justified his "blacks" at such an hour.

"No, it's a matter o' business," rejoined the brother sturdily.

"It's a queer time for a matter o' business," was Betsy's exclamation.

"Wattie McNab has gi'en me an order, an' I'm gaein' for measurements."

"No' in yer 'bests' anyhoo," commanded Sarah in tones of authority. "Ye're no tae spoil yer Sawbbath suit wi' warkin' in it. If ye hae tae gang tae Wattie's for measurements pit on yer auld things."

"No I'm gaen' as I am," replied Rory, taking the law into his hands for the first time, and feeling the exhilaration of it.

The sisters listened as he went down the garden path, and turned on to the high road.

"He's no gaen' tae the village or Wattie's. He's awa' up the hill towards Lochbend." was Betsy's comment.

"It's the first time I ever heard Rory tell a lee. What wud oor puir mither say?" Sarah exclaimed, with tragedy in her voice.

Meanwhile Rory was striding along with no conscience to prick him, for he had said nothing but the truth. When he reached the entrance to Lochbend farm he again felt a tremor at his heart, but to turn back now and face his sisters was much worse than to go on.

"Wattie has sent me tae tak' measurements for packin' cases," was how he introduced himself, as he held out his hand to the widow. I'm grieved tae hear ye're thinkin' o' leavin' us."

They were standing alone in the little parlor of the farm-house, where everything from the carefully dusted ornaments to the neatly arranged papers on the table seemed to Rory a part of the woman before him.

REMINGTON UMC

REPEATING SHOTGUN

Solid Breech Hammerless Safe

EVEN if you are not shooting a Remington-UMC Repeating Shotgun yourself—you have seen it in action at the traps or in the field.

You hear the opinion expressed by keen sportsmen about it—"Finest gun of its kind."

A pump gun that you can depend on—Breech mechanism perfected by the century-experienced Remington-UMC inventors.

Get your dealer to show you the Remington-UMC Pump Gun—the dealer who shows you the Red Ball Mark of Remington-UMC.

To keep your gun cleaned and lubricated RIGHT, use Rem Oil, the new powder solvent, rust preventative, and gun lubricant.

REMINGTON ARMS-UNION METALLIC CARTRIDGE CO. Windsor, Ontario

CUTS EVERYTHING!

Bread—meat—cooked fish—vegetables—fruit—anything and everything in the food line you put into a

Maxwell

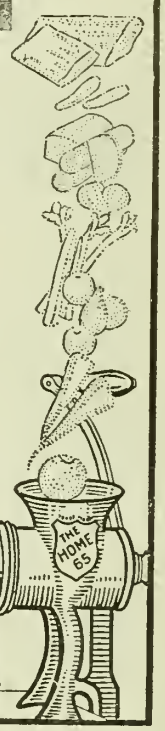
"HOME 65" FOOD CUTTER

is minced to perfection. Here too, is a machine which is quite watertight. No food or juices can escape as is the case with most Food Cutters.

No Food Cutter works so easily or is so reliable as the "HOME 65"

Four cutting plates (or 3 plates and 1 nut grater.)
Tight fitting screw cap.
Machine quite watertight.
Open end cylinder, easy to clean.

Better than any foreign made machine — and cheaper, too! With every **"Home 65"** we give a "Food Chopper Cook Book" free.

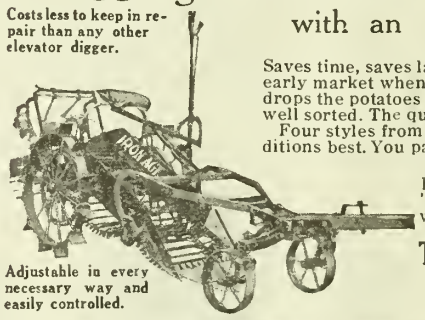


MAXWELLS LIMITED, ST MARY'S ONTARIO

ST. MARY'S ONT. 12

Digging Potatoes with an IRON AGE

Costs less to keep in repair than any other elevator digger.



Adjustable in every necessary way and easily controlled.

Saves time, saves labor, gets all of the potatoes, helps you get to an early market when the price is right. Digs, separates thoroughly, drops the potatoes where you want them, and in most cases fairly well sorted. The question is: Can you afford to be without a digger?

Four styles from which to choose the one that suits your conditions best. You pay for and your horses draw only what you need

We have been making Diggers 10 years and know what to build for this work. Our booklet "D" tells the whole story in an understandable way. May we send it ?

The Bateman-Wilkinson Co. Limited

No. 430 Symington Ave., Toronto, Ont.

THE HALL IMPROVED UNDERSHOT THRESHER.

Is Guaranteed to run **Smoother,** clean the grain **Better.** Stand the strain of an engine **Longer.** Will thresh more grain than any 26-inch cylinder machine of its class made, and **sells for less money.**

Agents Wanted Where Not Represented

Write us for prices and particulars,

Hall Manufacturing Co., Limited,

SUMMERSIDE, Prince Edward Island.

"Yes, I cannot understand what the Laird means by putting me out; for he has always proved himself a kind friend, and it will break my heart to leave the parish where I have lived all my days." As Mrs. McLeod spoke tears welled into her eyes, and it was the sight of them that broke the last barrier of reserve in Big Rory's heart.

"Mary" he stammered, "there's nae need for ye tae leave the parish. If ye'll let me, I'll build ye a better hoose than ye've ever had, an' among yer ain folk who a' respect ye. Only ye maun tak' me wi' the hoose Mary. I'm tired livin' at hame wi'—wi' my sisters, an' if ye dinna help me there's no anither who wull. Ye ken hoo fond we were o' each ither when we were boy an' girl. See, dae ye remember the rose ye ainee gave me. Here it is" and the joiner took from a flap in his pocket-book a piece of paper with a crumpled rose stem. "I havena changed, Mary, except on the ootside," he added awkwardly.

She let him lead her to the sofa and they sat down hand in hand, forgetting how many years had flown since the childish days when they had been inseparable companions.

"There'll be no need for measurements the nicht," said Rory with a smile, as at a late hour he left Lochbend, "an' Sarah wull get the surprise o' her life when she hears o' the matter o' business I've had in hand."

But Rory had no fear as he stepped briskly down the hill, for he knew that now he had the support of another woman who to him was the best in all the world.

The only one who was not surprised at the news was Wattie. The Laird laughed when he met him a few days later.

"You have been making a pawn of me, Wattie," he said.

"Ay, a king's pawn; for unless you had moved, Big Rory wudna hae captured his queen."

Burnt Lime vs. Limestone.

I have purchased a farm. They are not growing clover with success on it. I have a circular issued by the New York Agricultural Department, and it seems to favor putting lime on the land in the form of burnt limestone or quick lime as being cheaper and more economical to handle.

Some papers always talk ground limestone. Please explain whether both give good results. Is there danger of hurting the land with the quick lime? I want to try to raise clover and alfalfa.

What is the difference between limestone and rock phosphate?—Hoards.

We have emphasized the use of the ground limestone or marl for agricultural purposes, rather than burnt lime, because of the caustic properties of quick lime. Burnt limestone is a very effective agent in correcting the acidity of the soil. Fifty-six pounds of burnt limestone is equivalent to one hundred pounds of ground limestone. In the burning of limestone to make quick lime, 44 pounds of carbon dioxide is thrown off, this makes less bulk to handle;, but the caustic properties of burnt lime destroy a considerable percentage of the organic matter, which is very important to our soils. It is for this reason that we have urged the use of ground limestone rather than burnt limestone.

Limestone is a compound which is chemically known as calcium carbonate (Ca Co3) and when applied to the soil the acids will take up the calcium which form compounds that are not acid.

Rock phosphate is tricalcium phosphate (Ca3 (Po4)2) and is used to supply phosphorous to the soil, an important element of plant food. It would be too expensive to use this material to supply calcium.

You Can't Make
BEAVER FLOUR
Bread
with a western
wheat Flour,

YOU can't get the delicious, nutty, homemade flavor, with western wheat flour, that you get with "Beaver" Flour.

You can't get the lightness—the snowy whiteness—the fine texture—the uniform, dependable quality and strength—with western wheat flour that you get with "Beaver" Flour.

The Agricultural Colleges have proved—by experiments — that a true blended flour like "Beaver" Flour, is the only one suitable for both Bread and Pastry.

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PRIZE WINNERS AT THE ST. JOHN EXHIBITION

(Continued from page 819)

Heavy Horses

Single Horse, 15-3 hands and over—1, Dr. Simons; 2, Geo. M. Lawson; 3, P. H. Nugent.

Pair Horses—1, Geo. M. Holmes.

Class 12—Saddle Horses

Saddle Horse ridden by gentleman—1 and 2, Geo. Carvill; 3, Dr. Simmons.

Saddle Horse ridden by lady—1, Geo. Carvill; 2, Dr. Simmons; 3, R. J. Armstrong.

Military Class—1, Dr. Simmons; 2, Geo. Carvill.

Class 16—Cobs and Ponies

Pony in harness, 12½ hands and under—1, J S. Gibbon; 2, John F. Bullock.

Pony in harness, 12 to 14 hands—1, Cecil Alexander.

Sweepstakes

Sweepstake for best stallion, any breed as evidenced by six of his get—John Sharp.

Medium Draught Horses

Mare of Gelding, 3 years old and upwards—1, Geo. M. Holmes; 2, McFarlane Bros.; 3, E. J. Sullivan.

Colt or Filly, 2 years old—1, Geo. M. Holmes; 2, Wm. Jones.

Team, Mare or Gelding—1, Geo. M. Holmes; 2, E. J. Sullivan; 3, McFarlane Bros.

Commercial

Single Horse, Gelding or Mare, for light express—1, M R. & A.; 2, Geo. M. Lawson; 3, G. B. Taylor.

Single Horse, Gelding or Mare for heavy express—1, M. R. & A.

Progeny of Government Importations.

Colt or Filly, out of Mares imported in 1909, get of Thoroughbred, Standard Bred, Hackney, French or German Coach or Arab Sstallion—$60.00, Jas. Watters; $40.00, E. L. Woods; $30.00, Jas. Watters.

Sweepstake

Best Stallion, any breed, as evidenced by six of his get, $25.00—John Sharp, Woodstock.

BEEF CATTLE

Shorthorns

Bull, 3 years old and upwards—1, R. A. Snowball; 2, C. A. Archibald; 3, Isaac Chipman & Son; 4, G. C. Cossar.

Bull, 2 years old—1, A. N. Griffin.

Bull, junior yearling—1, R. A. Snowball

Bull, Senior Calf—1, A. N. Griffin; 2, Isaac Chipman & Son; 3, R. A. Snowball.

Bull, Junior Calf—1, C. A. Archibald; 2, Isaac Chipman & Son; 3, R. A. Snowball.

Male Sweepstakes, Diploma—A. N. Griffin.

Cow, 4 years old and upwards—1, R. A. Snowball; 2, A. N. Griffin; 3, C. A. Archibald.

Dry Cow, 4 years old and upwards—1, R. A. Snowball; 2 and 3, C. A. Archibald.

Cow, 3 years old—1, Isaac Chipman & Son.

Canadian Cow, 3 years old and upwards—1, R. A. Snowball; 2, C. A. Archibald.

Heifer, 2 years old—1, R. A. Snowball; 2, C. A. Archibald; 3, G. C. Cossar Farm.

Heifer, Senior Yearling—1, and 2, R. A. Snowball; 3, C. A. Archibald.

Heifer, unior Yearling—1, C. A. Archibald; 2, G. C .Cossar.

Heifer, Senior Calf—1, Isaac Chipman & Son; 2 and 3, A. N. Griffin.

Heifer, Junior Yearling—1, A. N. Griffin; 2, C. A. Archibald.

Female Sweepstakes, Diploma—R. A. Snowball.

Senior Herd—1, R. A. Snowball; 2, C. A. Archibald.

Bull and 3 of his get, Diploma and Dominion Shorthorn Breeders' Association, First Prize—A. N. Griffin.

Dominion Shorthorn Breeders' Association, Second Prize—R. A. Snowball.

Cow and 2 of her offspring, Diploma and Dominion Shorthorn Breeders' Association, First Prize—R A. Snowball.

Dominion Shorthorn Breeders' Association, Second Prize—C. A. Archibald.

Herefords

Bull 3 years old and upwards—1, Wm. O'Brien & Sons, Windsor Forks, N. S.

Bull, 2 years old—1, Jas. E. O'Brien, Windsor Forks, N. S.

Bull, unior yearling—1, Wm. O'Brien & Sons.

Bull, Senior Calf—1, Jas. E. O'Brien; 2, Wm. O'Brien.

Bull, Junior Calf—1, Wm. O'Brien & Son; 2, Jas. E. O'Brien.

Male Sweepstakes, Diploma—Wm. O'Brien & Sons.

Cow, 4 years old and upward—1, and 2, Wm. O'Brien & Sons; 3, Jas. E. O'Brien.

Cow, 3 years old—1, Wm. O'Brien & Sons; 2, Jas. E. O'Brien.

Cow or Heifer, 2 years old—1, Wm. O'Brien & Sons.

Heifer, Senior Yearling—1, Wm. O'Brien & Sons.

Heifer, Junior Yearling—1, Wm. O'Brien & Sons.

Heifer, Senior Calf—1, Wm. O'Brien & Sons.

Heifer, Junior Calf—1, Wm. O'Brien & Sons.

Female Sweepstakes, Diploma—Wm. O'Brien & Sons.

Senior Herd—1, Wm. O'Brien & Sons

Breeder's Young Herd—1, Wm. O'Brien & Sons.

Bull and 3 of his get, Diploma—Wm. O'Brien & Sons.

Cow and 2 of her offspring, Diploma—Wm. O'Brien & Sons.

Aberdeen Angus

Bull, 3 years old and upwards—1, J. M. Laird & Son.

Bull, 2 years old—1, J. M. Laird & Son.

Bull. Senior Yearling—1 J. M. Laird & Son.

Male Sweepstakes. Diploma—J. M. Laird & Son.

Cow, 4 years old and upward—1, J. M. Laird & Son.

Cow, 3 years old—1, J. M. Laird & Son.

Cow or Heifer, 2 years old—1, J. M. Laird & Son.

Heifer, Senior Yearling—1, J. M. Laird & Son.

Heifer, Junior Yearling—1, J M. Laird & Son.

Heifer, Senior Calf—1, J. M Laird & Son.

Heifer, Junior Calf—1 and 2, J. M. Laird & Sons.

Female Sweepstakes, Diploma—J. M. Laird & Son.

Senior Herd—1, J. M. Laird & Son.

Breeder's Young Herd—1, J. M. Laird & Son.

Bull and 3 of his get, Diploma—J. M. Laird & Son.

Cow and 2 of her offspring—J. M. Laird & Son.

BEEF GRADES AND FAT CATTLE

Fat Cow or Heifer, 3 years old and upwards—1, C A. Archibald.

Fat Cow or Heifer, 2 years old—1, C. A. Archibald.

Pair Fat Cattle—1, C. A. Archibald.

DAIRY CATTLE

Ayrshires

Bull, 3 years old and upward—1, Clifford Creighton; 2, McIntyre Bros.; 3, A. McRae & Sons.

Bull, 2 years old—1, McIntyre Bros.

Bull, Senior Yearling—1, A. McRae & Sons; 2, McIntyre Bros.

Bull, Junior Yearling—1, McIntyre Bros.

Bull, Senior Calf—1, McIntyre Bros.; 2, Prescott Blanchard; 3 and 4, A. McRae & Sons.

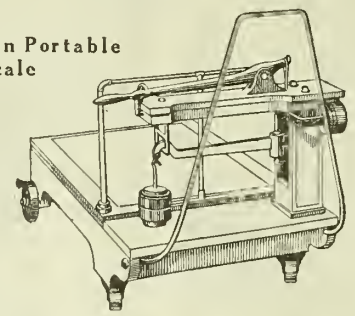
Bull, Junior Calf—1, Geo. Retson; 2, A. McRae & Sons.

Bull, Junior Calf—1, Geo. Retson; 2, A. McRae & Sons; 3, McIntyre Bros.

Male Sweepstakes, Dploma—Clifford Creighton.

Cow, 4 years old and upward—1, Clifford Creighton; 2, McIntyre Bros.; 3, Geo. Retson.

Dry Cow, 4 years old and upward—1, Prescott Blandchard; 2, McIntyre Bros.; 3, A. McRae & Sons; 4, Clifford Creighton.



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Dry Cow, 3 years old—A. McRae & Sons; 2, McIntyre Bros; 3, Geo. Retson.

Canadian Cow, 3 years old—1, Clifford Creighton; 2, A. McRae & Sons; 3, McIntyre Bros.

Cow, 2 years old—1, A. McRae & Sons; 2, Prescott Blanchar!; 3, McIntyre Bros.; 4, Clifford Creighton.

Heifer, 2 years old—1, Geo. Retson; 2, McIntyre Bros.; 3, C. A. Archibald.

Heifer, Senior Yearling—1 and 3, A. McRae & Sons; 2, Clifford Creighton; 4, Prescott Blanchard.

Heifer, Junior Yearling—1, McIntyre Bros.; 2, Clifford Creighton; 3, Retson Bros.; 4, A. McRae & Sons.

Heifer, Senior Calf—1, 2 and 3, Mc Intyre Bros.; 4. A. McRae & Sons.

Heifer, Junior Calf—1, McIntyre Bros.; 2, Prescott Blanchard; 3, A. McRae & Sons.

Female Sweepstakes, Diploma—Clifford Creighton.

Senior Herd—1. Clifford Creighton; 2, A. McRae & Sons; 3, McIntyre Bros.

Breeder's Young Herd—1, A. McRae & Sons; 2 and 3, McIntyre Bros.

Bull and 3 of his get, Diploma—Clifford Creighton.

Cow and 2 of her offspring, Diploma—Clifford Creighton.

Canadian Ayrshire Breeders' Association Specials

Get of one sire, four animals, either sex, any age—1, Clifford Creighton; 2, A. McRae & Sons; 3, McIntyre Bros.

Progeny of one cow, two animals, either sex, and age—1, Cilfford Creighton; 2, A. McRae & Sons; 3, McIntyre Bros.

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Bull, 3 years old and upward—1, Clifford Creighton; 2, H. S. Pipes & Son; 3, E. J. Young.

Bull. 2 years old—1, E J. Young.

Bull Senior Yearling—1, H. S. Pipes & Son; 2 and 3, E. J. Young.

Bull, Junior Yearling—1, H. S. Pipes & Son; 2 and 3, E. J. Young.

Bull, Senior Calf—1 and 2, H. S. Ppes & Son; 3, E. J. Young.

Bull, Junior Calf—1, H S. Pipes & Son; 2 and 3, E. J. Young.

Mael Sweepstakes, Dploma—H. S. Pipes & Son.

Cow, 4 years old and upward— 1 and 2, E. J. Young; 3, H S. Pipes & Son; 4. C. Creighton.

Dry Cow, 4 years old and upward—1, E. J. Young; 2, H. S. Pipes & Son; 3, C. Creighton.

Cow, 3 years old—1, C Creighton; 2, H. S. Pipes & Son; 3, . E. Young.

Dry Cow, 3 years old—1, H. S. Pipes & Son.

Canadian Cow, 3 years old—1, C. Creighton; 2, J. E. Young; 3, H. S. Pipes & Son.

Cow, 2 years old—1, C. Creighton; 2 and 3, . E. Young; 4, H. S. Pipes & Son.

Heifer, 2 years old—1 and 2, H. S. Pipes & Son.

Heifer, Senior Yearling—1 and 4, H. S. Pipes & Son; 2, C. Creighton; 3, J. E. Young.

Heifer, Junior Yearling—1 and 2, H. S. Pipes & Son.

Heifer, Senior Calf—1 and 3, H. S. Pipes & Son; 2, C. Creighton; 4, J. E. Young.

Heifer, Junior Calf—1, H. S. Pipes & Son; 2, C. Creighton; 3 and 4, J. E. Young.

Female Sweepstakes, Diploma—J. E. Young.

Senior Herd—1, C Creighton; 2, H. S. Pipes & Son; 3, J. E. Young.

Breeder's Young Herd—1 and 2, H. S. Pipes & Son; 3, J. E. Young.

Bull and 3 of his get, Diploma—C. Creighton.

Cow and 2 of her offspring, Diploma—J. E. Young.

Guernseys

Bull, 3 years old and upward—1, Hugh A. Dickson.

Bull, 2 years old—1 and 8, Roper Bros.

Bull, Junior Yearling—1, Hugh A. Dickson; 2, Roper Bros.; 3, Hghland View Dairy.

Bull, Senior Calf—1, Roper Bros.; 2. Hugh A. Dickson.

Bull, Junior Calf—1 and 2, Roper Bros.; 3, Hugh A. Dickson.

Male Sweepstakes, Diploma—Hugh A. Dickson.

Cow, 4 years old and upward—1 and 3, Roper Bros.; 2. Hugh A. Dickson.

Dry Cow, 4 years old and upward—1, Roper Bros.; 2, Hugh A. Dickson.

Cow, 3 years old—1, Hugh A. Dickson; 2, Roper Bros.

Dry Cow, 3 years old—1, Hugh A. Dickson; 2, Roper Bros.

Canadian Cow, 3 years old—1, Roper Bros..: 2, Hugh A. Dickson.

Cow, 2 years old—1, Hugh A. Dickson; 2, Roper Bros.

Heiefr, 2 years old—1, Roper Bros.; 2, Hugh A. Dickson.

Heifer, Senior Yearling—1 and 3, Hugh A. Dickson; 2, Roper Bros.

Heifer. Junior Yearling—1, Roper Bros.; 2, Hugh A. Dickson.

Heifer, Senior Calf—1, Roper Bros.; 2, Highland View Dairy.

Heifer, Junior Calf—1, Roper Bros.:

2, Highland View Dairy.
Female Sweepstakes, Diploma—Roper Bros.
Senior Herd—1, Hugh A. Dickson; 2 and 3, Roper Bros.
Breeders' Young Herd—1. Roper Bros.; 2, Hugh A. Dickson.
Bull and 3 of his get, Diploma—Hugh A. Dickson.
Cow and 2 of her offspring, Diploma—Hugh A. Dickson.

Holsteins

Bull, 3 years old—1 and 2, Lea & Clark.
Bull, 2 years old—1, Lea & Clark.
Bull, Junior Yearling—1, J S. Gibbon.
Bull, Senior Calf—1, Lea & Clark; 2, W. S. Harding.
Bull, Junior Calf—1, Lea & Clark; 2, W S. Harding.
Male Swepstakes, Diploma—Lea & Clark.
Cow, 4 year old and upward—1 and 3, Lea & Cark; 2 and 4, W. S. Harding.
Dry Cow, 4 years old and upward—1 and 3, W. S. Harding; 2, Lea & Clark.
Cow, 3 years old—1, Lea & Clark; 2, W. S. Harding.

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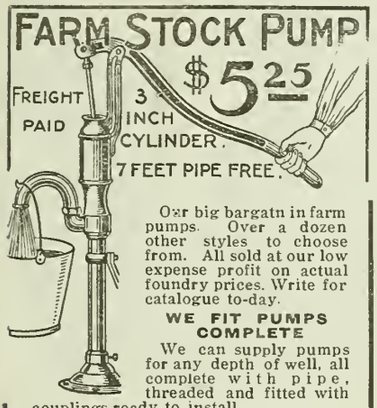

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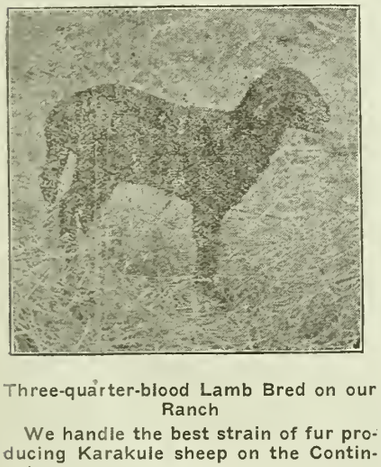

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Canadian Cow, 3 years old—1, Lea & Clark; 2, W. S. Harding.
Cow, 2 years old—1, Lea & Cark; 2, W. S. Harding.
Heifer, 2 years old—1, Lea & Clark.
Heifer, Senior Yearling—1, Lea & Clark.
Heifer, Junior Yearling—1, Lea & Clark.
Heifer, Senior Calf—1, Lea & Clark.
Heifer, Junior Calf—1, Lea & Clark; 2, W. S. Harding.
Female Sweepstakes, Diploma—Lea & Clark.
Senior Herd—1 and 2, Lea & Clark.
Breeder's Young Herd—1, Lea & Clark.
Cow and 2 of her offspring, Diploma—Lea & Clark.

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Cow, 4 years old and upward--1 and 2, Highland View Dairy; 3, McFarlane Bros.
Cow, 3 years old—1, A. McRae & Sons; 2, Highland View Dairy; 3, McIntyre Bros.
Cow, 2 years old—1, Highland View Dairy; 2, Hugh A. Dickson; 3, McIntyre Bros.
Heifer, 2 years old—1, A. McRae & Sons; 2, Highland View Dairy.
Heifer, Senior Yearling—1, McIntyre Bros.; 2, Highland View Dairy.
Heifer, Junior Yearling—1, Hugh A. Dickson; 2, McIntyre Bros; 3, Highland View Dairy.
Heifer, Senior Calf—1, A McRae & Sons; 2, McIntyre Bros.
Heifer, Junior Calf—1, McIntyre Bros.; 2, Highland View Dairy.

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Grand Champion Ram, any breed, 2 shears and over, Bronze Medal donated by Canadian Bank of Commerce, St. John, N. B.—Cephas Nunn.

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Ram Lamb—1, Geo. Retson.
Ewe, 2 shears and over—1 and 2, Geo. Retson; 3, Geo. Thompson.
Shearling Ewe—1 and 3, Geo. Retson; 2, Geo. Thompson.
Ewe Lamb—1, 2 and 3, Geo. Retson
Pen, ram and 4 ewes—1 Geo. Retson; 2, Geo. Thompson.
Pen Lambs—1, Geo Retson.

Leicesters

Ram, 2 shears and over—1, Albert Boswall, Sr.; 2, G. C. Cossar.
Shearling Ram—1, Albert Boswall Sr.; 2,S . L. Boswall; 3, Geo. Retson.
Ram Lamb—1 and 3, Albert Boswall; 2, S. L. Boswall.
Ewe, 2 shears and over—1 and 3, Albert Boswall; 2, S. L. Boswall.
Shearling Ewe—1, Albert Boswall; 2 and 3, S. L. Boswall.
Ewe Lamb—1 and 2, Albert Boswall; 5, S. L. Boswall.
Pen, Ram and 4 ewes—1, Albert Boswall; 2, S. L. Boswall.
Pen Lambs—1, Albert Boswall; 2, Geo. Retson.

..... Lincolns

Ram, 2 shears and over—1 and 2, Albert Boswall; 3, Carlyle D. Pugsley
Shearling—1, Albert Boswall.
Ram Lamb—1 and 3, Albert Boswall; 2, Carlyle D. Pugsley.
Ewe, 2 shears and over—1 and 2, Albert Boswall; 2, C. D. Pugsley.
Shearling Ewe—1 and 2, Albert Boswall; 3, C. D. Pugsley.
Ewe Lamb—1, Albert Boswall; 2 and 3, C. D. Pugsley.
Pen, Ram and 4 ewes—1 and 3, Albert Boswall; 2, C. D. Pugsley
Pen Lambs—1, Albert Boswall; 2, C. D. Pugsley.

(Continued on page 842)

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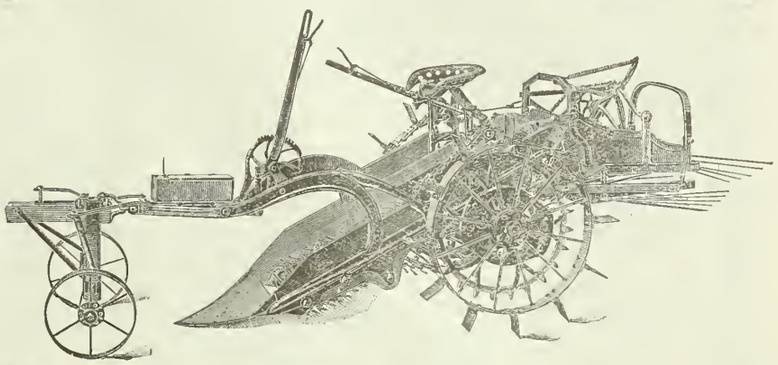

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The Cow and the Sheep.

There is always more or less discussion as to which is the more profitable the cow or the sheep. This, like all other live stock and agricultural comparisons, depends more on the handler than on the stock. A sheepman will succeed best with the cow, because the conditions and requirements necessary for the successful development of each will be contributed, and the animals will do their best.

All kinds of farm animals will succeed and become profitable when properly handled. This we see on all sides; it has been proven. The question nowadays is, will the owner or handler of live stock make a success out of the business of handling stock? The business itself is a success, but the handler often does not know anything about the business of handling stock, and therefore fails in obtaining the best results or even moderate results.

The sheep is a profitable animal on the farm and has made a very profitable animal on the range when systematically handled. The cow is a profitable animal on the farm when used as a dairy feature, and the farmer who has an aptitude for dairy management and dairy work will make a success with the cow in this line of industry.

The relative cost of keeping the cow and the sheep cannot be figured accurately, owing to the variation in the size and feeding capacity of these animals. The experiences of those who have thought they observed tests closely are widely different in their estimates, ranging all the way from five to ten sheep, as an equivalent to a cow in matter of feed consumed and expense of keeping. All sheep and all cows are not on an equal basis in consumption of feed. It is fair, however, to presume that on an average of six sheep can be kept on the feed required for a 1,000-pound cow.

The keeping of a few sheep on the farm where there are pastures fenced to hold them is a safe proportion of any farmer. Even the dairy farmer may find it profitable to keep a few sheep, as they are good weed destroyers, and in wool and mutton will return a good profit for feed consumed. They are not injurious to cow pastures, as many believe, espeially where but few are kept. The keeping of cattle and sheep on the same pastures at the same time is not recommended; yet all over the eastern sheep-raising districts the cow pastures were usually the run of a few sheep of extra quality, those being given a little extra care for show or breeding purposes. The keeping of a few sheep is the best way to solve the question of profit, also of the matter of whether you would like to engage in sheepraising as a business.

The Cow's Udder

It is quite customery to relieve the cow's udder to some extent immediately after freshening, although it is not considered a wise policy to attempt to remove all the milk at this time. Some of the most prolific milkers require milking before freshening, but this is not a good practice unless the condition of the udder is such as to make it advisable; that is to prevent over-distention of the udder, which is apt to be more or less injurious. When the udder is entirely relieved at the freshening period, milk fever is more likely to develop. Often and frequent milking and massaging the udder are considered advisable at this time.

EVERY FARMER SHOULD KNOW

how to make the most money out of his land. If your Fall Wheat crops have been diseased and poor, there is a seed dressing that will ensure you a better field at trifling cost.

CORVUSINE D.G

prevents ground rot, assists germination and is an excellent smut dressing. Corvusine is NOT poisonous, birds and animals will not touch it, and it has none of the dangerous features of bluestone and other obnoxious chemicals. 1

WRITE FOR PARTICULARS OF THIS WONDERFUL SEED DRESSING TO

McArthur, Irwin, Limited - Montreal, P.Q.

SPECIAL ADVICE FOR MEN Strength Restored By New Method

The little book described below (which I gladly send free, sealed, by mail, to any young or elderly man anywhere) contains in its 85 beautifully illustrated pages everything a man need know with regard to certain strictly personal subjects, and as a guide through his entire life, from the delicate period of youth, when wholesome advice is most needed, on through early manhood to a ripe, vigorous, healthy old age. Over a million of these books have been thus distributed by me all over the world. Therefore, please use coupon below and get YOUR free copy by return mail. SANDEN CO., DISTRIBUTORS.

MANLY MEN ARE THE WORLD'S POWER TO-DAY

Do you know, my friend, that there is a wonderful new way to apply a certain, great, natural FORCE to your body, and by which you may, without effort, trouble or inconvenience, treat your own self in the privacy of your home for debility and lost vitality, without using a single drug or medicine? This great FORCE, as a restorer of vitality and as a means to overceme those weaknesses which result from indiscretion and unnatural practices, is to-day being used all over the civilized world, and I give it as my honest opinion, based upon a vast observation and study, that any man anywhere, who leads a decent, manly life and who applies this marvellous FORCE in a scientific and rational way, can, without employing a single drug, be restored again to a state of perfect, rugged health and vigor, without a remaining ache, pain or weakness.

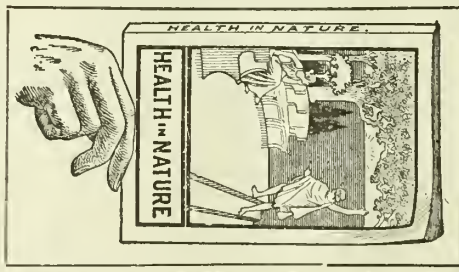
As we all know, these debiliating weaknesses handicap a man in every condition of life, while, on the other hand, a perfect speimen of vigorous, robust, lusty manhood is ever admired by both women and men alike, while, of course, it is certainly only such a man who can attain the really great success of life. Therefore, I say to you, no matter what your size, whether you are small or large, no matter what your occupation, no matter whether you are a college graduate or workng on the farm or in the factory, no matter whether you are young or elderly, it is all a question of your vigor and your vitality, and if I can give you a good, abundant supply of this same great power of VITAL FORCE, then it is easy to believe that I can completely restore your vigorous health, can overcome the evil of past indiscretions so you will be exactly the same in your influence over people, exactly the same in your manly bearing as other manly, strong-nerved, warm-blood ed fellows of your acquaintance.

With an idea of attaining this all for you, I recommend you to investigate a simple little VITALIZING APPLIANCE of my invention, which I am now sending out in great numbers for use by men everywhere who need new manly strength. This little VITALIZER is very light, weighing only several ounces, and can be worn without any one suspecting that you are wearing it. You buckle it on your body upon going to bed and take it off mornings. Thus while you sleep it sends its wonderful power which I call VITALITY or VITAL FORCE, into your blood, nerves and organs. Users say it takes pain and weakness out of the back from one application, and further say 60 to 90 days' time is sufficient to restore a state of health, strength and vigor. I am not offering this VITALIZER here for sale, but want you first to send for my book, that you may learn all about the whole wonderful subject, and why I get such quantities of testimonials from users everywhere telling of results after drugs completely and utterly fail.

NOTE— With special attachments VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health. Please write for book to-day, or, if near by, I should like you to call. Hours—9 to 6.

Use Coupon; Get Free Book

Remember, the little illustrated book which I send free, sealed, by mail, as per coupon below not only fully describes my VITALIZER, telling of a special offer by which you may get one on special terms for use in your own case, but contains a great fund of private advice for men, some good, wholesome cautions, and a lot of general information that might be of value to you to the end of your days. Therefore, please write or call.



DR. M. F. SANDEN CO.,
140 Yonge St., Toronto, Ont.

Dear Sirs:—Please forward me your book, as advertised, free, sealed.

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ADDRESS .....

Method of Salting Cattle.

I was much interested in the article on "Salt for the Dairy Cow." Perhaps the plan of salting cattle which we have been using may be of interest. A box about 8 by 18 inches and 6 inches deep is securely fastened to a post in the barnyard or pasture where the cattle may have daily access to it. A slanting cover to keep out the rain is fastened over the box by means of leather hinges. Keep the box filled with salt and the cattle soon learn to lift the cover and take what they want.—C. G. Bridgman in Hoard's Dairyman.

Explains Black Yolk.

Just how many black rots are found in current New York receipt of eggs. The occurrence of black rots has caused a good deal of discussion and everyone has his own view as to the cause of the dark yolk and few opinions are alike. The general impression is that blackness is caused by grass or certain kinds of feed. In addition to the black yolk which is in excessive evidence during June, July and August, there is the grass yolk. Few know just what causes a grass yolk although all acknowledge that there is such a thing.

To learn the cause of the black yolk a New York paper asked Dr. M. E. Pennington, at Philadelphia, chief of the Food Research Laboratory of the United States Department of Agriculture, Bureau of Chemistry. Her reply follows:

"You ask what causes dark yolks in eggs. It is generally supposed that the color of the yolk is due more to the food of the hen than to any other factor. Hens which are fed a clean ration, containing plenty of grain and green food, are more apt to lay eggs with golden yellow yolks

"An egg with a dark yolk frequently arises when the hen is fed a diet rich in meat or bugs. Some people have gone so far as to call dark yolk eggs 'dung hill eggs', implying that the hens have foraged for a living. I am not prepared to endorse the truth of all these statements, but, undoubtedly, there is close relation between diet and color.

"The term 'grass egg' is frequently applied to those eggs whose whites have a greenish tinge. These eggs are very common in damp weather where the nests do not have proper attenteion. The green color s produced by bacteria, which are enabled to penetrate the shell when moist, but cannot enter if the shell is kept dry. The eggs with a greenish tinge to the whites always contain a very large number of bacteria and are considered entirely unsuitable for food purposes."

Testing the Age of Eggs.

There are various ways of testing the age of eggs. An old-time method which was often adopted when a "stolen" nest was found, was to put the eggs in a vessel of cold water. On the principal that weight decreased as age increased, it was held that eggs which had been laid several days would float, while any of recent date would go below the surface. All that promptly sank to the bottom were supposed to be good for food. This was an easy method, but unfortunately as a good many people who had faith in it discovered after they had made a few experiments, it was not always reliable. Just why its results were not uniform has never been satisfactorily explained. It often worked out correctly but sometimes eggs that were very far from good sank in the water. When these eggs were broken the one who was to cook them had not an altogether pleasant surprise.

A prominent poultry journal has just reprinted from a French paper, and without comment, a description of a somewhat similar method of learning the approximate age of eggs which may work out satisfactorily. This involves the use of salt water, and the eggs to be tested are placed in this solution. A strictly fresg egg is supposed to sink to the bottom and an egg only one day old should go nearly there. If an egg swims it has probably been laid at least three days and one that floats has reached a greater but entirely problematical age.—A. E. Vandervort.

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$10 This is in addition to our FREE DELIVERY $10 of all orders amounting to $10 or over of all goods catalogued, and heavy goods quoted prepaid

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Do not fail to look these values up in your catalogue. The descriptions fully explain the big saving in store for you.

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Want to Increase the Buying Power of your Money--Then you'll need this book of big values

We refer to our Fall and Winter Catalogue for 1914-15 just issued. It's the best all-round book of big merchandise values we have ever issued. From cover to cover its pages are fairly brimming over with buying opportunities that will greatly interest you. If you have received a copy you should not fail to study each page carefully and order early and often so that you may receive the fullest benefit. There are buying possibilities in store for you such as you've never known—and the more you spend the greater the saving. **Send us your name and address if you have not received a catalogue.**

IT LISTS MERCHANDISE OF ALL KINDS

It is not merely a book of fashion—almost every known household commodity is offered in wondrous variety throughout the three hundred odd pages of this book. This is what makes it of so much value to one and all. An **EATON** Catalogue in your home is indeed a treasure store of untold worth.

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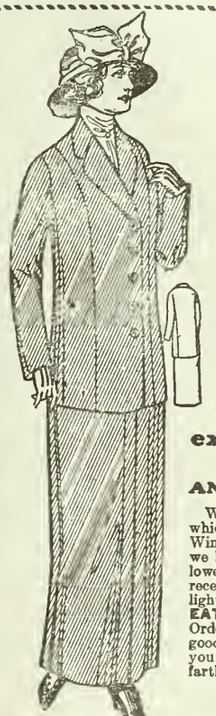

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We reproduce three of the many splendid values which are to be found in your **EATON** Fall and Winter Catalogue. These examples of low pricing we believe fully bear out our claim "Best value at lowest possible price." We know that once you receive your purchase you will be more than delighted. Style, fit and finish are all up to the **EATON** standard, price alone has been lowered. Order these from your catalogue, and allow the goods to convince you. The price quoted is all you pay. Values like these make your money go farther.

DO NOT FORGET

That when your order amounts to $10.00 or over of any goods in the Catalogue, including Men's, Women's and Children's Outer Garments or heavy goods, we pay the shipping charges to your nearest station or post office. It gives you the opportunity of getting practically all your needs at our low prices delivered free if you make your order to this amount.

THE T. EATON Co LIMITED TORONTO - CANADA

56-439. CHEVIOT SERGE SUIT 5.95

Lost Certificate.

Farmer, N. B., Please inform me about the following:

Some years ago I bought a registered cow. I have lost the certificate I know the cow's name and year registered. I now want to register a calf of her's. Where can I find out about this cow's number and registeration ?

Farmer has not mentioned the breed of the cow for which he wishes to get a duplicate certificate, and whose progeny he wishes to register.

Write the Secretary of the breed Association, giving cow's name, year registered and name of owner at that date. Also give color markings and any other particulars for identification, and we have no doubt he will be able to make a search of his records and get you the desired information. There will be a small fee for new certificate. You may also be required to testify to the correctness of your assertions re the cow in question as being the cow for which the original certificate was held.

Value of Cows Going Up.

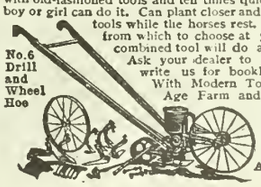
Estimates made January 1, 1914 by the U. S. Department of Agriculture indicate that the number of milch cows on farms in the United States is now 20,737,000, an increase of about one-half of one per cent. over the census figures of 1910. Meanwhile the average farm price of milch cows has increased rom $35.79 in 1910 to $53.94 or an increase of 50.7 per cent On this basis the farm value of the milch cows now in the United States is estimated at $1,118,487,080 as compared with an estimated value in the census year of $738,184,000 an increase of $380,303,000 or an average annual increase for four years of $95,075,000.

A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $3.00 to $14. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.



The Bateman-Wilkinson Co., Limited 432 Symington Av., Toronto, Can.

PRIZE WINNERS AT THE ST. JOHN EXHIBITION

(Continued from page 839)

Oxford Downs

Ram, 2 shears and over—1, J. E. Baker & Sons; 2, J. M. Laird & Son.

Shearling Ram—1, J. E. Baker & Sons.

Ram Lamb—1 and 3, J. E. Baker & Sons; 2, J. M. Laird & Son.

Ewe, 2 shears and over—1 and 2, J. E. Baker & Son; 3, J. M. Laird & Son.

Shearling Ewe—1, 2 and 3, J. E. Baker & Sons.

Ewe Lamb—1 and 2, J. E. Baker & Sons; 3, J. M. Laird & Son.

Pen, Ram and 4 ewes—1 and 3, J. E. Baker & Sons; 2, J. M. Laird & Son.

Pen Lambs—1, J. E. Baker & Sons; 2, J. M. Laird & Sons.

Shropshires

Ram, 2 shears and over—1 Geo. L. Boswall.

Ram, shearling—1, Geo. L. Boswall 2, Cephas Nunn.

Ram Lamb—1 and 2, Geo. L. Boswall; Cephas Nunn.

Ewe, 2 shears and over—1, Geo. L. Boswall; 2, M. K. Boswall.

Shearling Ewe—1 and 2, Geo. L. Boswall; 3, M. K. Boswall.

Ewe Lamb—1 and 3, Geo. L. Boswall; 2, M. K. Boswall.

Pen, Ram and 4 ewes—1, Geo. L. Boswall; 2, M. K. Boswall.

Pen Lambs—1, Geo. L. Boswall.

Southdowns

Ram, 2 shears and over—1, Cephas Nunn.

Shearling Ram—1, Cephas Nunn; 2, J. E. Baker & Sons.

Ram Lamb—1, Cephas Nunn; 2 and 3, J. E. Baker & Sons.

Ewe, 2 years and over—1, J. E. Baker & Sons; 2 and 3, Cephas Nunn.

Shearling Ewe—1, 2 and 3, J. E. Baker & Sons.

Ewe Lamb—1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.

Pen, Ram and 4 ewes—1 and 3, J. E. Bader & Sons; 2, Cephas Nunn.

Pen Lambs—1, Cephas Nunn; 2 J. E. Baker & Son.

Dorsets

Ram, 1 shears and over—1, Geo. L. Boswall.

Shearling Ram.—1, Geo. L. Boswall 2, M. K. Boswall.

Ram Lamb—M. K. Boswall; 2, Geo. L. Boswall.

Ewe, 2 shears and over—1 and 2, Geo. L. Boswall; 3, M. K. Boswall.

Shearling Ewe—1 and 3, George L. Boswall; 2, M. K. Boswall.

Ewe Lamb—1, 2 and 3, George L. Boswall.

Pen, Ram and 4 ewes—1, Geo. L. Boswall; 2, M. K. Boswall.

Pen Lambs—1, Geo. L. Boswall.

Hampshires

Ram, 2 shears and over—1, Cephas Nunn.

Shearling Ram—1, Almon Boswall.

Ram Lamb—1, Cephas Nunn; 2, Almon Boswall.

Ewe, 2 shears and over—1 and 2, Cephas Nunn; 2, Almon Boswall.

Shearling Ewe—1 and 2, Cephas Nunn; 3, Almon Boswall.

Ewe Lamb—1 and 2, Cephas Nunn; 3, Almon Boswall.

Pen, ram and 4 ewes—1, Cephas Nunn; 2, Almon Boswall.

Pen Lambs—1, Cephas Nunn; 2, Almon Boswall.

Cheviots

Ram, 2 shears and over—1, Cephas Nunn; 2 and 3, Chas. Symes.

Ram, shearling—1 and 2, Cephas Nunn; 3, C. W. Skelton.

Ram Lamb—1 and 2, Chas. Symes; 3, Cephas Nunn.

Ewe, 2 shears and over—1 and 2, Chas. Symes; 3, Cephas Nunn.

Shearling Ewe—1 and 2, Cephas Nunn; 3, Chas Symes.

Ewe Lamb—1 and 3, Chas. Symes; 2, Cephas Nunn.

Pen, Ram and 4 ewes—1, Cephas Nunn; 2 and 3, Chas Symes.

Pen Lambs—1 and 2, Chas. Symes; 3, Cephas Nunn.

Suffolks

Ram, 2 shears and over—1, Albert Boswall; 2, Almon Boswall.

Ram, shearling—1, Albert Boswall.

Ram Lamb—1, Albert Boswall; 2, Almon Boswall.

Ewe, 2 shears and over—1 and 3, Albert Boswall; 2, Almon Boswall.

Shearling Ewe—1 and 3, Albert Boswall; 2, Almon Boswall.

Ewe Lamb—1 and 3, Albert Boswall 2, Almon Boswall.

Pen, Ram and 4 ewes—1 and 3, Albert Boswall; 2, Almon Boswall.

Pen Lambs—1, Albert Boswall; 2, Almon Boswall.

Fat Sheep

Ewe, over 1 year—1, J. E. Baker & Sons; 2, Geo. L. Boswall.

Ewe Lamb—1, Geo. L. Boswall; 2, L. Bibeau.

Wether, over 1 year—1, L. Bibeau; 2, Cephas Nunn.

Wether Lamb—1, C. D. Pugsley; 2, Almon Boswall.

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Special Prizes

Best judging of Swine by amateur, Silver Cup—Geo. Callbeck.

Grand Champion Boar, any breed, 2 years and over—Geo. Callbeck.

YORKSHIRES

Boar, over 2 years old—1, J. W. Callbeck; 2, J. E. Josselyn.

Boar, 1 to 2 years—1, J. W. Callbeck.

Boar, 6 mos. and under 1 year—1, J. W. Callbeck; 2, Thos. A. Barrett.

Boar, under 6 mos.—1, and 2, J. W. Callbeck; 3, A. E. Josselyn.

Sow, over 2 years—1 and 2, J. W. Callbeck; 3, Thos. A. Barrett.

Sow, 1 to 2 years—1, Thos. A. Barrett; 2 and 3, J. W. Callbeck.

Sow, 6 mos. to 1 year—1 and 2, J. W. Callbeck.

Sow, under 6 mos.—1 and 2, J. W. Callbeck; 3, Thos. A. Barrett.

Sow and litter—1, Thos. A. Barrett 2 and 3, J. E. Josselyn.

Herd, Boar and 3 females—1, J. W. Callbeck.

CHESTER WHITE

Sow, 6 mos. and under 1 year—1, J. E. Josselyn.

Sow and litter—1 and 2, J. E. Josselyn.

POULTRY

C, cock; h, nen; r, cockerel; p. pullett.

Light Brahmas—Chas. H. Smith, 1 c, 1 h; Scott and Warren, 1 r, 1 p.

Buff Cochins—Mrs. J. G. Myers, 1 and 2 r.

Partridge Cochins—Scott & Warren 1 h, 2 r, 2 p; Chas. H. Smith, 2 h, 1 r 1 p.

Black Langshans—Chas. H. Smith 1 c, 1 h, 1 r, 1 p.

Barred Plymouth Rocks—Bertrand Goodspeed, 2 c; Evangeline Poultry Yards, 1 c.

White Plymouth Rocks—G. A. Gallagher, 1 and 2 c, 1 and 3 h; Geo. M. Holmes, 3 c, 2 h, 2 r, 3 p; Albert Boswall, 4 c; Mrs. J. G. Myers, 1 r, 1 p; Hillside Poultry Yards, 3 r, 2 p.

Buff Plymouth Rocks—Scott & Warren, 1 r, 1 p.

White Wyandottes—Mabel G. Thomson, 1 c, 1 r, 1 p,; Evangeline Poultry Yards, 1 and 4 h. 3 r, 4 p; C. Roy Forbes, 2 c, 2 h; Maritime Poultry & Supply Co., 3 h; Highland View Dairy, 2 and 4 r, 2 p.

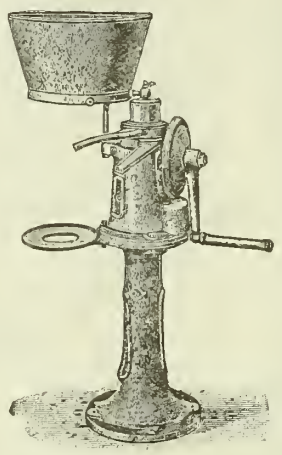
Silver Wyandottes—Evans Kyle, 1 c, 1 and 3 h, 1 r, 1 and 2 p; Maritime Poultry & Supply Co., 2 c, 2 h, 2 r; Hillside Poultry Yards, 4 r.

Black Wyandottes—Scott & Warren 1 h; Hillside Poultry Yards, 1 r, 1 and 2 p.

The Premier Cream Separator

made throughout in the largest and best equipped separator works in the British Empire.

The highest grade of material, workmanship and finish.



All wearing parts renewable and interchangeable.

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Machine-cut gearing.

Working parts easily accessible.

Bowl easily and quickly cleaned.

Simplest Construction.

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Lasts Longest.

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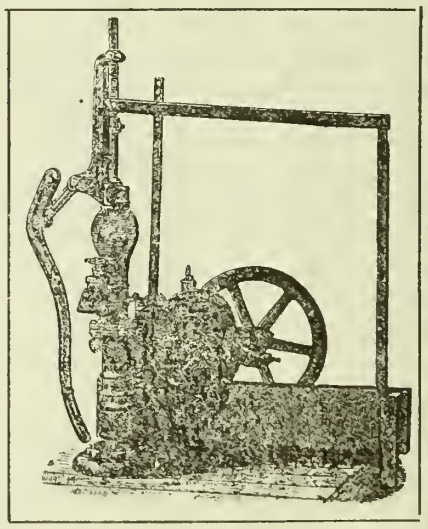
Winnipeg, Toronto, St. John.

THIS LITTLE ENGINE

is designed to take the place of the man at the pump and anyone who watches this outfit pump water for ten minutes will never again be willing to work the pump handle. The operating cost is very small and a splendid feature is that this engine can be easily connected to "any old pump." The ladies often start it to pump a single pail of water. They rest while it works.



The Outfit Complete as shown sells for $70.00. The engine alone $55.00. Immediate shipment from stock.

The A. R. Williams Machinery Co., of St. John, N. B., Limited,

15 Dock St. ST. JOHN, N. B. 34 Nelson St

Columbian Wyandottes— Wolfville Poultry Yards, 1 c, 2 h, 2 and 3 r, 1 and 2 p; Maritime Poultry Supply Co., 2 c, 3 h, 1 r; Highland View Dairy, 3 c.

Silver Pencilled Wyandottes— Maritime Poultry Supply Co., 1 c, 1 h.

S. C. Rhode Island Reds— Thomas Kyle, 1 and 2 c, 1 h, 1 and 2 r, 1, 2 and 3 p.; C. Roy Forbes, 2 h, 3 r, 4p; Fred B. Walters, 3 h.

R. C. Rhode Island Reds—Maritime Poultry Supply Co., 1 and 2 c, 3 h; Gerda A. Holman, 2 c, 1 h, 2 and 3r; 1 and 3 p; Hillside Poultry Yards 4c, 2 h; Fred B. Walters, 4 h; Scott & Warren, 1 r, 2 p.

Silver Gray Dorkings— Scott and Warren, 1 c, 2 h, 2 r; Hillside Poultry Yards, 1 h, 1 r, 1 and 2 p.

White Orpingtons—R. B. Humphrey 1 c, 1 h; Maritime Poultry Supply Co., 2 c, 2 h.

Buff Orpingtons—Highland View Dairy, 1 c, 1 h, 2 and 3 r, 2 and 3 p; Geo. M. Holmes, 1 r, 1 p.

Black Orpingtons—Mrs. H. Hassett, 1 c, 1 r; Scott & Warren, 2 r; 1 and 2 p; Highland View Dairy, 3 r, 3 p.

Red Caps—Mrs. J. G. Myers, 1 and 2 p.

Houdans—W. J. M. MacLeod, 1 and 2 c, 1, 2, 3 and 4 h; 1, 2 and 3 r; 1 2 and 3 p; Maritime Poultry Supply Co., 3 and 4 c.

Black Langshans—Scott & Warren, 1 h.

Golden Pencilled Hamburgs— Mrs. John Dakin, 1 , 2 and 3 h.

Silver Spangled Hamburgs—Scott & Warren, 1 c, 1 h; Highland View Dairy, 2 c, 2 h, 3 r, 2 p; Maritime Poultry Supply Co., 1 and 2 r, 1 and 3 p.

R. C. White Leghorns—Scott and Warren, $,r, 1 p.

S. C. White Leghorns— Mabel G. Thompson, 1 c, 1 h, 2 r, 3 p; Maritime Poultry Supply Co., 2 and 3 c, 2 and 3 h, 3 r; Mrs. H. Hassett, 1 r, 1 p; Hillside Poultry Yards, 4 r, 4 p; Evangeline Poultry Yards, 2 and 5 p.

R. C. Brown Leghorns— Scott and Warren, 1 and 2 c, 1 and 2 h, 3 and 4 r, 1 and 2 p; Highland View Dairy 1 r, 3 p.

S. C. Brown Leghorns— Scott and Warren, 1 and 2 c, h, r and p.

R. C. Buff Leghorns—Maritime Poultry Supply Co., 1 c, 1 h, 1, 2, an 3 p.

S. C. Buff Leghorns—W. W. Osborne, 1 c, 4 h, 1 and 2 r, 1 and 3 p; Hillside Poultry Yards, 2 c, 3 r, 2 p.; Maritimr Poultry Supply Co. 3 c.

S. C. Black Leghorns—Hillside Poultry Yards, 1 and 2 h, 1 r.

R. C. Black Minorcas— Hillside P. Yards, 1 c, 1 and 2 h, 1 and 2 r, 1 p.

S. C. Black Minorcas—Alfred Mallins, 1 c, 1 h; Maritime Poultry Supply Co., 2 c, 2 h.

Black Spanish—Hillside Poultry 1 and 2 h; Geo. A. Vincent, 1 and 2, r and p.

Andalusians—Maritime Poultry Supply Co., 1 p.

St. Isidore, P. Q., Aug. 18, 1904.
Minard's Liniment Co., Limited.

Gentlemen,—I have frequently used MINARD'S LINIMENT and also prescribe it for my patients always with the most gratifying results, and I consider it the best all-round Liniment extant,

Yours truly,
DR. JOS. AUG. SIROIS.

Few, if any, medicines, have met with the uniform success that has attended the use of Chamberlain's Colic, Cholera, and Diarrhoea Remedy. The remarkable cures of colic and diarrhoea which it has effected in almost every neighborhood have given it a wide reputation. For sale by all druggists.

High Quality Builds Big Telephone Business

THIS business was organized to manufacture telephone equipment for independent local and municipal systems. Right from the start our equipment made records for efficiency. It did not take long for our goods to acquire a reputation for quality and reliability. As a result our business has grown by leaps and bounds.

It is a well-known fact that we have been securing over 80 per cent of the new telephone business in Ontario. The business, too, has been secured with less effort than business secured by competitors. The satisfaction our telephones and equipment have given under all conditions has paved the way for easy business getting.

To judge how fast our business is growing, you'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the local telephone business that we are the legitimate people todeal with. There are those in the telephone business who are interested in depreciating the success of the independent telephone movement and the development of munibipal systems. On the other hand, our business lies wholly and directly with the independent telephone systems and it is to our own best interests to look after those systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of the telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephone and equipment.

You are absolutely safe in equipping your system with our telephones. We guarantee them as regards material and workmanship. In fact we guarantee all our equipment and materials. And in addition, we offer to send your telephones for FREE TRIAL, so you can test and compare them with others right on your own lines before risking a dollar.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4. describing our magnetic telephones, is free on request,

Send for a copy.

Let Us Quote You on Your Year's Supply of Dry Cell Batteries.

Canadian Independent Telephone Co., Limited

1820 Duncan Street, - - Toronto, Canada

Also Manufacturing Agents for the Magnaphane Co. under Geo. R. Webb, Canadian Patent No. 123367, No. 142513, No. 142514, No. 124537, No. 142621, No. 131145

Anconas—Hillside Poultry Yards,1 and 2.

Golden Unbearded Polish—Maritime Supply Co., 1 c, 1 h.

White Crested Black Polish—Scott & Warren, 1 and 2 c, 2 h, 1 p; the Maritime Poultry Supply Co., 1 h.

Golden Beared Polish—Scott and Warren, 1 c, h and p.

Games—Hillside Poultry Yards, Scott and Warren and Maritime Poultry Supply Co., captured all the prizes on Games.

Pen of Poultry (Fowl)

White Plymouth Rocks—1, Albert Boswall.

White Wyandottes—1, Wolfville Evangeline Poultry Yards; 2, Highland View Dairy.

Silver Laced Wyandottes—1, Hillside Poultry Yards; 2, Evans Kyle.

Columbian Wyandottes—1, Wolfville Evangeline Poultry Yards.

Black Langshan—1, Shas. H. Smith

S. C. Rhode Island Red—1, Thos. Kyle; 2, C. Roy Forbes.

Buff Orpington—1, Highland View Dairy; 2, Hillside Poultry Yards.

Houdans—1, W. J. M. MacLeod; 2, W. J. M. MacLeod.

Silver Spangled Hamburgs, S. C. Brown Leghorns and R. C. Brown Leghorns—Scott and Warren.

S. C. Black Minorcas—1, Alfred Mallins; 2, Hillside Poultry Yards.

Pen of Poultry (Chickens)

White Plymouth Rocks—Mrs. J. G. Myers.

White Wyandottes—Mrs. H. Hassett

S. C. Rhode Island Reds—1, Thos. Kyle; 2, Louise C. Brown.

R. C. Rhode Island Reds— Fred B. Waters.

Buff Orpingtons—Mrs. H. Hassett.

White Orpingtons—R. B. Humphrey

Buff Orpingtons —Highland View Dairy.

Houdans—1 and 2, W. J. M. MacLeod.

S. C. White Leghorns—1, C. Roy Forbes; 2, Hillside Poultry Yards.

R. C. Brown Leghorns— Scott and Warren.

Buff Leghorns—Hillside Poultry Yds

Turkeys, Geese and Ducks

Bronze Turkey Cock—1, R. B. Humphrey; 2, Albert Boswall.

Bronze Turkey Hen—1, Albert Boswall; 2, R. B. Humphrey.

Narragansett Cock and Hen—Bertrand Goodspeed.

Black Turkey Hen—1, Albert Boswall; 2 and 3, Maritime Poultry Supply Co.

Buff Turkey Cock—Maritime Poultry Supply Co.

Pekin Drake—1, G. E. Stephenson; 2, Geo. M. Holmes; 3, Maritime P. Supply Co.; 4, Albert Boswall.

Pekin Duck—1, Mabel G. Thompson 2 and , Maritime Poultry Supply Co 4, Albert Boswall.

Rouen Duck—1, S. L. Boswall; 2, Geo. M. Holmes.

Rouen Drake—1, S. L. Boswall; 2, Geo. M. Holmes.

Indian Runner Fawn Duck and Drake—1 and 2, Maritime Poultry Supply Co.

Gray Toulouse Gander—1, Mabel G. Thompson; J. A. Floyd; 3, Maritime Poultry Supply Co.

Gray Toulouse Goose—1, Bertrand Goodspeed: 2, J. A. Floyd; 3, Bertrand Goodspeed.

White Embden Gander and Goose—1 and 2, Albert Boswall.

African Gander—1, Maritime Poultry Supply Co.; 2, Albert Boswall.

African Goose—1, Albert Boswall; 2 Maritimr Poultry Supply Co.

Turkeys, Geese and Ducks of 1914.

Bronze Turkey Cock and Hen— R. B. Humphrey.

Pekin Drake—1, R. B. Humphrey; 2, Mrs. H. Hassett; 3 and 4, Maritime Poultry Sup, Co.

Pekin Drake—1, Albert Boswall; 2, R. B. Humphrey; 3, Maritime Poultry Supply Co.; 4, R. B. Humphrey.

Rouen Drake—1, S. L. Boswall; 2, Geo. M. Holmes.

Rouen Duck—1, S. L. Boswall; 2, Geo. M. Holmes.

Toulouse Gander—1, Bertrand Goodspeed; 2, J. A. Floyd; 3, Maritime Poultry Supply Co.

Toulouse Goose—1, Bertrand Goodspeed; 2, J. A. Floyd; 3, Maritime Poultry Supply Co.

Embdens and Africans—1 and 2, Albert Boswall.

Eggs

Heaviest Dozen White Eggs—1 Hillside Poultry Yards; 2, Bertrand Goodspeed.

Heaviest Dozen Brown Eggs—1, L. C. Brown; 2, Bertrand Goodspeed.

REMARKABLE OFFER TO SUBSCRIBERS

The Maritime Farmer has secured a limited number of Mauser rifles, weight only 7½ pounds, sighted for 1,100 yards, which it offers with the Maritime Farmer for one year for only FIVE DOLLARS. These rifles are models for hunters. They are sold elsewhere for a much higher figure and are easily worth from three to four times as much as we are asking for them. The first to call will get the choice. The rifles will be sent express to your nearest express office, collect. Money must accompany all orders and rifles will only be supplied to new subscribers, or those who pay strictly in advance. They are the best lot of rifles of the kind on the market. We can also supply ammunition for the rifles in lots of 100 rounds at most reasonable prices.

West Prince, P. E. I., Standing Grain Competition.

Following are the results in the Fields of Standing Grain Competition for West Prince, P. E. I: Oats—1st, Geo. Horne, O'Leary, 96; 2nd, Peter Poirier, Palmer Road, 95; 3rd, Peter Callaghan, Palmer Road, 94½; 4th, Rev. P. C. Gauthier, Palmer Road, 94; 5th, Andrew Martin, Bloomfield, 93¼; 6th, Wm. Aylward, Palmer Road, 93; 7th, Celestin Poirier, Palmer Road, 92½; 8th, R. H. Raynor, Cascumspec, 92; 9th, Jas. O'Brien, Elmsdale, 91½; 10th, James Cadigan, Palmer Road, 91; 11th, T. O'Brien, Alma, 89½; 12th, John Casey Palmer Road, 89; 13th, Dennis O'Brien, Elmsdale, 88¾; 14th, James Callaghan, Palmer Road, 88½; 15th, Arcade Gaudet, Palmer Road, 88¼; 16th, Allen McDonald, Palmer Road, 88; 17th, Joseph Poirier, Palmer Road, 87¼; 18th, I. T. Reid, Palmer Road, 86; 19th, Emmett Shea, Palmer Road, 85. Wheat—1st, James O'Brien, Elmsdale, 96; 2nd, Norbet Poirier, Palmer Road, 94½; 3rd, Peter Callaghan, Palmer Road, 94; 4th, Celestial Poitier, Palmer Road, 93½; 5th, Dennis O'Brien, Elmsdale, 93; 6th, R. H. Raynor, Cascumpec, 92½; 7th, Albert Kennedy, Palmer Road, 91; 8th, Jas. Callghan, Palmer Road, 90½. Barley—1st, Rev. P. C. Gauthier, Palmer Road, 90; 2nd, Jas. Cadigan Palmer Road, 89½; 3rd, Chris. Cadigan, Palmer Road, 89; 4th Richard Noonan, Palmer Road, 84.

A Gift From Brandram-Henderson Limited.

News comes from Ottawa, that on August 10th Mr. J. R. Henderson telegraphed Sir Robert Borden as follows:

I have learned through my son that the Naval Service Department require forty five thousand pounds White Lead and have wired the Deputy Minister as follows—With further reference Brandram-Henderson, Limited, quotation just called my attention thirty-thousand pounds Pure White Lead required by the Naval Service at Halifax, fifteen thousand pounds, Esquimalt, have pleasure in cancelling same and in offering material as a gift to the country and empire in this time of need.

(Sgd.) Jos. R. Henderson.

To this Sir Robert Borden sent the following reply:

My colleagues and I most warmly appreciate your generous and patriotic offer and send our sincere thanks.

(Sgd.) R. L. Borden.

The Hon J. D. Hazen also expressed the thanks of the government as follows:

Ottawa, August 11th, 1914.

Dear Mr. Henderson,—

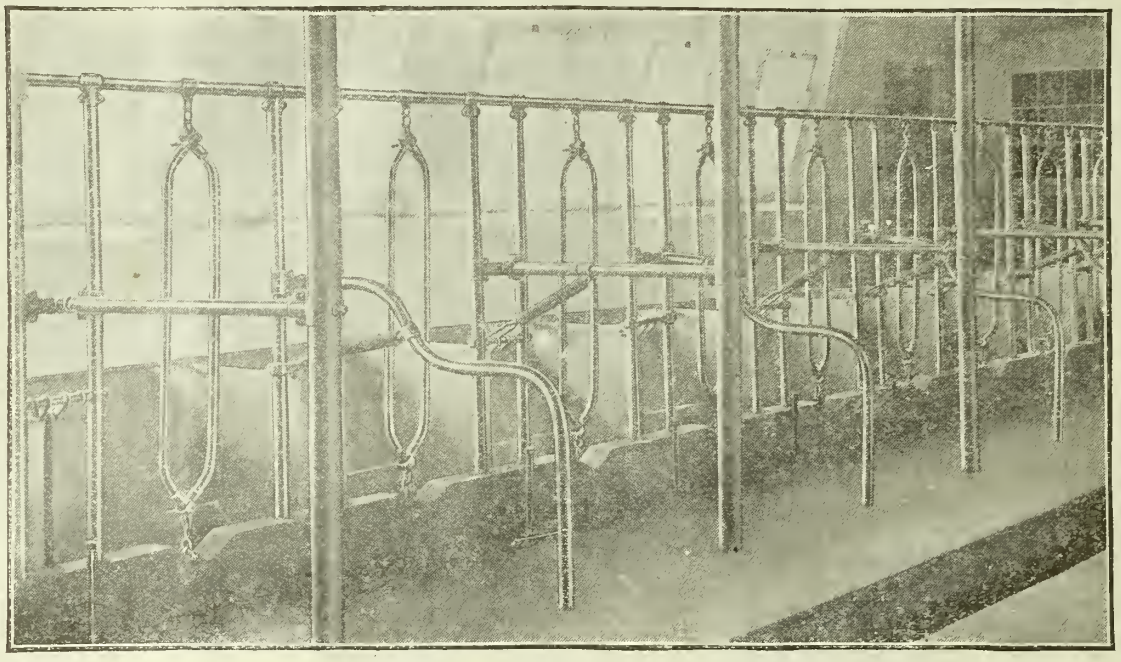
Mr. Desbarats, Deputy Minister of the Naval Service has informed me of your generous and timely offer to supply free of charge all our requirements of white lead for the Ships of the Naval Service in the present emergency.

As Minister of the Naval Service I desire to express to you on behalf of the Dominion Government their appreciation of your generous and patriotic offer. The Government accepts this timely gift as being doubly valuable in these anxious days. Actions such as these strengthen our hands and encourage us in the work of safeguarding the interests and honor of Canada and the Empire.

I have the honor to remain, Sir,
Your obedient servant,
J. D. Hazen,
Minister of the Naval Service.

LOUDEN

Sanitary Steel Stable Equipment



What it means to you

MODERN, Sanitary Stables, at a reasonable outlay of time and money.

Convenience in looking after your cows, and a saving of time and labour in tieing, feeding and cleaning them.

Increased milk production, no waste feed, and increased profits.

What it means to your Cows

COMFORT, cleanliness, and almost as much freedom as when in pasture.

More sunlight and fresh air, the great germ destroyers.

Our catalogue is FREE. Write for it to-day.
It tells all about the complete LOUDEN line.

EXHIBITS AT TORONTO, LONDON, OTTAWA AND SHERBROOKE EXHIBITIONS

Our Architectural Department will supply Free Barn Plans

LOUDEN MACHINERY CO., Dept. 18 Guelph, Ont.
"Everything for the Barn"
1

Special War Notice.

We have received a cable from Mr. W. C. Catesby, of Catesbuys Limited Tottenham Court Road, London, England—the well-known firm of English Mail Order Tailors— whose advertisement appears regularly in our columns, which reads as follows.

Please assure your readers who have sent orders to us that they will get their suits delivered without delay. We anticipate parcel post shipments to Canada will not be delayed long. In the meantime, please instruct your readers who are about to send orders, to mail them, together with their money orders, made payable to Catesbys Limited, 119 West Wellington Street, Toronto. All monies will be held in Toronto and duplicate measurements forms made up and sent by Specially Registered Mail to us. So that in the unlikely event of anything going astray we will have an absolute ecord and duplicate of the order, and guarantee each customer against any loss what soever.

Please thank your readers for us for their continued patronage during these strenuous times. Assure them we very heartily appreciate their goodwill. Tell them they can get our New Style Book and patterns for the fall season free by addressing Catesbys Limited, 119 West Wellington Street, Toronto, and that our regular advertising will be resumed at a very early date.

The St. John Business College.

What a gathering it would be could the thousands, who, during the past 47 years, have been students at the St. John Business College be brought together? It would include Bank Managers, Members of the Houses of Assembly, the Bar, the Press, the Pulpit, etc., but especially those prominent in business circles.

To these men and women the St. John Business College is indebted for the reputation and standing it now enjoys. They have made good in their respective callings in life, and each and every one of them is ready to testify that they owe their successes to the business principles and training received at the College.

We have just received the 1914-15 prospectus of this institution. It is replete with testimonials from many men and women in various walks of life who at some time in their career have attended this excellent school. What the school has done for ex-students it is ready and willing to do for all those who may patronize it in future. The principal and staff have a reputation to maintain and do it they will.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co.. N. B
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

B. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Milking Shorthorns.

E. W. Heurtley, P. O. Sutherland's River, N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Cheviot Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Southdown Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Shropshires

C A. Archibald, Truro, N. S.

Yorkshires.

R. J. Messenger, Lawrencetown, N. S.
E. W. Heurtley, P. O. Sutherland's River, N. S.
Steward Bros., Murray River, R. R. No. 1, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Thos. W. Prowse, Union Road, P. E. I.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
A. A. H, Margison, East Centreville, Carleton Co., N. B.

White Wyandottes

R. J. Messenger, Lawrencetown, N. S.

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

PURE BRED STOCK FOR SALE

Guernsey and Ayrshire Bulls ranging from four months to twenty months old.
One Pure Bred Ayrshire Cow 5 yrs. old (Fresh milch.)
Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, - Shubenacadie, N. S.

Riverview Stock Farm
High Class Holstein Cattle and Yorkshire Pigs

Several young Bulls fit for service for sale, sired by Bob Dorindo, 9532, several times champion and a son of the well known champion Mercena Vale 5828. Dams are heavy producers and show ring winners.

D. R. NICHOLSON, Coxheath, N. S.

GUERNSEYS

Buff Orpingtons and White Wyandottes.

R. R. BLACK,
Highland View Dairy, Amherst, N. S.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, hetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

BEEKEEPERS, ATTENTION!

Do your bees pay their keep? If not it is your fault. Use modern appliances, and make them the most profitable stock on the farm. We carry a full line of Beekeepers' Supplies: Hives, Honey Extractors, Packages, etc.

Write for particulars.

E. L. COLPITTS,
PETITCODIAC, - - N. B.

HIGHFIELDS POULTRY FARM

FOR SALE

Pure S. C. W. Leghorn Cockerels from imported stock from the States and England. Orders booked now.

Also White Wyandotte Cockerels of good size and color.

Also Pure White Pekin Ducks and Drakes bred from birds specially imported from the States.

Inspection invited.

HIGHFIELDS FARM
Hampton, - - N. B.

"Meadowlands" Stock Farm

Clydesdale Horses & Shorthorn Cattle

We have for sale 3 pure bred Shorthorn Bull Calves, milking strain, 3 and 4 months old. Also 1 Bull Calf 11 months old, from good milking dam. He is a red roan and will make an extra good herd header.

MORRIS SCOVIL & SON
Meadowlands, Gagetown, N. B.

DURHAM BULLS

Six nice pure bred Durham bulls from eight to fifteen months of age, out of heavy milking dams, for sale. Also a number of nice calves and yearling heifers, well bred for milking qualities and in fine shape.

C. C. H. EATON,
Canard, - - Nova Scotia

Potato Diggers

Dig your potatoes this fall with an Iron Age Potato Digger.

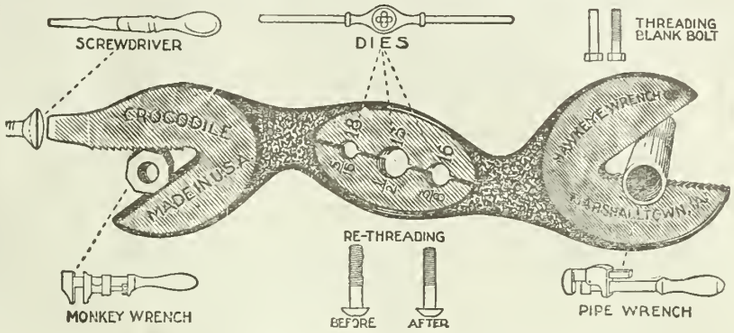
Write for catalogue and learn all about it.

I also have a second handed one for sale at a bargain. It has only been used one season.

C. FRED FAWCETT,
UPPER SACKVILLE, - N. B.

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wrench, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

PARTNER WANTED!

For a growing Poultry Supply Business, a good opportunity for a man interested in poultry desiring a steady income. The business at present in good paying condition and growing to such an extent that the owner needs assistance, prospects for future very bright. Books and all particulars of the Company open for inspection, correspondence invited.

Address Box 27, - - Sussex, N. B.

AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.
Correspondence solicited. 'Pone 111.

J. FRANK ROACH, - - Sussex, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick

FOR SALE

A handsome registered Guernsey heifer of excellent breeding. Sister to a heifer now making ten pounds of butter a week as a two-year-old with her first calf. This animal for sale will freshen in the winter, she is well grown and a promising heifer in every way. Price is $50 easily worth $75.

SARAH E. MOSES SMITH,
Woodward's Cove, - N. B.

FERTILIZERS

We carry the famous

HARAB FERTILIZERS

Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

MARITIME POULTRY SUPPLY COMPANY,
Moncton, - - N. B.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue. which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word. each insertion. MARITIME FARMER, Sussex, N. B.

FOR SALE.—White Wyandotte Cockerels. Choice stock $2.00. G. H. BURNETT, St. John.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

FOR SALE—One pure bred Shorthorn Bull Calf, five mos. old. WM. HAWKINS, Millville York Co , N. B.

FOR SALE—At a bargain, a good "Dairy Farm" 18 cows, young stock and machinery. Apply to A A. REID, Box 22, Oxford, Cum. Co,, N. S.

100 POST CARDS, POSTPAID, 35c. Big assortment Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

SOUTHDOWN YEARLING RAMS FOR SALE. —McEwens strain, registered. Apply E. SHARP, Van Horne's Farm, St. Andrews, N. B.

FOR SALE—Two six H. P. gasoline engines. both in good condition. Were put out of use by increase in power. One almost new. Apply to S. A McLEOD, Sussex, N. B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS West Branch R. J. Pictou Co., N. S.

FOR SALE. One Jersey Bull, eight months old. Resistered. Also one bull-calf, Registered, two months old. Apply J. A. DUFFY, Nauwigewauk, N. B

TWO LITTERS YORKSHIRE PIGS for sale Also a few high grade Holstein heifers one year old and upwards. ARTHUR E. FERGUSON, Bathurst Village, N. B.

YORKSHIRES—Nothing but praise for breeding stock I have sent all over the Maritime Provinces. Book your orders at once for August litters. $5 registered at 5 weeks. R. J MESSENGER, Lawrencetown, N. S.

LADIES WANTED TO DO PLAIN and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send Stamp for particulars. NATIONAL MANUFACTURING CO., Montreal,

FOR SALE.—Fancy Pigeons, all kinds. Barred Rocks, Pullets and Cockerels. White Wyandotts, Pullets and Cockerels and breeding pen of both. All exhibition stock. Apply WILL JORDAN, Kentville, N. S., Box 203.

AYRSHIRE BULL FOR SALE.—Belvoir Augustus 36664—a grandson of the N. S., A. C. bull, McQuittiston Secretary, calved January 15, 1911. Sure stock getter. Just the right kind for an Agricultural Society. W. M. CHISHOLM, Loch Lomond, N. S.

FOR SALE OR EXCHANGE.—I will sell or exchange 160 acres unencumbered land in Saskatchewan. capable of raising 50 bushels of wheat per acre, for small farm property in Maritime Provinces, near sea preferred. Particulars on application to owner.—W. E. GIRARD, Treherne Manitoba.

FOR SALE.—White Wyandotte Cockerels, 260 egg strain, large, blocky birds, grand table fowl. If you have a White Wyandotte Flock you want one to head it, and if you have a mixed flock one of these will double the egg yield. Price from $1.00 to $2.00 each. B. V. MILLIDGE, St. John, N. B.

FOR SALE.—Registered Holstein Bull 3 1-2 years old, half-Hengervelt, quiet and sure stock getter; also Bull 10 months old, a great-grandson of Colantha's Johanna, and a Bull Calf 3 mos. old. All bred in the purple, Pedigree prices and photos on application. — J. J. McCABE, Alma, N. S.

Registered Stock for Sale

Guernsey and Ayrshire Bulls ranging from nine months to eighteen months old.

Guernsey and Ayrshire New Milch Cows Also Young Calves of both breeds. Last but not least, Registered Shropshire Ram Lambs. The above will be shown at Shubenacadie District Exhibition.

John McDonald & Son
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It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information

The Dominion School of Taxidermy, St. John, N. B.

We take pleasure in calling the attention of our readers to the fact that a Correspondence School, for the purpose of teaching the interesting subject of Taxidermy, has been started in St. John, N. B. There has long been felt the need of a school of this kind in Canada, especially in the Maritime Provinces whese game is so plentiful, and where specimens worthy of preservation are so often obtained.

Mr. Miles D. Emack, the founder of the school, is a prartical taxidermist of many years experience and well qualified to give instruction in every branch of the work.

This school presents the opportunity of learning how to mount birds, animals, game heads, etc. The course is composed of a complete set of lessons, clearly and concisely written, with illustrations and drawiugs adapted to aid the beginner in his work. This is the chance for those who wish to know how to preserve their own trophies and thus save money, or to do this work for others and by this means add to their incomes in leisure hours. It also presents a means to those parents who would solve the problem "How to Keep the Boy at Home?" This is a course which combines business, pleasure and decorative ingenuity and and the work is fascinatingly absorbing once it is understood.

The school has issued an illustrated catalogue in which the prospective student will find full information concerning the particulars of the course, the methods used, cost of tuition, etc. This catalogue may be secured by writing to address given above, enclosing two cent stamp for mailing.

Additions to Plant of the Enterprise Foundry Co., Sackville, N. B.

In spite of the comparatively quiet times throughout Canada this year, there is one firm at least whose buisness has increased so much that it necessitated large additions to their plant—This is The Enterprise Foundry Co., Sackville, N. B., makers of stoves and furnaces and advertisers in this paper.

One of the additions is an extension to the warehouse of ninety (90) feet. This was necessary in order that they might carry a larger stock and thus insure immediate shipment of all orders which they receive.

Another improvement is a thoroughly up-to-date absolutely fireproof pattern storage, size 50x60 ft. In this are kept all the different patterns for the many stoves and furnaces they make.

They have also recently made a large addition to their plating department and have installed an automatic polishing machine—one of the first to be used in Canada.

All these improvements and additions have been caused by the rapidly growing demand for Enterprise products which have secured such a high reputation for excellence throughout the Dominion.

It must be very gratifying indeed to the owners of this business to have such success attending their efforts, and it shows that there s throughout Canada a rapidly growing demand for goods of the very highest character and people are beginning to realize more than ever before the necessity of buying high class goods.

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The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

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"ASK THE USER"
"Great White Light" Burners speak for themselves, prove their worth, make friends—
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EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it towards the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new "**GREAT WHITE LIGHT**" is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyne, whether new or renewal subscription. When sending in money state which size you want. Send today.

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Volume 19. SUSSEX, NEW BRUNSWICK, SEPTEMBER 29, 1914. Number 24.

CONCRETE MANURE PITS

THE following description is taken from Farmer's Bullentin, 481, "Concrete on the Live Stock Farm," United States Department of Agricul ture. The portion in back type is by the editor.

For maintaining or restoring the fertility of the fields, there is nothing better than barnyard manure. By the ordinary methods of piling manure on the ground or storing it in wooden pens or boxes, 30 to 50 per cent. of its fertility is lost. This loss is brought about in two ways: First, by leaching or washing due to heavy rains; second, by fermentation or heating caused by lack of sufficient moisture. Since concrete pits are waterproof, manure can be kept in them as moist as may be necessary and such an enormous waste in the fertiity of the manure may thus be entirely prevented. One load of manure from a concrete pit is worth 1½ to 2 loads of manure as usually stored. Moreover, with concrete pits the supply of manure is increased by all the liquid manure, the richest part, from the barn guttters and feeding floors.

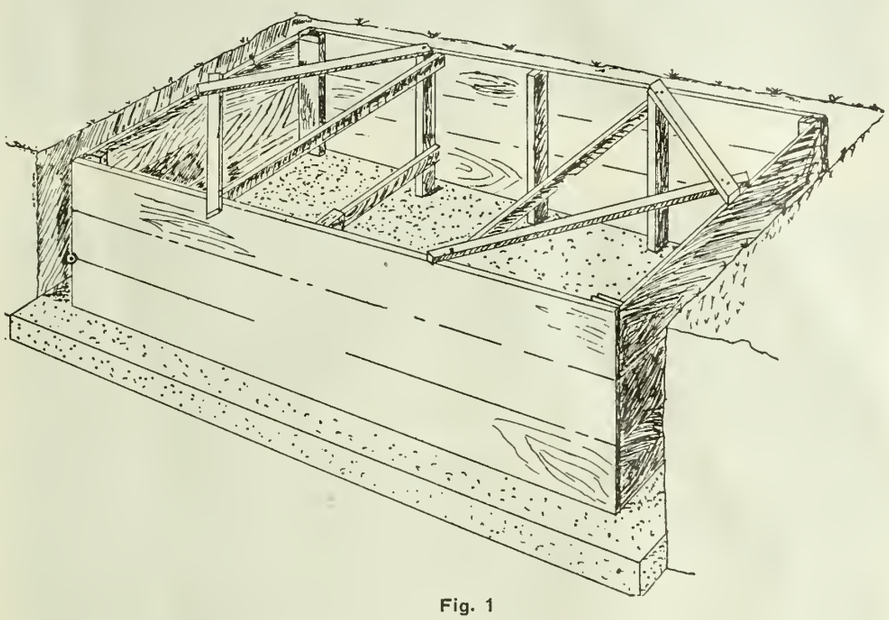


Fig. 1

Shallow Manure Pits.

Shallow manure pits do very well where the manure can be frequently hauled to the fields. In Figs. 1, 2 and 5 are shown plans for such a pit adjoining a feeding floor. The walls and floor are five inches thick. The clear dimensions of the pit are: depth, 3 feet; width, 6 feet; length, 12 feet. Dig the trench 3 feet 5 inches by 6 feet 10 inches by 12 feet 10 inches. By keeping the sides vertical, only an inside form will be needed. Frame the sides and ends separately. For the sides, cut the 1 inch siding 12 feet long and nail it to four 2 by 4 inch uprights 3 feet long and equally spaced. The end uprights for the sides are 2 by 4 inch pieces nailed flat to the siding; the others are also 2 by 4, but are nailed on edge. It is not necessary to cut these uprights to exact lengths; they may be allowed to extend above the siding. Make the siding for the end section of the form 5 feet 2 inches long and at the ends nail it to the edge of two 2 by 4 inch uprights. Palce a single 2 by 4 upright between each end pair. Cut four cross braces 5 to 10 inches long, from 2 to 4 inch timbers. Have enough sections of woven wire fencing, 7½ feet long, to cover the bottom of the pit.

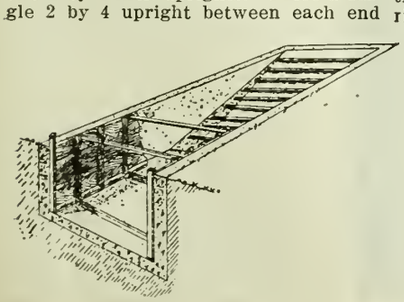


Fig. 2

Mix the concrete in the proportions of 1 part cement, 2 parts sand and 4 parts broken stone or coarse gravel according to the directions given in our book "WHAT THE FARMER CAN DO WITH CONCRETE," on page 148. Tramp in a section of concrete (not too wet) 2 inches thick and a little wider than the strip of woven-wire fencing used as reinforcing. Lay the wire with an even division of the extra length, so that it may project upward into the side walls. Tamp in the remaining 3 inches of concrete. Work rapidly and complete the floor. No facing mortar is needed.

Immediately set up the forms on the finished floor so as to allow a 5-inch wall on all sides. Join them by nailing together the 2 by 4's at the corners of the sides and ends. Do not drive the nails home. Cross brace with 2 by 4's and with 1 inch boards from each central end upright to the second side upright.

Quicky begin filling the forms with concrete almost wet enough to pour, and keep it practically the same height on all sides. Puddle the concrete by running a long paddle up and down next to the form. Do not puch the earthen wall. Dirt in the concrete may make a poor wall. If the top of the earthen wall tends to crumble, hold it back with 1 inch boards placed against the forms. To keep out flood water, pit may be extended 6 inches above the ground by using the ower half of a 1 foot board to hold back the dirt, by alowing the remainder to project above the ground level, and by adding 6 inches to the height of the inside form. Remove the forms after the concrete has set four days, by first drawing the nails in the corner 2 by 4's. The pit may be used after ten days.

Manure Basins

Where manure must be stored for a considerable length of time, larger pits or basins are required. Such pits are seldom made over 5 feet deep (in the clear at the deeper end) and are wide enough that the manure may be loaded on a spreader in the pit and drawn up a roughened concrete incline or run. The slope for such a run must not be steeper than 1 foot up to four feet out.

In building such a basin as planned in Fig. 3 use a team with a plow and scraper to make an earthen pit in which to build a concrete basin of the clear dimensions shown. In laying out the earthen pit, bear in mind that the concrete walls and floor are 8 inches thick and make due allowance for the same. With a spade trim the sides and the deep end vertical.

In order to form a sump hole from which the liquid manure ca nbe pumped, in one corner at the deep end of the pit dig a hole 18 inches deep by 2½ feet in diameter. To protect the concrete floor at the upper end of the driveway excavate a trench 18 inches wide and 2 feet deep for a concrete foundation apron. Extend it around the corners and slope it upward to meet the driveway incline.

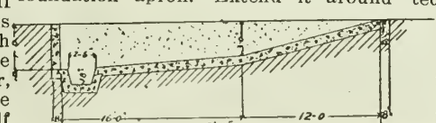


Fig. 3

In general, the framing of the form is similar to that of shallow pits. If the earthen walls stand firm, only an inside form will be needed. Otherwise, build an outer form. For the forms use 1 inch siding on 2 by 4 inch studding spaced 2 feet 8 inches. These uprights need not be cut to exact length. Save lumber by allowing them to extend above the siding. Stiffen each section of the form by nailing a 2 by 4 inch scantling to the uprights at top and bottom of the forms.

Erect the forms in the pit. Set them on 8 inch concrete blocks or bricks, so that the floor may be built under them. To prevent bulging, cross-brace the forms with 2 by 4 inch timbers. Begin filling with concrete, as for "Shallow Manure Pits," and do not stop until the job is completed.

Lay the floor for the bottom and the incline the same as for shallow pist. To give teams a sure footing on the incline, embed in the concrete the turned-up ends or iron cleats bent at right angles similar to a capital U. Old wagon tires, cut in lengths not greater than 20 inches and turned up 4 inches at each end, will do. Leave 1 inch clearance between the cleats and the concrete, and set them so as not to obstruct the wheelway. Space the cleats 14 to 16 inches. Roughen or corrugate the bottom crosswise every 6 inches by using a 5 foot length of 2 by 4 inch scantling beveled lengthwise to the shape of a carpenter's chisel. To make the corrugations, set the timber with the beveled face toward the incline. Strike the 2 by 4 with a heavy hammer, so as to indent the concrete to the depth of 1 inch.

SEPTIC TANKS

The problem of the sanitary disposal of sewage on the farm is becoming one of the most important questions. The old form of out house and the later cess-pool are gradually passing away as farmers are learning that they are nothing more than disease spreaders, a large percentage of all sickness being traced directly to them. The liquids from them seep into the ground and in time find their way into the best well or spring. Even though located down hill from the well, the rock formation is sometimes such as to lead the liquid directly into the well.

These methods are no longer tolerated in cities. Large sums of money have been spent for the installation and maintenance of sewage disposal plants. This large outlay, however, is not necessary on the farm. Where some system of water supply has been installed—such as a cistern and pump, elevated tank or hydraulic

ram—the house may be fitted with running water, giving all the conveniences of toilet, bath and kitchen. With this amount of water, there should be some method of disposing of the sewage, and this is best obtained by the use of an inexpensive eptic tank, which eliminates all danger of sickness from such a source.

The results will depend to a certain extent upon the kind of plumbing which is installed in the house. Each figure should have a separate trap and the soil pipe should be extended through the roof—see Fig. 1. A.

Septic tanks are nothing but long underground, water-tight cisterns through which the sewage passes very slowly and evenly. Being underground, they are warm and dark—ideal conditions for the development of bacteria or germs which live in the sewage and, by their growth, liquify the sewage and render it harmless in much the same way as another kind act on cider and cause it to ferment.

When the sewage enters the tank the solid matter or "sludge" rises to the top and it is in this "sludge" that the bacteria find their food, living upon it and gradually turning it into a clear liquid. To prevent this from being disturbed the current of the inflowing sewage should be broken up. This is done by placing cross walls—called "Baffle-boards"—in the tank and also by having the sewage enter and leave through vertical pipes. The latter condition is obtained by building the pipes with an elbow.

Location

In deciding on the location of the tank, choose a place where it can be placed with the side walls entirely underground and with the top flush with the surface. It should not be too near the house and should be entirely out of danger of flood water.

For a family of six to eight the tank should be 5 feet deep, 3 feet wide and 8 feet 4 inches long. The walls should be 8 inches thick. If the soil is stiff enough to stand alone, dig the hole 9 feet 8 inches by 4 feet 4 inches and 6 feet deep. This allows for using the soil as the outside "form." If the soil will not stand without supports then the size must be increased to provide for outside "forms."

Forms

The tank shown in Fig. 2a is divided into two compartments by the partition wall. By this method the inside forms are nothing more than two hollow boxes without any top or bottom. Build two hollow boxes, 3 feet by 4 feet and 5 feet deep, and place them so that they are 8 inches from the sides of the hole and 4 inches apart. This makes 8-inch side walls and a 4-inch partition wall. They should rest on 6-inch concrete blocks—previously moulded—which are laid on the bottom of the hole. As the partition wall is only 4 feet high nail two boards across the tops of this opening extending one foot from the top to make the side walls continuous.

Placing Concrete

Before starting to place the concrete, have all the drain pipes and the bolts to which the baffle boards are connected in place. This can be done by cutting holes in the forms," through which they are passed.

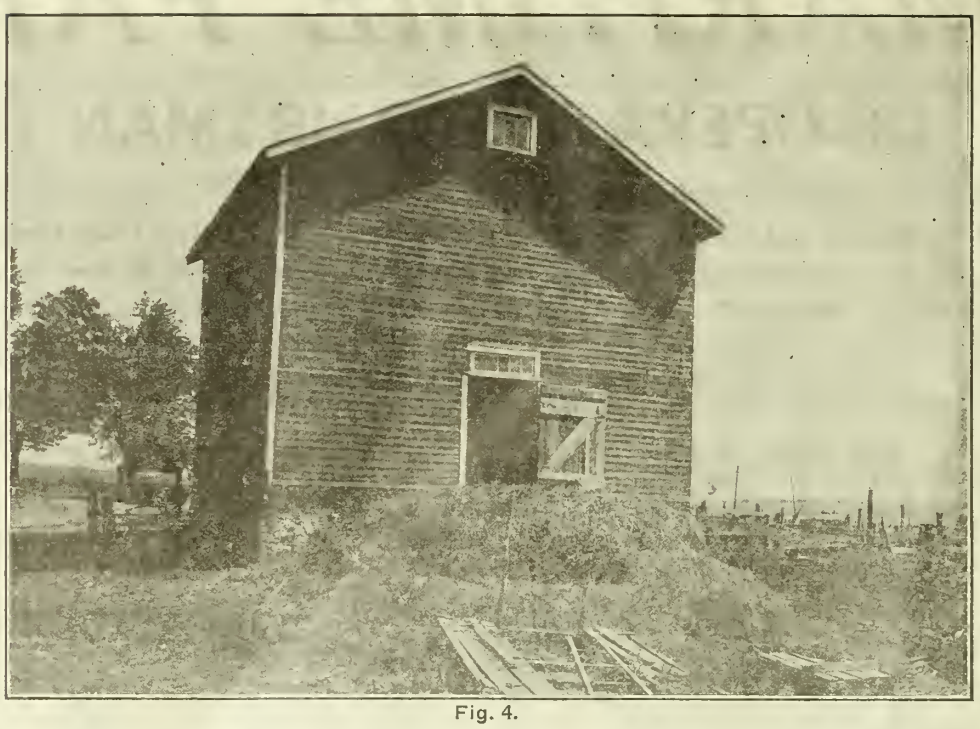


Fig. 4.

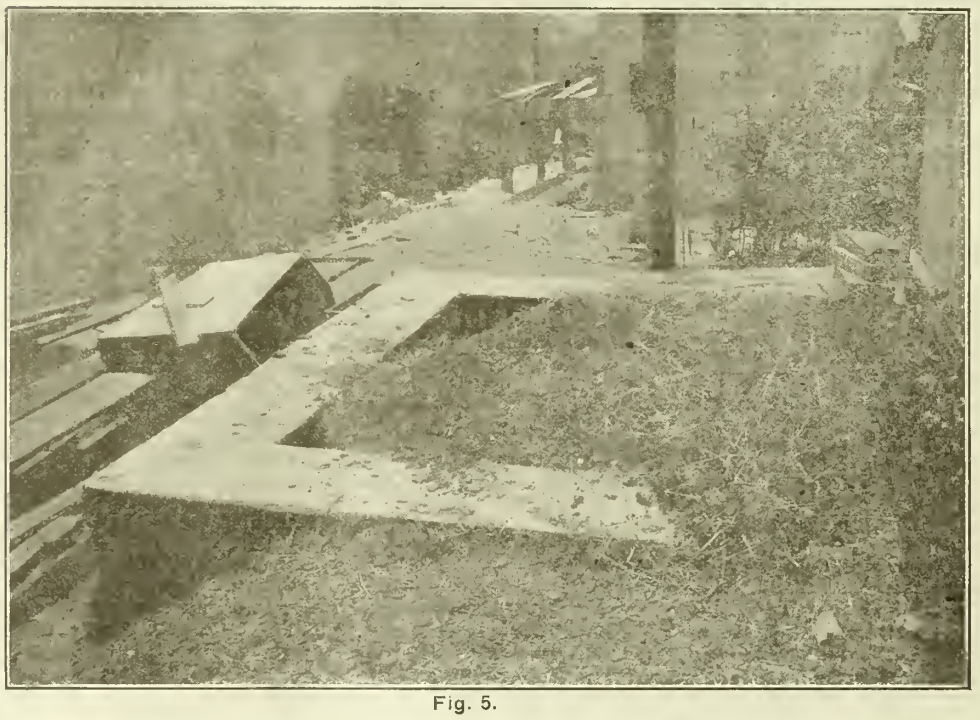
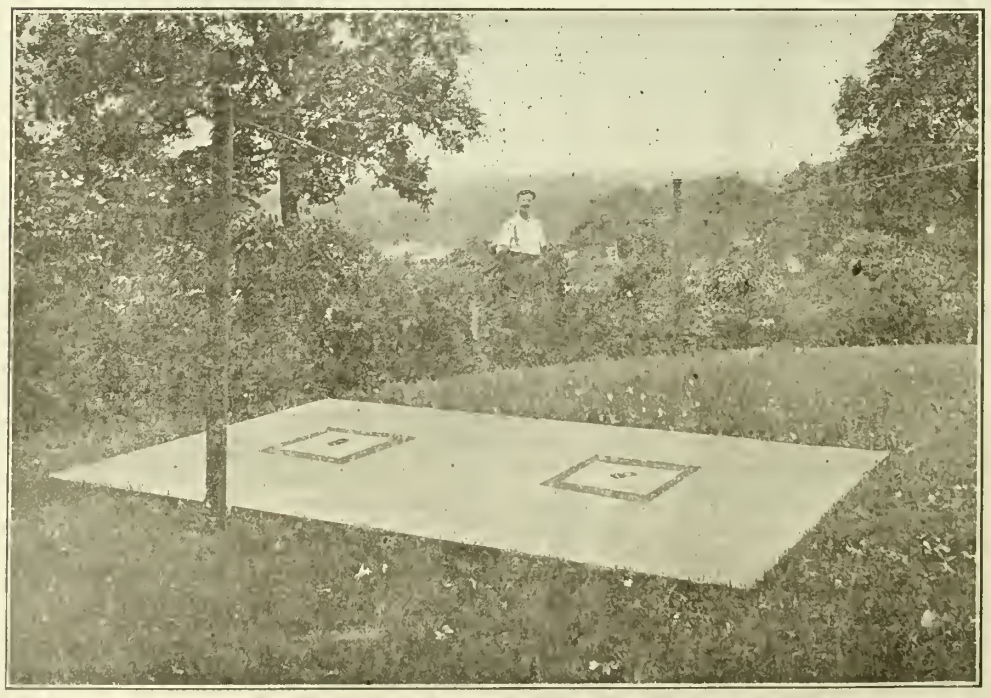


Fig. 5.



Top of Concrete Septic Tank

As the walls are to be water-tight the concrete should be mixed in the proportion of 1 bag of cement, 2 cubic feet of sand and 4 cubic feet of stone. It should be made muchy wet. Fill the wall forms first, 6 inches at a time, until the top of the form is reached—the partition wall stops at four feet. Immediately start laying the floor before the concrete in the walls has "set." In placing the concrete in the walls, some will spread out through the opening but this is all right. As the concrete is wet, it can be "puddled" as each layer is placed, by an iron rod or a 2x4. The surface next to the "forms" by working a garden spade up and down and to and fro between the concrete and the "form." This pushes the large stones away from the "face" and leaves a smooth surface without any hollow spots.

Roof

A Manhole is centered over each compartment for cleaning. The manholes are made with beveled sides and are two feet square. Before filling the manhole "forms," four one inch gas pipes are put in place vertically to serve as ventilators. As the concrete reaches the top bent pieces of iron can be inserted as handles for lifting them. The bevel edges insure a tight fit and the weight prevents children from opening them. The "forms" for the roof are supported by 4x4 struts which rest on wedges so that they can be easily removed.

In laying the concrete for the roof, first put in place a two inch layer of concrete and on top of this place steel rods 3-16 of an inch in diameter and 6 inches apart. The rods are placed across the shorter direction and are bent in the form of right angles at the ends to anchor them. Around the manholes the rods are placed as shown in Fig. 3a. After the rods are all in place, put on a layer 4 inches thick. This should be done before the first layer has become hard.

The inlet pipe is connected to the house plumbing and the outlet can discharge into the regular farm drain tile as it is nothing more than clear water.

If this liquid cannot be discharged into a stream, lay the tile with open joints, allowing it to filter into the soil.

Only a rich man can afford to keep poor cows. Sometimes it is said, that a man, unless he is well off, cannot afford to own good cows. This is wrong. If he can afford to own any, he can afford to own good ones. The man who refuses to spend the money necessary to purchase a good cow, and finds enough to get hold of a second ate one, must work double time to get any profit, and wait years before he can breed up to a higher standard. The fact should be realized at the beginning that it is better to put all the money in half a dozen good cows than in a dozen inferior ones.

The Control of Cabbage Maggot on Early Cabbage

Cabbage Maggot Injuries Serious

Any pest which attacks the roots of plants mustbe considered a dangerous enemy. The injury involves the parts most essential to tbe life of plants; and the pest itself is liable to be so hidden from view that its presence will become known only when the effects of its work appear, which is frequently too late for effective control. The concealment in the soil, also, and the protective influence of this cover make repressive measures very difficult and uncertain. For these reasons, control of the cabbage maggot has long been a problem for entomologists. In the growing of late cabbage, however, the insect is not to be feared in the field, since its ravages for the season are over before the plants are set; and the practice of screening seed beds makes it possible to secure, at only slight expense, healthy, uninjured, vigorous plants to set.

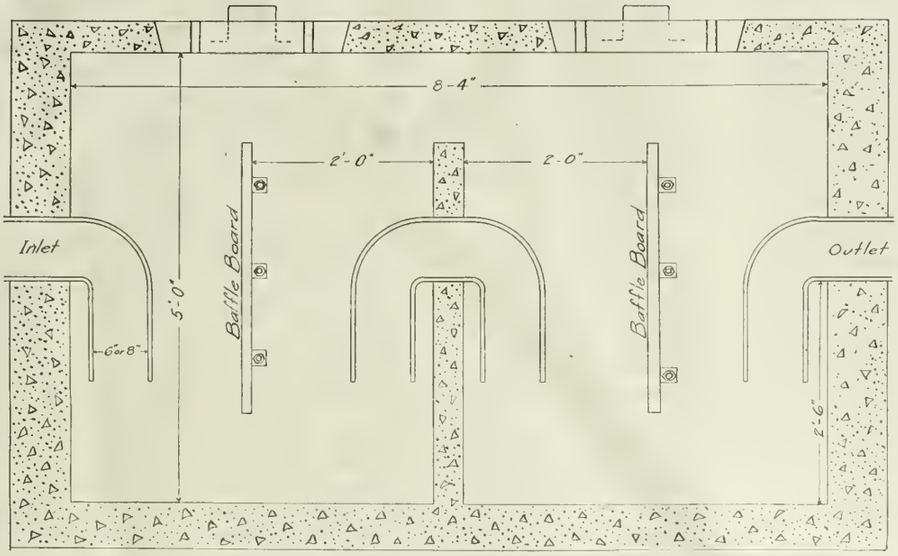


Fig. 2a.

Work on Early Cabbage.

Upon early cabbage, on the contrary, the cabbage maggot is a field pest; and its injuries are sometimes so scvere as to destroy all hope of profit from the crop. In order to secure the best prices for early cabbage, the heads should be ready for market in July; and this means that the plants must be set in the field—from greenhouses or cold frames—in late April or early May. Shortly after this time the cabbage maggot flies appear and are busy laying their eggs. From these the larvae hatch in a few days so that when the young plants should be making their best growth the maggots are most abundant and most busily at work. In consequenc, entire plantings of early cabbage are absolutely ruined.

Use of Insecticides.

Against this pest, only two methods of control are practicable—the young maggots may be killed by injecting into the soil some conttact insecticide, or the flies may be prevented from laying their eggs about the plants. Many materials have been tested for the purpose of destroying these larvae, but, in the main, with out thoroughly satisfactory results. If strong enough to kill the maggots the materials employed have also been strong enough to injure the delicate roots of the plants and to so stunt them that the crops have been little better than they would if the insects had been allowed to work undisturbed.

The experiments made by other entomologists, some of them dating back thirty years, and preliminary tests made at the station seemed to indicate that carbolic acid emulsion was most promising of all the insecticides suggested, and it was decided to make a series of thorough tests with it in both laboratory and field.

Tests of Carbolic Acid Emulsion

In the laboratory, direct immersion of eggs of the maggot flies in the emulsion, even when as strong as 11-3 per cent. of carbolic acid, did not affect them; but when the eggs were covered with soil and treated with emulsion, so that the exposure was more prolonged, as it would be in the field, few of the eggs hatched and the larvae that did hatch died near the eggs. This was true even when the emulsion contained only one-third of one per cent. of the acid.

Field tests with the emulsion were made during two different years on cabbage seed beds near Seneca Castle, but it proved wholly ineffective, though not injurious to plants five to seven inches high. On plants one or two inches high the same emulsion was very injurious. In tests on transplanted cabbage, in two fields—one heavy clay and the other light sand—an emulsion slightly stronger than one-third of one per cent. acid caused serious injury to recently set plants. Plants longer set were not injured. As a result of all these tests with insecticides, then, even the one commonly regarded as best is a very uncertain dependence against cabbage maggot. Although it will destroy eggs and young maggots when used at a strenth of one-third of one per cent. carbolic acid, it will not kill older larvae; and it is certain to injure small or recently set plants and liable to do some harm even to older plants.

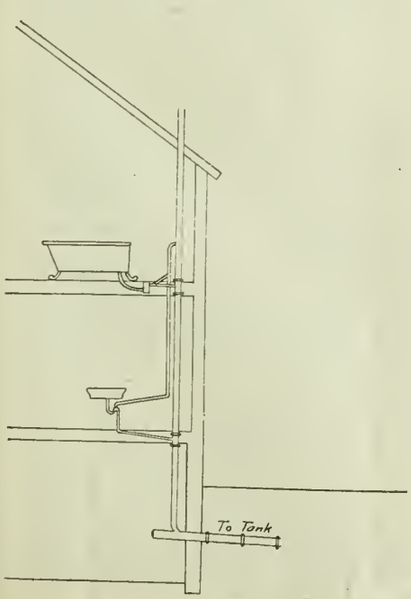


Fig. 1a.

Tar-pads.

There remains, therefore, only one resource—to prevent the flies from laying their eggs on the plants. The so-called "repellent" materials—lime, ashes, tobacco dust, tar, etc.—have proved either wholly ineffective or too expensive to use; but one mechanical obstruction to egg-laying—the "tar-pad" or hexagonal disks about 3 inches from angle to angle, slit to the center at one angle and with a short cross-cut at the center which allows the collar to fit about the stem of the plant. When placed in position it should lie close upon the ground and fit snugly about the stem, so that the flies of the cabbage maggot are mechanically prevented from reaching the stem at the point where the eggs should be laid, just at, or slightly below, the surface of the ground. These pads can be easily and rapidly cut by the use of a special tool, not patented, and easily made by any good blacksmith. The pads can be made for from 50 to 55 cents a thousand.

The idea of using such pads was first proposed about 25 years ago, and they have been used with good success in several loc. s since that time.

Tests of Tar-pads.

At the station four careful tests with these pads were made during 1912 and two during 1913, and the results justify a hearty recommendation of this method of preventing inury to early cabbage by maggots. In three tests injury from maggots was great and benefit from use of pads was marked. In the first field 400 disks were applied to 4 alternate rows of plants on May 22, and during the next month ten per cent. of the check plants were killed or badly wilted, as compared with one per cent. of those protected by the tar-pads. In addition to this notable numerical difference, the cabbages in the protected rows were slightly larger than those in the check rows. That is, maggots had worken on the unprotected plants and checked their growth even where the attack was not severe enough to result in death or distinct dwarfing. The same effect was noticed in all the other tests where maggots were abundant. This check to growth materially interferes with early heading, a most important factor in protable marketing of early cabbage. In the second test 16 per cent. of the check plants were killed or seriously injured, as compared with 5¼ per cent. of those protected. In this case the lumpy condition of the clay soil and low setting of the p ants made it impossible to place the disks so that effective protection could be secured in all cases. and a heavy shower soon after placing the disks covered many of them with earth and allowed the flies to deposit eggs on the stems above the pads.

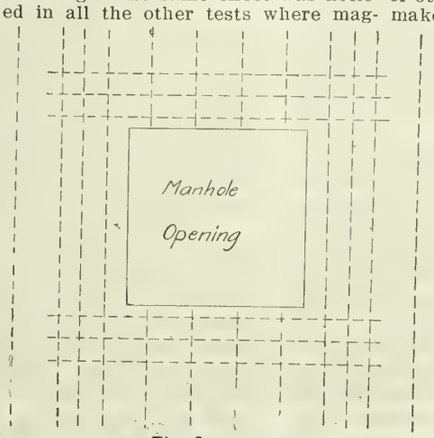


Fig. 3a.

In the third test of 1912, the injuries on checks and protected rows were eight per cent. and two-thirds of one per cent. respectively. In the most striking test in 1913 disks were placed on about 700 plants in six alternate rows, on May 3. By June 5 the alternate ro vs shawed marked dierences. It was estimated on June 9 that 93 per cent. of the protected plants and only 45 per cent. of the checks would make marketable heads.

After harvest it was found that nearly three-fourths of the plants in the protected rows had furnished suitable heads for early marketing and only one-fifth of those on the check rows.

On the basis of 1,000 plants, the results were as follows:

marketable heads yielded by 1.000 protected plants	723
Marketable heads yielded by 1,000 check plants	193
Gain due to tar-pads	530
Value of 530 heads at 8 1-3 cts per head	$44.17
Cost of protection	1.40
Net profit per 1,000 protected plants	$42.77

Maggot Injury Unevenly Distributed.

In two of the tests of the first year and in one the second year, cabbage-maggot injury was comparatively slight, even on the check rows, although other fields nearby suffered severely from the pest. This restricted distribution of maggot infestation is a factor that must be considered by each grower; for fields adjacent to those badly infested, or even certain areas in infested fields, may be comparatively free from the insects and therefore need no protection. In testing the ability of the use of the pads it will be well to apply them in alternate rows, leaving the intervening rows as checks, in order that the extent of the infestation and the effectiveness of the pads may be more readily learned. If uninfested areas of considerable size are noted, they should be kept under observation in subsequent years, as soil or other conditions there may regularly make these areas practically immune to maggot injury, so that pads need not be applied.

Conclusions.

These tests prove quite plainly and conclusively that where maggots are abundant and where conditions are such that the pads can be properly applied, these tarred-paper disks serve as efficient protectors of the cabbage plants. They not only prevent serious injury to practically all the plants, but protect all from the slighter infestation which retards growth and makes the earliest and most profitable marketing of the crop impossible. Their use has advantages over the use of carbolic-acid emulsion, aside

(Continued on page 875)

THE MARITIME FARMER.

And Co-operative Dairyman
Registered Trade Mark

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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SEPTEMBER 29, 1914.

DATES OF ISSUE

October 13-27
November 10-24

GIVE YOUR BOY A COURSE AT N. S. A. C.

The Nova Scotia Agricultural College will open its doors for the 1914-15 classes on November 3rd. Will your boy be one of the number who will enter the N. S. A. C. this fall to prepare himself for one of the numerous opportunites which is available to the trained agriculturist? Writing on the Subject of "Opportunites for College Graduates in a recent issue of The Breeders' Gazette says:- What opportunities are open to the graduates of "the agricultural college? This question is often asked; as if the farms of the country were not waiting and calling for all the knowledge and training available. Perhaps the question implies that the graduate ought to do something better than to farm; as if the farm did not require the best talents of any man and repay his efforts about as fully as most lines of business and with far more certainty. The question is, however, capable of analytical answer, and I will try briefly to show what the graduates of the agricultural colleges of the country are doing. I may remark by way of preface that approximately 95 per cent of them are in some form of agriculture with exceedingly few failures.

"The things such graduates may do are divisible into two classes: those he may undertake immediately upon graduation, advancing with experience, and the other class which he should not undertake without more age and experience than are possessed by the average man at graduation.

"The great opportunity for the graduates of the agricultural college is farming. That it is so regarded is shown by the fact that more than half of all the number go at once upon the farm, not to mention the difficulty in securing modern highpriced land, and the necessity which drives a good many for a time into something that will bring ready money with which to pay college debts and to make at least a payment upon an outfit for farming. Statistics prove this point and while I cannot substantiate the statement by data my opinion is that at least 90 per cent ultimately own and operate land. In any event, almost every teacher in college, or journalist, or forester of middle age, owns land somewhere.

"Whatever other calling may be open to young men from the agricultural college, and they are many, it will be a sorry day when, if ever, the colleges themselves or their students lose sight of the fact that the great business of the American agricultural college is to prepare young men for successful country life. They are colleges not for a landed gentry ; nor are they peasant schools to drill an ignorant constituency in the art of husbandry, like most of the agricultural schools of Europe. They are institutions for acquainting average intelligent citizens with the science and the economics of food production and the methods and standards of rational living in the open country,

"Responsive to their ideal, it is safe to say that, in general, every graduate heads at once for the farm, providing only he has a farm to go to, and if he has not he begins to lay plans for securing the means of getting at least a foothold on land The apparent exceptions to this are the natural teacher and student of agricultural science, though most teachers own land.

"For the present purposes the graduates are roughly divisible into two classes ; those who own or have ready access to land through relatives, and those who have no present means of obtaining a foothold. Both classes are again divisable into two groups : the country-born, acquainted with the art of farming, and the city boy, ignorant of the most common details of country life. Here then are four groups of would-be young farmers, and each has his problem.

"Fortunate is the young man who was born and brought up in the country and who has a farm in his own right awaiting his graduation. This man soon marries, establishes his home, attends strictly to his own business for a few years, and is gradually drawn into positions of influence among his neighbors. He has generally learned two things through graduating; one is to keep his mouth shut; the other is that he owes service to the community as soon as it calls upon him. The course of this man is clear and his success is limited only by his natural ability, the fortune of health and the blessed fact that farming does not lead into overwhelming wealth.

"To the country boy without land two courses are open. He may rent or he may go where it is cheap and lead the life of a pioneer. In many respects the latter course is preferable and in the end brings the largest returns, though the family has less to enjoy in the immediate prospect than if farming should be carried on upon rented land in an older country.

"The city boy with land at his command is of course in an anomalous position. He is supposed to know agriculture because he has been to college, but he has never practiced farming and he has much to learn that is not taught in college, as has every graduate. What he has learned is something of the science of agriculture that will help him in his general policies. What he has not learned is the art of daily practice of farming and the thousand and one details that go to make up the technique of one of the most complicated of all the professions.

"If this kind of student has been wise and well advised he will have spent his summer vacations upon the farm. If he has not succeeded in this before graduation the very best course is to hire as a farm hand upon some good farm for at least a full year. What ? A college graduate work as an ordinary hand with his head full of valuable knowledge ? Certainly ; why not ? Some of the best railroad presidents were once section hands, at least for a limited time. Whatever is good of his knowledge is safe from leaking out of his head while his hand becomes cunning in the only possible way. After this he is safe in beginning his own farming operations. This course is strictly advised except where the boy's possessions lie in a new country, where the operations are simple and possible of "picking up" from the neighbors.

"The fourth class of would-be farmer is the city boy without land, and his course is either to go at once to a new region to "grow up with the country," or to follow some other occupation than farming till he can accumulate money for a start, using every opportunity in the meantime to pick up a knowledge of the art to suppliment his knowledge of the science of agriculture.

"The reader would be surprised to know that a full third of all the students in most colleges of agriculture come from the town or city, with little or no actual knowledge of farming. He would also be surprised to learn that most of these men "make good," their enthusiasm and energy going far to make up the lack in not being "to the manner born." They are of course a picked lot not many generations removed from the land and born with an instinct for country life. Sharply to be distinguished from the tpyical citizen who abominates the "dullness and monotony of the country."

"There are many other avenues open to this class of young men the morning after commencement if not before. First of all they may teach.

"Our rapidly growing faculties of agriculture must be recruited largely from young graduates. Once a man is successfully settled upon the land he will scarcely be available for teaching, and if not successful he is not wanted. If the young graduate plans to teach in college or to work in the scientific staff of the experiment station he must expect to serve cheaply for a few years, then go to some good university other than the one from which he graduated for about three years of post-graduate study, though generally some portion of this study may be done in connection with minor paid positions. After a long period of preparation he may expect if successful to hold a $2,000 position, which if things go well may increase to $3,000, $4,000 and possibly to $5,000 or $6,000, though there are few of the latter because the teaching profession does not pay commercial salaries and the average salary in agriculture is not far from $2,000 in the best institutions.

"The young graduate can go at once into an agricultural department of a secondary school, normal school or small college at $1,000 to $1,500, according to his experience, and without spending more than one additional year in college he can earn $2000 and perhaps advance to a superintendcy at $2,500, but if he goes much further he will need his doctor's degree.

"Quite akin to college and school employment are the positions in the scientific staff of the Federal Department of Agriculture which employs thousands of men of almost all degrees of experience from the novice at $50 a month to the mature man at $2,000 to $3,000 a year, and in few cases more.

These two great callings, farming and teaching, with the kindred work of research, absorb the great bulk of graduates from the agricultural college.

"But there are still other avenues. By farming we mean the production of grain and forage crops, live stock, fruit, vegetables, milk and other foods characteristic of the country. Growing out of this is another line of occupation for which the college man may train himself, such as the conduct of milk depots with city delivery, creameries, cheese factories, confectioneries, condenseries, canneries and abattoirs.

"There yet remains to engage the attention but requiring specialized courses veterinary medicine, forestry, machine experting for harvester companies (a favorite vacation employment), floriculture, and the growing profession of landscape gardening. Last and most difficult of all in its requisites as to knowledge, specific training, and natural bent is journalism and authorship two growing and influential callings recruited from the ranks of agricultural college graduates.

"There are certain lines of agriculture for which the student needs a degree of maturity and an amount of experience which are not found among the average college students at graduation.

One of these is the oversight and management of large landed properties belonging to other people. In rare cases where the owner is father or other relative, with a personal interest in the young man, and especially if he himself is a practical farmer, the graduate may safely begin on the plan of "working into the business." But when the estate is owned by a man primarily interested in other things, or where he has newly heard the agricultural bee buzzing in his bonnet, or when, having made a "hatful of money," in some city business, he now desires a country place as a plaything to show his friends—in all cases of this kind the young man should pass by on the other side and the two keep as far apart as possible. Any one of these contract's is a man's job, requiring the extreme of knowledge and experience combined with a kind of balance that comes only with maturity, and a diplomatic tact found but rarely. It is foolish for young men to undertake these responsibilities and it is criminal to assist them in doing so. No self-respecting college will recommend its young graduates as candidates for failure in this difficult and hazardous line of work.

"Pretty much the same can be said of the country adviser. God save the mark! To undertake the contract of advising hundreds of farmers, rich and poor, capable and incapable, educated and ignorant, wise and foolish—this too is a man's job. No boy, however well educated, can know the problems of a man with a family on the farm, with sickness, disease and debt, beside the hazard of season and the disappointment of children gone wrong. It is the preacher's job as well as the farmer's and the agricultural adviser, like the medical missionary, must know how to apply the knowledges he posseses and to use it to advantage in a multitude of difficult if not conflicting circumstances. Here too are demanded maturity and that judgment which is born only of experience, both successful and unsuccessful, and here too it is a crime to put the young man with only twenty-two years and a college course behind him.

"Colleges of agriculture are frequently critised for not being able to furnish skilled labor for ordinary employment on the farm or for operating small farms for non-resident owners. The colleges exist not for the purpose of training men for hire for and owners but for the purpose of training farmers to engage in business for themselves. and while there are individuals who offer themselves temporarily for ordinary employment at ordinary wages it is for the experience they can get, and these men are headed for successful farms where they can learn from others, not for farms which they are expected to operate at ordinary wages for other people.

"All in all the openings are many and the opportunities are worthy the best of men, but they all demand a superior type of men with good training, seriousness of purpose, and unflagging industry. There is no place in agriculture for the lazy or the incompetent college graduate, of which, however, the numbers are few, and under present policies rapidly declining."

Disinfecting Farm Premises.

An object is said to be infected when contaminated with disease poducing germs. It is disinfected by destroying the vitality of these organisms. Disinfection deals only with destroying the vitality of these minute forms of life which cause disease. It does not mean the destruction of all lower forms of animal and vegetable life that may be in or upon an object; this is sterilization. Disinfection must necessarily be greatly in excess of the actual requirements, as we are attacking an invisible foe. For instance, a sick room might be disinfected and rendered safe by the use of a small amount of germicidal solution to a limited area. but as we are not able to see the germs it is necessary to apply disinfecting agents to every inch of surface of the room, and all its contents in order not to miss that particular spot.

Our present knowledge of disinfection favors the vapor or gaseous disinfectant. By reaching all confined spaces it has a better chance of coming in contact with all infective material. Formaldehyde comes nearer being an ideal disinfectant than any of the gases in general use. It is not poisonous and does not injure fabrics, doors, metals, or objects of value. The preparation of a room is of great importance. As a great deal of gas is lost through cracks and crevices, all such places should be closed by pasting paper over them, or by caulking with suitable material. Expose the objects in the room so that the gas may have free access to all the surfaces. Hang clothing, bedding and fabrics upon lines strung acros the room, move furniture away from the walls, and open the doors of closets, bureau drawers and lids of boxes, so that the gas may enter freely While the articles in the room must be arranged so the gas may gain access to all surfaces possible, do not disarrange the contents too much, as the same surfaces should be exposed to the gas that were exposed to the infection. The secret of successful disinfection with formaldehyde gas is to obtain a large volume of gas in a short time, a temperature above 65 degrees F. and a certain degree of moisture. A concetrated voume of formaldehyde gas will kill exposed bacteria almost instanty, but to destroy spores it requires about one hour. Penty of time shoud be given to allow the gas to permeate to all corners and dead spaces of the room.

The following formula is one of the best methods of use on account of its simplicity and the large amount of gas evolved in a short time: Use 500 c. c. of formalin and 250 grams of potassium permanganate for each 1,000 cubic foot of air space. The potassium permanganate is first paced in a pail and the formalin poured upon it. An active effervescence takes pace and considerabe heat is evolved; therefore a pail of sufficient capacity, and especially of sufficient height, should be used to prevent boiling over. The floor should be protected from heat by the use of some bricks or some suitable device. For small spaces, such as cosets, wardrobes and cabinets, the formalin may be sprayed directy upon the objects to be disinfected. In this way they enjoy the direct germicidal action of the substance in solution and further are bathed in the gas which is sowly evolved. This method is not practical for larger rooms. The room or incosure undergoing disinection should remain closed for at least eight hours; after which it should undergo a very thorough mechanical cleansing and be opened for the free entrance of air and sunshine.

The conditions met with in stables render their disinfections difficult on account of the accumulation of organic filth, and high resistance of anthrax and tetanus spores, for which stables are sometimes disinfected. It is advisible to give a stable a preliminary fumigation with sulphur in order to destroy surface infection and the vermin which always occupies these places. This is done by thoroughly moistening the surfaces and articles to be disinfected, and burning 3 pounds of sulphur for every 1,000 feet of air space. Remove all small articles that need disinfection, such as pails, currycombs, brushes and other articles that have been used around the infected animals, or have come in contact with infected material. These should be thoroughly scrubbed and allowed to remain for several hours in a 5 per cent solution of carbolic acid. All hay and grain should be removed from the racks, all bedding from the floors, and all debris from the cracks in the floor and walls. After its collection at some safe place this refuse should be saturated with petroleum and burned. All surfaces of the stable should now be thoroughly saturated with a strong antiseptic solution, such as 5 to 10 per cent carbolic acid. The floor and walls should then be scrubbed with a strong hot lye solution. After several days exposure to air and sunshine the interior of the stable should receive a fresh coat of whitewash, prepared from freshy-burnt lime.

Wells may be disinfected by the use of freshly-burnt lime; half a barrel should be put in the well, thoroughly stirred, and the walls washed down with the resulting milk of lime. The well is then pumped out, cleaned, allowed to refill and a second supply of lime added. This should be allowed to remain 24 hours after which it is thoroughly stirred, pumped out and allowed to refill. This is repeated until the water is free from lime. Chlorinated lime may be used for this purpose, sufficient being used to make approximately a 1 per cent. solution. Soil may be satisfactorily disinfected by the free use of lime.

When to Cut Corn for Silo.

Twenty years ago the Maine Agricultural Experiment Station studied the yield and composition of Maine flint corn at different stages of growth. These results, which are probably lost sight of by most Maine growers of corn, are just as valuable and as pertinent today as they were when made. They are far more valuable for Maine conditions than experiments made in States having a warmer summer and a longer growing season.

In order to obtain data on this important point, a field of Maine dent field corn was cut at five different stages of growth. The field selected for this study was very uniform. It eared out finely and was in every way suited for the experiment. There were ten tenth-acre plots, each with five rows of corn.. One row in each plot was harvested at the five differen' stages of growth. Hence, each cutting represents one-fifth acre. The first cutting was made when the ears were just beginning to form. This second cutting was made 13 days ater, when the plot contained a few roasting ears. The third cutting was made a week later, when all the ears had reached the roasting stage. The fourth cutting was made another week later, when the ears were beginning to glaze, and the last lot was cut ten days later, when all the ears were glazed.

There was a continuous increase in dry matter from 11.7 percent at the first cutting to 25.3 percent at the last. The graduations were 11.7 percent., 17.5 percent., 19.6 percent., 23.1 percent., and at the last cutting, 25.3 percent dry matter.

There was also a steady increase in protein as follows: 1.8 percent. 2.1 percent, 2.2percent, 2.3 percent, and of nitrogen free extract from 5.5 percent by the following steps: 9.7 percent, 11.7 percent, 14.5 percent to 16 percent nitrogen free extract in the corn cut when all the ears were glazed.

The mature corn is much less watery. This means that it contains more nutritive matter. During the thirty days while the crop was maturing, there was a constant increase in the percentage of dry matter. There was also a constant increase in weight of dry matter. At the first cuttng, the total crop yield was 13 tons per acre; at second cutting, 15½ tons; at third cutting, 14½ tons; and at last cutting, when the ears were all fully glazed, 14 tons. From this it might be infered that the time to cut was at the second cutting when there were only a few ears at roasting stage. The yield in dry matter, however, constantly increased as follows. At the time of first cutting, there were 3050 pounds dry matter per acre; at second cutting, 5,200 pounds; at third cutting, 6050 pounds; at fourth cutting, 6700 pounds. and at the last cutting, 7050 pounds The dry matter increased two tons per acre during the thirty-seven days, or at the rate of over 100 pounds per day. This daily increase per acre is equivalent in quantity to the daily ration for four or five cows.

Furthermore, this increase was mostly in the nitrogen free extract which is a mixture of such highly nutritious bodies as sugar, starch and gums. The proportion of starches and sugar increases from 25 percent at time of first cutting to 50 percent. at last cutting. The actual weights of starches and sugar increased as follows: First cutting contained 360 pounds per acre; second cutting, 1200 pounds; third cutting, 1550 pounds; fourth cutting, 1750 pounds; and the last cutting, when the ears were all fully glazed, 2250 pounds of starches and sugars per acre. There is as constant a growth of starches and sugars up to full maturity.

Other letters have given the results of experiments made by the Maine Station and show that the varieties of corn that will mature in Maine are the most economical for either fodded or silage. These experiments show why this is so, and also point out the fact that there is a large and continuous production of the valuable plant constiuents up to the period of full maturity. From this it follows that harvesting half-grown or immature corn is a wasteful practice. Owing to the large production of sugars and starches in the late stages of growth, a pound of the dry substance of the mature, well-eared plant possesses a higher nutritive value than at any earier stage of growth. For the most economical production of fodder and siage, it is clear that one should use a corn that will mature in Maine and that it should be allowed to stand until the ears are full glazed.—Chas. D. Woods, Director Maine Experiment Station, in Maine Farmer.

Wise Advice.

Said a wise college professor to his class:

"Do not fall into the very stupid error of thinking that no matter how highly learned you may become you do not need constant association with the unlearned classes of society. These men know many things from actual contact with life that books and schools do not convey and which you must know if ever you become truly effective.

How Sod Affected an Apple Orchard

Tillage Superior to Sod Mulch

Five years ago a bulletin of the Geneva, N. Y. Station, No. 314, announced that in the Auchter orchard, typical of the great majority of commercial apple orchards of western New York, the tillage-and-cover-crop system of soil management was, in practically every way, superior to the sod mulch system. Five additional crops have confirmed this conclusion and strengthened the belief that grass roots above apple-tree roots are detrimental to the health of the trees and a menace to good crops.

Under exceptional circumstances, as in the Hitchings orchards, discussed in Bulletin No. 375, deep soil well supplied with moisture may grow both apples and grass successfully and to the financial advantage of the orchardist; but such conditions are so uncommon in commercial orcharding in the great New York apple-belt that the only safe practice is to adopt the tillage-and-cover-crop system unless careful study of all factors has proved sod-mulch better for the particular combination of topographical, soil, labor and market conditions in individual orchards.

Auchter Orchard and its Management.

The Auchter orchard, in which the experiment here reported was located, is near Rochester, in the heart of the "apple-belt" and was chosen because it was uniform in soil and topography and quite typical of the apple orchards of western New York. The land is slightly rolling and is a fertile Dunkirk loam, about ten inches deep, underlaid by a sandy subsoil. The orchard includes nine and one-half acres, set to Baldwin apple trees, 40 feet apart each way, which were 27 years old when the experiment began in 1903. About 120 trees were included in each half of the experiment. On the sections devoted to tillage the land was plowed each spring and cultivated from four to seven times, after which a cover crop was sown, usually during the last week in July. During all but the last year in the five-year period the cover crop has been medium or mammoth red clover, but in 1913 oats were sown. On the sod-mulch plats the orchard grass and the blue grass were cut once, sometimes twice, and the crop allowed to lie where it fell. In all other respects except the application of fertilizers in certain subsections, the treatment of the plats has been alike and such as prevails in the best commercial orchards.

Experimental Conditions and Results.

During the first five years of the experiment the orchard was divided into east and west halves for the cultured operations and during the last five years into north and south halves. In this way, at the close of the ten years the northeast quarter of the orchard has been tilled ten years, the northwest quarter in sod five years and then tilled five years, the southwest quarter in sod ten years and the southeast quarter cultivated five years and then in sod five years. About one-half of the area in sod during the last half of the test—a section through the middle of the area—received annual applications of nitrate of soda in an effort to overcome the unfavorable influence of the grass.

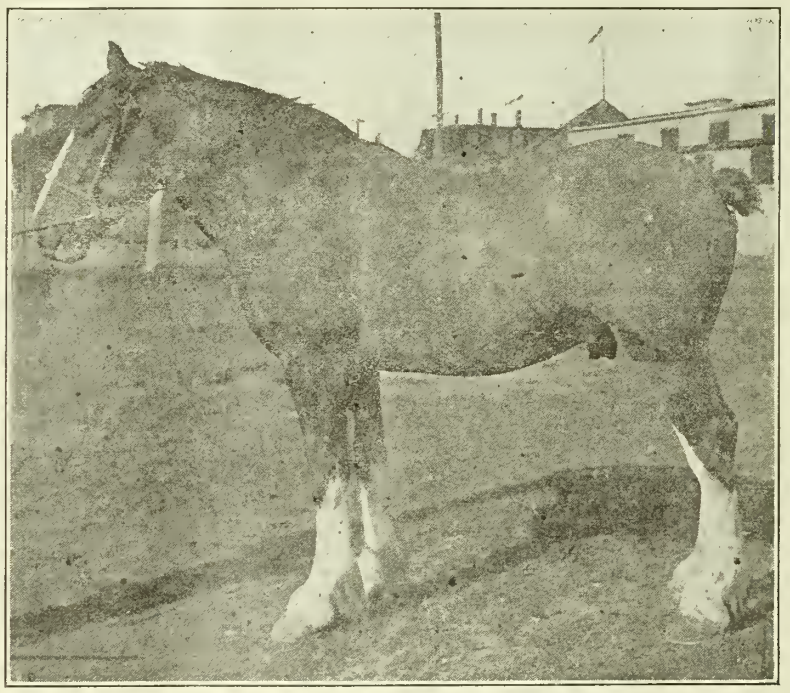
In considering results, of course yield comes first, since orcharding is a commercial proposition and upon the amount of fruit harvested must largely depend the income; but in comparing systems where production cost differs as greatly as in sod-mulch and tillage methods of soil management, it is essential to associate these costs with the yields.

The average yield on the plat left in sod for ten years was 69.16 barrels per acre, on the plat tilled for ten years 116.8 barrels, a difference in favor of the tilled plat of 47.64 barrels per acre. These apples were sold at varying prices but averaged $2.60 for bareled stock and 72 cents for evaporator and cider stock, from which sales there was secured an average annual return of $126.04 per acre ofr the apples grown on sod and of $224.15 from those under tillage. The average acre-cost of growing the apples on sod was $51.73 and under tillage $83.48. Subtracting these figures from the gross return we have a "balance" per acre for the sodded plats of $74.31 and for the tiled plats of $140.67, an increase in favor of tillage of $66.36. For every dollar taken from the sodded trees, after deducting growing and harvesting expenses, the tilled trees gave one dollar and eighty-nine cents.

In general quality, also, the fruit from the trees under tillage was much better, being crisper, jucier and of better flavor; and it kept from two to four weeks longer than the fruit from trees in sod. In color, however, the apples grown on sod were superior to those from tilled trees, and they matured from one to three weeks earlier.

The difference in the effect of the two systems on the trees was almost as great as on the fruit. The trees in sod gained 2.4 inches in tree diameter, taking the average of the measurements, while those under tillage gained an inch and a half more than this, or 3.9 inches. This difference extended to a similar ratio to gain in height and spread of branches; and the foliage of the tilled trees was so much more abundant, and of such dark, rich, green color, that the line between the two plats could be recognized more than half a mile away.

Closer view showed more plainly the sparseness of foliage, irregularity of branches, presence of dead branches and lack of plump, healthy, bright-colored new wood on the trees grown in sod. The trees under tillage, on the other hand, were very uniform in development, with new growth and fruit well and evenly distributed, and notable for their vigor and health.



Boreland Crest

Two-year-old imported Cydesdale Stallion, Champion at the 1914 St. John Exhibited.

Owned and exhibited by McFarane Bros., Fox Harbor Point, N. S.

Change of Conditions

At the close of the first five years one quarter of the orchard was changed from sod to tillage and another quarter from tillage to sod. In each case the effect of the change was almost instantaneous. Before midsummer, the trees released from the influence of the sod showed plainly the benefit of the added moisture and available plant food furnished them by tillage. Both trees and foliage improved notably, and the apples on them grew as large as any in the orchard. The number setting was, however, influenced by the previous poor conditions so that the first year's crop was below normal; but the average for the entire five years was as great as that of the trees continuously under tillage. The change for the worse was quite as remarkable and as immediate in the section of the orchard turned from tillage to sod; for the average yield per tree on this section during the first yea was less than three-quarters of a barrel, while even the trees continuously in sod yielded twice this amount.

The use of nitrate of soda on the sod helped matters somewhat and was a paying investment, yet for the whole five years the trees in sod thus fertilized yielded less than half as much as the tilledt rees without any fertilizer.

Does Tillage Exhaust the Soil?

Since the trees under tillage have borne heavy crops annually for ten years, without any addition to the soil except the seed of the cover crops used, it might be supposed that the soil would show the draft. Careful analyses made at the close of the test prove that this is not the case. The mineral elements of fertility are practically alike throughout the plats. and the nitrogen and humus are much greater on the tilled plats. Though analyses were not made at the start it is not probable that material differences then existed, for the soil is apparently quite uniform, and previous treatment had been made the same for years. It is fair to conclude that the tillage and cover-crop treatment conserves nitrogen and humus better than the sod-mulch treatment, while it also gives much larger crops.

Why is Grass Harmful

Grass in an apple orchard is evidently a detriment, and it acts against the best interests of the trees in several ways. These ways have been so fully discussed in Bulletin No. 314 that it is only necessary to state them here.

(1) The growing grass lowers the water supply, since every plant uses and evaporates many score of times its own weight of water. Under rare conditions this reduction of the water content of the soil might be an advantage to the trees, butt in ordinary seasons, on soils neither very deep nor specially retentive of moisture, as in most New York orchards, the trees need all the rain that falls during the growing season, and the draft of the grass roots on the supply of water left near the surface by showers is robbery that affects both the crop of apples and the trees that bear them.

(2) With the water there goes into the grass a certain amount of plant food, which will become available to the tree roots only after a considerable time and some of it probably never. The use of fertilizers in certain portions of the Auchter orchard proved this factor of plant food of less consequence than that of water; yet the trees in sod responded promptly and profitably to applications of nitrate of soda. Trees under tillage, on the other hand, seemed to have enough and to spare of nitrogen, as well as all the other food elements they needed.

.4) The growth of grass on a soil reduces its temperature. Whether this is a serious disadvantage we cannot say, but most New York apple soils are comparatively cold; so it would seem reasonable to suppose any additional cooling influence harmful, as heat causes the food substances in the soil to dissolve more rapidly, hastens their diffusion through the soil water, aids soil ventilation, stimulates the absorptive action of the roots, and helps to form nitrates in the soil. Thermometer readings made over a considerable period showed that the tilled soil in June and July is more than a degree warmer than the sodded soil in the morning and more than two degrees warmer at night.

(5. The supply of air is less in a sodded soil than a tilled soil; and good soil ventilation is essential not only to the life of the plant itself, but also to the activity of the bacteria which make certain forms of plant food available.

(6) Sod affects deleteriously the

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Proud Monarch, champion male Shorthorn at the 1914 St. John Exhibition and three of his get. Owned and exhibited by A. N. Griffin, New ...nas, N. S.

beneficial micro-organisms in the soil. The experiment given supplies no definite data to support this statement; but the lowering of the humus content of the soil, restriction of the air supply, cooler temperature and smaller moisture content of the soil under the sod are all factors unfavorable to the development of those bacteria whose action in the soil we know to be beneficial to plants.

(7) Sod may "poison" apple trees. This conclusion has been reached by very careful investigators in England, who assign to this factor, principally, the evil effects which they have found to follow attempts to grow apple trees in sod land. The sudden changes from good to illresults when trees in the Auchter orchard were changed from sod to tillage, lend some support to this theory that the grass roots excrete some substance harmful to apple trees: but the other factors previously mentioned, particularly the lowering of the water content of the soil, seem quite sufficient to account for the evil influence of sod without laying much stress upon its excretion of an actual "poison."

Deductions From These Tests.

It is hardly necessary to repeat again or to emphasize the main conclusion from this ten-year test, that tillage and cover crops rather than sod-mulch should be generally adopted by commercial orchardists in New York State.

But some other statements should be made regarding the application of this experiment in other directions.

In orchards on deep soils the sod-mulch method is less of a detriment than on shallow soils. In the deep soil the tree roots have some chance to escape the drought-producing influence of the grass roots. Under such conditions, as where moisture is over abundant and apple trees make too luxuriant growth, sod may occasionally be used with benefit to check growth and promote fruitfulness. There is, however, nothing in the experiment to indicate that on ordinary soils the grass roots and tree roots ever establish amicable relations; for the difference between the tilled and the sodded plats was greater at the end of ten years than during the first half of the test. That is, apples do not become adapted to grass. The injurious effects of the grass on apple trees occur, no matter what the variety or age of the tree or other cultural treatment; and are even more liable to be shown by dwarfs than by standard trees because of the shallow root systems of the trees on dwarf stocks. Pasturing orchards in sod may reduce the injury from the grass just to the extent that the pasturing reduces the growth of the grass; but it can never wholly overcome the evil. The owners of sod orchards may not realize how their trees are weakened and their crops lessened by the growth of the grass, since they have no tilled trees under the same conditions to compare with them; but a trained observer can usually detect, even from a distance, signs of poor health and diminished vitality in the light color of the foliage.

The sod-mulch system is bad enough but grass grown in the orchard, not for a mulch, is all but fatal—its makes the trees sterile and paralyzes their growth. It is the chief cause of unprofitable orchards in New York State.—Geneva Station Bulletin 383.

The Fourth Dominion Conference of Fruit Growers.

Fruit growers from all parts of Canada met at the Fourth Annual Conference, at Grimsby, Ontario, on September 2nd, 3rd and 4th. It had been generally expected that the Hon. Martin Burrell, Minister of Agriculture, would preside over the conference sessions, but owing to the extreme pressure brought to bear upon the cabinet by the conditions existing throughout the British Empire, he was unable to fulfill his presidential duties. However, the conference had the pleasure of his company at one of the sessions, when he deliveed an inspiring address realtive to the fruit-growing industry and the duties devolving upon Canadians in this trying time. Under the guidance of Dan Johnson, Dominion Fruit Commissioner many important matters pertaining to the welfare of the industry from the Atlantic to the Pacific were thoroughly discussed. The sessions of the first day were devoted to a discussion of Transportation as appied to Fruit, which was led by Geo. E. McIntosh, Traffic Expert of the Ontario Fruit Growers' Association; to an examination of the cold storage warehouse recently erected by the Dominion Government, and to a discussion of pre-cooling fruit led by J. A. Ruddick, Dairy and Cold Storage Commissioner, Department of Agriculture, Ottawa. Mr. Ruddick gave a clear and concise explanation of the Gravity Brine and Mechanical Systems of Refrigeration, pointing out the more important features of each system. In referring to the cold storage plant at Grimsby, the Commissioner pointed out that the objects in view were to illustrate the Gravity Brine system of refrigeration; to illustrate and demonstrate the value of precooling of fruit and that the Cold Storage Branch was now given the opportunity to conduct experiments in the storage, packing and shipping of fruits. The warehouse, in charge of Mr. Smith, has already handled and tested the following fruits: strawberries, cherries, gooseberries, blueberries, blackberries, early varieties of apples as well as matoes.

The second day of the conference was devoted to a motor ride through the famous Niagara fruit belt, and was one of the most pleasant, interesting and instructive features of the conference. The Inspection and Sale Act, and the standardization of packages formed the subjects of discussion on the closing day.

The following is the Report of the Committee on the Inspection and Sales Act, which was passed at the Fruit Growers' Conference:—

1. That fruit districts in the different provinces shall be divided into sections.

2. That a sufficient number of inspectors shall be appointed so that each inspector shall have a certain section under his charge, so that he may be enabled to make at least weekly visits, and when instruction is required to either impart such instruction himself or, when time does not permit, that he be authorized to employ for such purpose and such time as may be required, a competent assistant.

3. That in all cases when the pack is not consistent with the Fruit Marks Act, the offender, after receiving not more than one warning, or when it may be deemed advisable by the inspector to allow the offender to grade his fruit down, that on every occasion when the warning is not heeded the full penalty of the law be inflicted, and for every additional offence the fines be inflicted [illegible] with the law.

4. That all packers and shippers of fruit be compelled to register with the Chief Inspector of the Division in which he resides.

5. Ever since the coming into force of the Fruit Marks Act there has been a growing desire for some kind of report of the result of inspection which could be used as an assurance to the purchaser that the fruit in that shipment which had been inspected was up to the standard of the Fruit Marks Act. We recommend that so far as the plan can be worked out without injury to the work of inspection that such certificate of inspection be given to shippers requesting same; such certificate to be plainly stamped or printed in such a way as to indicate that it only applies to the packages inspected which may, if found desirable, be stamped "inspected" on such parts of package as seem likely to best serve as an intimation that such package had been inspected.

Among the resolutions passed were the following:—

That the Department of Agriculture should take the necessary steps to keep Canadian growers in closer touch with the importers of fruit, if necessary by the appointment of special commissioners in Great Britain, Europe, South America, Australia and South Africa; and that the Department should set aside a sum of money for trial shipments on a commercial scale for the development of additional markets.

That whereas, certain countries require, either by law or custom, that fruit imported be contained in packages of a fixed size, thereby preventing our exporting in packages other than those they demand.

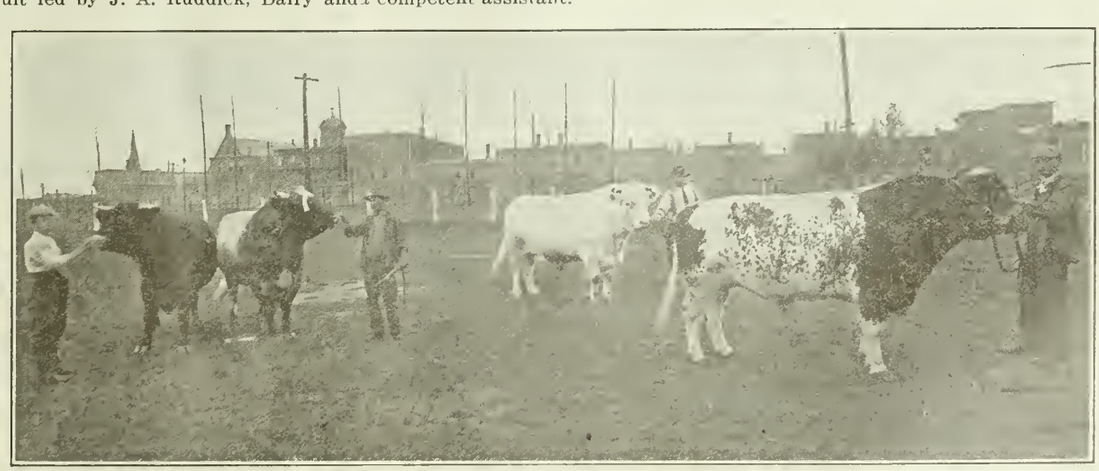
Be it therefore resolved that we respectively ask our government to legalize exporting in such packages as meet the requirements of the countries with whom we wish to trade.

That we respectively petition our government that such legal requirements as to size or capacity of fruit packages for Canadian fruit shall apply equally and as rigidly to fruit imported into Canada.

Whereas the steamship companies carrying Canadian fruit to the English markets have greatly increased ocean freight rates, and whereas some at least of such companies are subsidized by the Federal Government and their schedule of freight rates may be controlled by the Government.

Therefore, resolved that a Committee be appointed at this Conference to

(Continued on page 875)



Aged Shorthorn Bull Class at St. John.

From right to left in order of merit: Gay Archer, owned by R A. Snowball; Prince Imperial, owned by C. A. Archibald; Victor, owned by Isaac Chipman & Son; May Dawn, owned by G. C. Cossar.

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DAIRYING.

The Production of Clean Safe Milk.

Persons engaged in the production of milk and consumers interested in procuring clean, safe milk, will be interested in the factors for producing the same, as outlined by the United States Department of Agriculture in a recent Farmers' Bulletin No. 602, entitled "Production of Clean Milk." The essential factors are outlined as follows:

Clean, healthy cows kept in clean, light, well ventilated stables.

Stable so constructed as to be easily cleaned.

A clean, well-drained barnyard.

Clean utensils, thoroughly sterilized.

Clean, healthy milkers that milk with dry hands.

A small top milking pail.

Immediate cooling of the milk to 50 degrees F. or lower.

Storage of milk at a low temperature until delivered.

A separate house for handling the milk.

An abundant supply of pure water.

The new bulletin in its eighteen pages contains a number of figures and describes in detail the practical methods that should be followed in the production of clean milk.

How Milk Becomes Diseased

Bacteria, according to the bulletin, find their way into the milk from various sources. Some may come from the udder itself, where they grow in the milk cisterns and ducts. The greater number, however, come from the dust of the air, the dirt from the udder and flanks, from the milker, and from unclean utensils. Disease- producing bacteria may get into the milk from cows having such diseases as tuberculosis, or from people who handle the milk, who may themselves have contagious diseases or who have been taking care of patients afflicted with such diseases as typhoid fever, diptheria, and septic sore throat.

The consumer is sometimes responsibe for the contamination of the milk. Milk bottles should not be taken into a sick room because infectious diseases can be spread by carrying infected bottels back to the dairy farm. If bottles are left where there are contagious diseases, they should not be collected by the milkman until they have been properly disinfected by the board of health. In the case of typhoid fever or other serious diseases which may be carried in the milk, it is better for the consumer to put out a covered dish for the milk or have it delivered to some member of the household. Until official permission has been granted, no milk bottles should be removed from a home in which there is or has recently been a case of communicable disease. The consumer should not use milk bottles for holding vinegar, kerosene or liquid other than milk.

Why Clean Milk is Important

Cleanliness is not an absolute safeguard against disease, but it is the greatest factor in preventing contamination. From the health standpoint there is great danger not only from the specific disease-producing bacteria previously mentioned, but from milk that contains large numbers of miscellaneous bacteria which may cause serious digestive troubles, especially in infants and invalids whose diet consists chiefly of milk. There is also the minor consideration of the loss to the consumer from milk souring or otherwise spoiling before it can be used. The cleaner the milk, the longer it will keep good and sweet.

Clean milk not only benefits the consumer, but the milk producer who will consider this subject from an unbiased standpoint will find many ways in which he himself is benefited by producing cean milk. There are a number of items in this connection which, when considered alone, may seem unimportant, yet collectively, they are of great importance. Moreover, they are not only of immediate value, but have a cumulative value reaching far into the future. Tuberculin testing, for example, is not only a safeguard to the purity of the milk supply for the consumer, but is a means of assisting the producer to protect his herd against future ravages of tuberculosis.

Most producers of market milk have experienced the chagrin of having a shipment of milk refused or returned because it reached the market sour, tainted, or otherwise in poor condition. Although such milk may be used for feeding pigs, it usually means a complete loss to the producer, as it costs too much to transport it back to the farm and because, depending on the market as an outet for his milk, he has no means for utilizing small amounts at uncertain intervals. Another important consideration is the unpleasant effect upon the purchaser. Delivering sour or tainted milk usually results in losing the confidence of the dealer; or if it is delivered direct to the consumer, it means the loss of good customers. A reputation for clean milk means fewer complaints, a better class of patrons, and a steady market for all the products of the dairy

Safeguarding the purity of the milk is a protection to health on the farm in several ways; first, the heath of the farmer's family, who use a portion of the milk themselves; second, the health of the calves, which live largely on milk. Healthy cows to breed from and pure milk to feed upon are two important factors in rearing thrifty calves and in the development and maintenance of a healthy and profitable herd. Aside from these immediate and definite benefits there is another consideration, not immediately measurable but of vast influence, namely, the moral influence, for no one can learn to produce good and clean milk without learning good methods of care and management of the herd, and the study of these things leads to greater care and intelligence in the economic features of the business.

Dairying with Cottonseed Meal.

If used in reasonabe amounts cottonseed meal may be fed for indefinite periods of time and the animas keep in a vigorous and heathy condition. The great troube with the average feeder is his lack of acquaintance with the concentrated nature of this material and his disposition to feed it as freely as he would corn or some other feedstuff not so high in digestibel nutrients. If the farmer and dairyman will bear in mind that one pound of cottonseed meal contains about four times as much digestible protein as a pound of corn, they will have no trouble from feeding it. Four or five pounds of cottonseed meal contain the protein equivalent of from 16 to 20 pounds of cornmeal. It is seldom that this much corn meal would be fed as a dairy ration to an animal weighing 1,000 pounds, and the average feeder who is unacquainted with cottonseed meal can hardly bring himself to realize that 4 or 5 pounds is about the right amount to feed per day to a 1,000-pound cow when not giving over 2 gallons of milk.

Our exports of cottonseed meal in 1911 unfortunately amounted to about 650,000 tons. This meal did not bring the producers in the south more than about $25 a ton, yet it is known to contain fertilizing constituents of an equal value. This meal went chiefly to Denmark, German yand Great Britain and was used largely in feeding dairy cows, though of course considerable quantities were fed to beef cattle as well. For years the policy of these nations has been to secure concentrated feed materias of high nutritive quality and rich in plant food constiuents from all the outyling sections of the world and to feed them on their farms. As a result they have built up soils which were extremely poor a half century ago but are now rated as among the most productive and desirable for agricultural purposes in the world. Denmark has risen in preeminence as a dairy nation and the products of her herds top the market in the great capitals of Europe. It may be surprising to some to know that the basis of the dairy ration fed in Denmark is founded in a great majority of cases on the cottonseed meal produced in the southern part of the United States.

If the meal can be taken across 3,000 miles and fed with such remarkable success by the farmers of Europe, it is surprising that it should not be wholesome and desirable for use here at home. As a matter of fact, so long as the meal is allowed to be exported a drain amounting in the aggregate to millions of dollars is being made on the soils of the south to the enrichment of Europe. At the same time these Europeans are developing an industry of world-wide importance and producing for the consuming population the most wholesome and desirable of beef and dairy products.

A campaign of education is needed which will reveal to our own people the very great mistake they are making in failing to utilize these products here at home, so that our own beef and dairy industries may be advanced to the proud position which they should occupy. When this is done "starving America" will be abundantly supplied with the most wholesome and desirable

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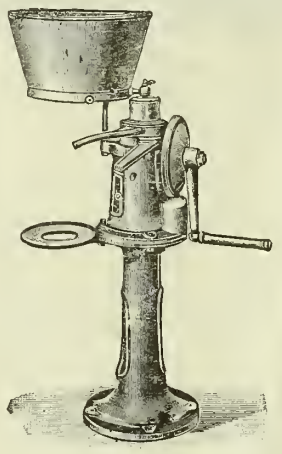

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dairy products at a reasonable cost.—Andrew M. Soule, Georgia College of Agriculture in Breeders' Gazette.

What Sampling Reveals.

A herd owner may ascertain from the creamery that his average is 40 pounds of fat per cow for the month and yet have a dim idea that some of his cows are better producers than others, but probaby few men are prepared for the veritable surprises encountered when they commence regular weighing and sampling. To take the case of two-year-old heifers that freshened this spring, last month one gave 30 pounds of fat, the other gave 46 pounds. One 5-year-old in the same herd of grade Jerseys gave 67 pounds of fat, and another 5-year-old gave only 36 pounds. The owner would scarcely believe that one mature cow is thus earning, with fat at 27 cents per pound, eight dollars and thirty seven cents more than her stabe mate in just one month. What will the difference be for the whole year? That is the crucial test.

Between two 3-year-olds in the same herd, that both freshened in March, there was a difference last month of 19 pounds of fat, worth over five dollars. Similar differences are to be found in many herds, illustrating very clearly that it is palpably unfair to take a general average of the herd unless they are decidedly more even in production than those cited above. Records of individual production alone can give this valuable information to the owner Milk and feed records may be obtained free on application to the dairy commissioner, Ottawa.—C. F. W.

The Ayrshire as a Butter Producer.

The Official test is proving what a valuable producer is the Ayrshire Cow. To June 1st, 1914, 454 cows and heifers have registered in the Record of performance test. This immense herd gave a yearly average of 408 lbs. of Butter, a splendid average considering 189 of them were two-year-old, and 82 three-year-old heifers.

One cow gave over 850 lbs. butter; 3 gave over 700 lbs.; 22 gave over 600 lbs.; 30 gave over 500 lbs.; 70 gave over 450 lbs.; 140 gave over 400 lbs.; a number gave from 300 to 500 lbs. and a comparative few were under 300 lbs. There is a profit in dairying when Ayrshires are kept.—W. F. Stephen, Secretary Canadian Ayrshire Breeders' Association.

A Simple Sanitary Measure.

The Hollander, when placing his cows in their stalls which they do not leave during their entire time in the stable, cares for the tails of the cows by braiding the switches and fastening a ring in each and then suspending them by coils from the ceiling.

This is, of course, to prevent the tails from getting befouled by reaching down into the gutter when the cows are lying down and subsequently employing them for the dissemination of filth and germs.

This is the more important from the fact that the tubercular cow, by swallowing her sputum, discharges large quantities of tubercular germs through the bowels.

I was much impressed at the time by the excellence of the arrangement, and have frequently since then cudgled my wits to devise some similar arrangement that would be practical in this country where cows leave their stalls for water, and have been chagrined at being unable to solve so simple a problem.

I have finally reached a conclusion, and as I always suspected, it is so simple that I feel like kicking myself for not thinking of it before.

Braid the switch and fasten a ring in the end, as the Hollander does, and then fasten it to the thigh of the cow by a strap around above the hock.

This will allow the tail all of the liberty that it needs, when there are no flies to swat, and still prevent it from getting into the gutter.—W. C. Huntington, M. D., Howell, Mich.

Sour Milk for Calves.

That in summer time calves do as well on sour milk as they do on sweet will be interesting news to many farmers who have hitherto been kept from raising calves by the expense of keeping the milk sweet in hot weather. This expense experiments carried out by the department indicate to be quite unnecessary. The calves will make as rapid gains on sour skim mik. In winter, it is true, this is not quite so satisfactory. It chills the calves and some of them drink it with great reluctance. Very young calves have even been known to refuse it altogether. On the other hand, of course, it is much easier to keep the milk sweet in winter.

In calling the attention of farmers to these facts, however, the department at the same time emphasizes an important precaution. Unless the milk is produced and kept under cleanly conditions, it may become contaminated with disease-producing bacteria. Farmers should, therefore, allow the milk to sour quicky and then feed it without delay.

In the course of these experiments sour skim milk was fed to 22 caves—Holsteins, Jerseys and Guernseys—at different seasons of the year. In no case would cause digestive disturbances, even when the change from sweet to sour milk was made abruptly when the caves were only a few days old. Moreover, no evil resutls followed the alternate use of sweet and sour. It seems, therefore, that the common idea that sour milk leads to scours is quite unfounded. The calves, it was found, did not like the sour milk as well as the sweet, but in the majority of cases soon become accustomed to it. The aversion, however, increased when the mik was fed them at a low temperature.

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It makes possible the top dressing of field crops, which is usually the most effective method—the first rain carrying the fertilizing elements down into the soil. -:- -:- -:- -:- -:- -:-

On meadows and pasture lands it makes it possible to apply the manure so as to be of the greatest possible benefit—renewing the fertility without losing the use of the land for a time. -:- -:-

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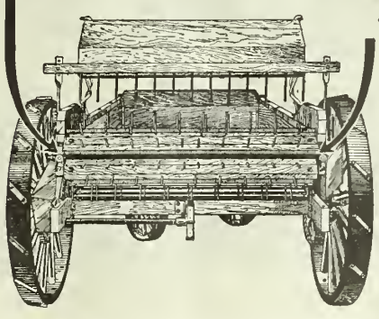

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We have not in any way altered or cheapened the construction of the Stanchions. They are *exactly* the same as those formerly sold at $1.50.

These O. K. Canadian Stanchions are made of the same U-Bar steel, they have the high hinge that has always been a feature of their superiority, and the simple, secure lock that is proof against the wiliest cow.

Orders for Stanchions at $1.00 can be filled only while our present supply of steel lasts, so those who wish to take advantage of this price should order quickly, either through their dealer, or direct from us.

Tell us how many cows you keep and we will quote prices on complete metal stalls.

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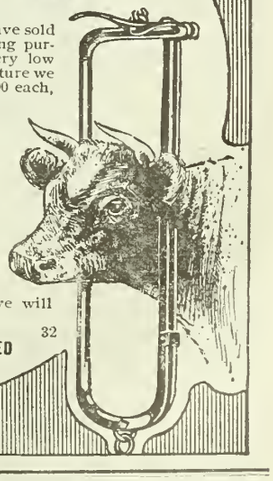

LIVE STOCK.

Abortion in Sheed.

The President of the English Board of Agriculture and Fisheries appointed a Committee in April, 1905, to inquire, by means of experimental investigation and otherwise, into the pathology and etiology of Epizootic Abortion, and to consider whether any, and if so, what, preventive and remedial measures might with advantage be adopted with respect to that disease.

In 1909 the Committee submitted a Report (Cd 4742) embodying the principal results of their investigations concerning Epizootic Abortion as it occurs among bovine animals, and an Appendix by Sir J. McFadyean and Mr. (now Sir) Stewart Stockman, giving a detailed account of the experiments on which the report was based.

The inquiry was extended to include a consideration of the administrative measures which should be taken to deal with cases of this disease in cattle, and a Report (Cd. 5279) was presented by the Committee in 1910 dealing with this aspect of the question.

A third report has now been presented by the Committee, dealing entirely with abortion in sheep, and, in a separately published appendix, an account is given of the experimental work on the disease in sheep carried out for the Committee by Sir J. McFadyean and Sir Stewart Stockman.

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A Group of Good Ayrshires.

First Prize aged herd at the 1914 St. John Exhibition. This herd includes: The champion male, Cherry Bank Cicero. Following him in line are: White Heather of Silver Falls, the champion female, first with two of her offspring and dam of best two animals progeny of one cow at St. John. The other cows in the photo are Emma of Silver Falls, Lady Viola and White Lady of Silver Falls.
Owned and exhibited by Clifford Creighton, Silver Falls, N. B.

Microbe of Abortion in Sheep.—In the Committee's first report it was stated that these investigators had never found the microbe of cattle abortion in connection with natural outbreaks of abortion among sheep, and that a totally different microbe—a vibrio—had been repeatedly isolated from outbreaks of abortion in ewes, and that it had been successfully used at the laboratory to infect pregnant ewes with abortion experimentally.

Although the Committee are not prepared to say that the vibrio is responsible for all serious outbreaks of abortion among ewes, they have not met with any other specific form of the disease in this species.

The microbe was found to occur both in the short "S" form as well as in various long spirillar forms. The individual organisms vary in length from 1.5 to 3 microns, and the breadth is from 1-4 to 1-3 of a micron at the middle part, which is broader than the extremities. The appearance of the spirillar forms is very like that of a spirochaete. The vibrio is motile.

Virulent Material and its Vehicles.—The contents of the infected uterus, viz., the exudate, the membranes and the foetus, contain the microbes and are virulent. An important point is that lambs may be born alive from an infected uterus at or about full time.

In the case of bovine abortion an infected cow is probably seldom in a position to infect others until the actual time, or shortly before the actual time of abortion, when virulent material is discharged from the uterus. This, however, is not the case with ovine abortion. It would appear from the experiments carried out for the Committee that virulent material may be spread about the pastures (a) by infected ewes although they may lamb at full time, (b) by aborting ewes, and (c) by infected ewes ong before they show outward signs of being about to abort.

In connection with the dissemination of the disease among sheep, the report calls attention to the fact that, as compared with epizootic abortion in cattle, ovine abortion is enzootic in character, that is to say, is seems to confine its operations to a comparatively small proportion of farms without showing much tendency to become widespread. On the other hand, it is pointed out that a disease does not owe its epizootiogical character to its contagiousness alone, but also to the opportunities given it for dissemination. The opportunities which operate in relation to the disease in cattel and not in sheep are as follows:—(a) Breeding goes on all the year around in the case of cattle, whereas with sheep, it is almost entirely confined to a season, and a considerable interval of rest intervenes. (b) Cows are frequently sent to the bull on other premises, where the disease may prevail, but this does not apply to ewes to any extent. (c) There is a very considerable interchange of in-calf and newly-calved cows through markets, while ewes are practically always tupped on the owners' premises and remain there throughout pregnancy.

The history of some flocks shows that the disease may prevail on the same premises at intervals over a number of years. It is difficult to explain how the virus is kept alive during the long interval between each breeding season; but bridging this interval it is comprehensible that in those outbreaks which have recurred after an interval of some few years, a few abortions not amounting to an outbreak, may have occurred in the intervening years. The circumstances surrounding some outbreaks favour the idea that the vibrio may lead a saprophytic of other existence outside the bodies of the sheep.

Methods of infection.—The ntaural channels of infection are the alimentary and genital passages, mainly the former. The Committee considered whether any part in the spread of ovine abortion is attributable to the ram; and they state that it seems most improbable that a ram could spread infection mechanically from ewe to ewe, in a flock merely from the fact of having been contaminated by an aborting ewe. because, in the great majority of cases. both rams and ewes, when the breeding season begins have been excluded from sexual intercourse for nearly a year, and the ewes must have been free from maternal duties, other than suckling, for about six months. There seems to be only the possibility that a result of abortion in ewes, inflammation of the womb is not uncommon, and this may end fatally especially when the contents of the uterid are putrid.

Distribution and Prevalence of the Disease.—Particulars indicating the distribution of the disease were obtained by the Committee by means of replies from farmers to circular letters of inquiry. The proportion of the aborting ewes taken by the Committee as indicating that something definite had operated on the ewes was 10 per cent. and over; and of the 470 farmers from whom replies were received, the proportion was 10 per cent. and over, on 70 farms (or 14.7 per cent.), these infected farms being situated in 24 counties in Engand, 4 in Wales, and 6 in Scotland. The proportion of barren ewes on the 476 farms was also ascertained, as it was thought that an unduly high proportion might be ascribable to the ewes casting foetuses unobserved. The proportion of barren ewes was 10 per cent. or over in 26 flocks out of the 476.

Preventive and Remedial Measures.—No particular breed of sheep seems to possess natural immunity to the disease, although some individual animals are apparently more resistant to infection than others; and further, the evidence obtained by the Committee as to the resistibility of ewes which had already aborted was in no way conclusive. A few experiments were carried out to ascertain whether immunity could be conferred on ewes by subcutaneous injection of living cultures of the vibrio, but no preventive effects of any value were obtained. Fairly successful results were obtained with an anti-serum, but, owing to doubt as to the constant virulence of artificial cul-

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ram from infected premises may be a carrier of infection owing to the upkeep in some way of virus in its body, but of this being actually the case there is no evidence of any consequence.

Symptoms.—No particular symptoms in connection with abortion seem to have been observed in the field except just before the act, when, if the period of pregnancy is advanced, and it usually is, the ligaments are relaxed, the mammae and the vulva are swollen and a sanious mucoid discharge is seen around the latter. It is pointed out that a pregnant ewe, which before her time shows soiling of the fleece by sanious material, should be regarded with suspicion and the discharge should be examined. The evidence from the field is that many of the foetuses are putrefying when expelled, and this seems to apply more particularly to those which have died in uterus at a comparatively early stage of pregnancy. It appears that the interval between infection and abortion varies between 13 and 113 days, and the percentage of abortions on infected premises averages about 23 per cent. As the retures of the vibrio no great importance ched to these experiments. Further investigations are proceeding in relation to the possibilities of the serum and also as to drug treatment.

To prevent the spread of infection once the disease has broken out the following measures are recommended:

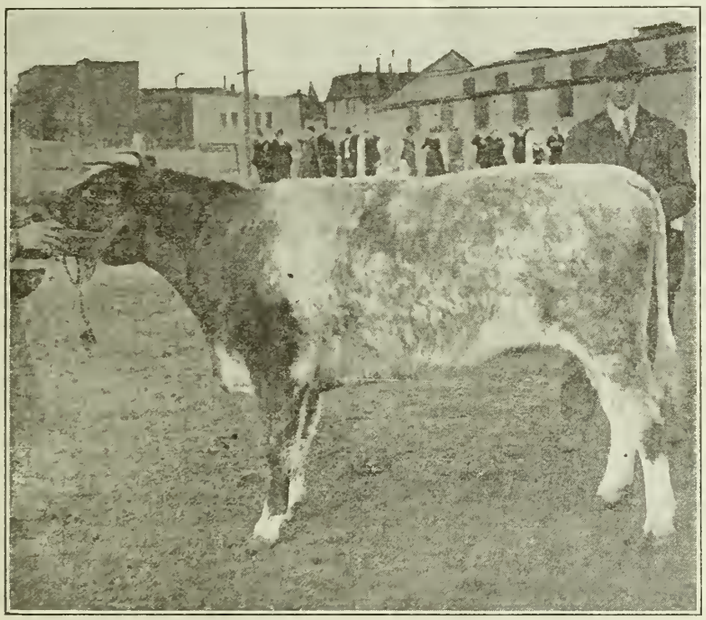
Destruction of Virulent Material and Disinfection of Everything Contaminated by it.—This is obviously important. The membranes, foetus, the discharge, and any litter soiled by the material should be removed at once and destroyed. It is even preferable to destroy their virulence on the spot by mixing the material freely with caustic lime and slaking or enveloping it in straw soaked in paraffiin and burning it. Any patches of the pen or pasture which are known to have been soiled should be disinfected with a strong disinfectant. The boots, clothing, and hands of attendants should be disinfected.

Isolation of Aborting Animals and Those Which Have Aborted.—When a ewe shows before her time a discharge from her genital organs, or should she abort, it is essential that she should be removed from contact with her fellows. The same applies to ewes which have given birth to live lambs prematurely, in which case both ewes and lambs may be excreting infectious material. It would be preferable, of course, to remove the still pregnant ewes when this is possible.

Penning or Folding of Ewes Before Lambing.—In some cases it is customary to pen ewes at night towards the end of pregnancy, and it is also not unusual to fold them by hurdles to feed on certain crops. As far as abortion is concerned, these practices may do no harm, so long as there are no infected ewes in the flock; but given out or two cases of abortion occuring in the narrow area of a pen or fold; it will be obvious how great will be the opportunity for other ewes to become infected, and it is pointed out that a ewe may abort from infection acquired only a short time before her normal time to lamb. Of the 70 farms referred to above as having experienced 10 per ceint. or more of abortion, 46 were in the habit of penning or folding their ewes some time before they were due to lamb.

It is advisable then not to adopt these practices if they can be avoided but if they are adopted the greatest vigilance should be exercised in watching for cases of abortion. Should such occur, two courses are open either to destroy all evacuated material disinfect the ground and remove the ewe or immediatey to remove the other ewes to clean ground. The second course is the more to be recommended, if it can be carried out

Disinfection of the Genital Passages of Ewes Which have Aborted.—This may be done by gently injecting an antiseptic wash (3 per cent. pure carbolic acid in water, or corrosive sublimate 1 in 2,000) by way of the external genital organs. It is advisable to carry out this treatment, because it may have the effect of destroying a certain amount of virulent material which has passed from the uterus into the vagina, and it may also help to prevent further invasion of the passages and womb by harmful microbes from with out. Ewes which have aborted should be put in improvised pens, and ereated in the same way until the discharge ceases.



Roan Mina

Two-year-old Champion Shorthorn female at the 1914 St. John Exhibition Bred and owned by R. A. Snowball, Chatham, N. B.

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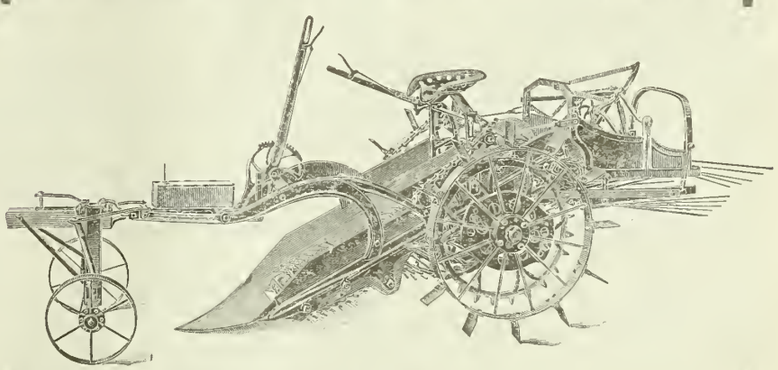

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THE HORSE.

Horses vs. Tractors.

Wayne Dinsmore, earnest champion of the draft horse, has prepared a comparative statement showing that even in Alberta, with fields of 500 to 2,000 acres, tractors have been proven second to the horse for farm operations.

Reasons for the general use of tractors in Saskatchewan, Aberta, and Manitoba were: 1st, large areas of prairie sod purchased at low prices, and of such character as to render feasible operation from 50 to 2,000 acres per field; 2nd, high prices of horses and refusal of horse owners to sell unless substantial cash payment were made; 3rd. wilingness of tractor companies to sell complete outfits, costing from $4,000 to $10,000, on very small initial payments, and long-time notes, most of them running for three years; 4th, knowedge that such outfits have been known to break from 20 to 30 acres of sod per day when handed by experts; 5th, lack of knowledge as to depreciation and cost of operation of such engine outfits, especially in comparison with the cost of horse operations.

The result was the purchase of thousands of tractors in the Canadian northwest. They have now been used from two to five years, and the Canadian farmers, business men and bankers have had experience enough to know their advantages and disadvantages. The net result is an overwhelming decision against such outfits for general farm work. A few have been successful with tractors, but even these cannot show returns that will indicate any advantage over horse out-

Charles Esterbrook of Alberta gives for illustration these figures:

Daily cost figures on tractor plowing, gas engine of 45 horsepower on drawbar:

Cost of engine and plows, $3990.	
Interest on same at 7 percent, $279.30 per year, or on 313 working days, per day ....$	.88
Depreciation 25 percent on total, $3990, or $997.50 per year, or $3.19 per day	3.19
Gasoilne, 45 gas. per day, 33 1-3c. delivered at farm, pe rday	15.00
Cylinder oil, 3 gals., at 80c per gal.	2.40
Gear oil, 1 gal. per day, at 30c per gal.	.30
Hard oil and transmission grease, estimate per day	.10
Engineer per day	5.00
Competent plowman, per day ..	3.50
Board of same two men at 50c per day	1.00
Total .....$	31.37
Average powed per day, 20 acres, or average cost per acre of .....$	1.57

In the preceding tabe, we did not figure in the cost of sharpening plows, as he uses disk pows, sharpens but once a season, at 50c per disk, or $7 per season for 14 disks.

Mr. Esetrbrook thus figured his horse powing costs:

Daily cost figures on horse plowing, gang plow, two 12-inch plows, six horses worked together:

Cost of gang plow. 2 12-inch plows and 2 extra shares, $90.	
Interest on same at 7 percent, $6.30 per year, or on 313 days, 2c per day	.02
Depreciation 10 percent per year; repairs 5 percent; total 13.50 per year, or 4c per day.	.04
Value of 6 horses used on gang, $150 per pair, or or $450 for the 6 small horses.	
Interest on same at 7 percent. $31.50 per year, or 10c per day	.10
Depreciation nil—increase in value of young animals being broken, and produce from mares offsetting loss and depreciation.	
Cost of man at $40 per month per day $1.53	1.53
Board of man per day	.50
Fed of 6 horses:	
Each 18 qts. of oats per day at 32c per bu. for 6	1.08
Each 21 lbs. of hay per day at $7 per ton for 6	.57
Harness, 3 sets at $40 per set, $120.	
Interest on same at 7 percent, $8.40 per year, or, per day	.0268
Depreciation on harness 10 percent per year; repairs 5 percent; total 15 percent. on $18 per year, per day	.057
Sharpening plow points, estimated at 30c per day each gang..	.30
Average plowed per day, 5 acres. Cost per acre, 83 cents.	

The highest cost figure given by any farmer for horse plowing was 83 cents; the lowest cost given by any on tractor plowing was $1.55. Al agreed, also that thet ractor suffered a stil greater disadvantage in the lighter work, such as disking, seeding and harvesting.

Still more significant of the judgement of Canadians on this question was their actual field procedure, seen in an extended trip in Alberta at a time when summer fallowing was in progress. But three tractor outfits were seen at work, but we passed hundreds of horse-drawn plows. At numerous places we found tractors idle in the farmyards or sheds, while the farmers were doing the field work with horses.

While it is not at all likely that Eeastern farmers will ever use tractors to any great extent in their farming operations, yet it is well, in the face of the campaign which has for some time been in force to get them installed here, to learn just how they are regarded on those farms that at first thought would seem so large as to make the economic use of horses prohibitive. We will admit Mr. Esterbrook places a low price on horses, estimating that they can be bought for $150 per pair, but we presume he was sure of his statement before he made it having so recenty visited the section about which he writes.—Maine Farmer.

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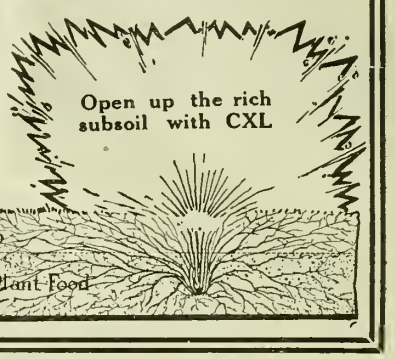

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Common Worms Affecting Horses.

Bots in Horses

The condition commonly known as bots in horses results from the presence in the stomach of the arvae or grubs of the gad or bot fly technically termed the Oestrus Equi, or Gastrophilus Equi. Their presence is common during winter and spring among horses which have been exposed outside during the previous months of the year, when the fly is active. Whie differences of opinion exist as to the harmful effects caused by bots in the stomach of horses, it is, however, generally accepted that their presence may be harmful to a greater or less extent by producing digestive disturbances.

Development.

The gad or bot fly attacks horses chiefly during the late summer months, and the eggs are deposited by the female especially on the hairs of the front limbs or other portions easily reached by the animal's mouth. The eggs are firmly glued or fastened to the hairs, and within a few days they hatch out and liberate the embryo or small maggot-like larvae which commence to crawl under the hairs and give rise to an itchiness which causes the horse to lick or bite the parts so that they are licked off by the tongue and taken into the mouth and swallowed. On reaching the stomach, the embryo or larvae attach themselves by means of their hook-like mandibles or jaws to the mucuous membrane or lining of the stomach. At this time they are of a blood red colour, and, in the course of the following winter and spring months they undergo at least two moultings, becoming larger and more developed each time, until they reach the full stage of their development and growth and become the mature larvae or the so-called "Bots." These are found in the stomach during the spring, and are of a yellowish-brown color. They are somewhat pear-shaped, tapering towards their head, and formed of a series of rings or segments. Subsequently, during the summer months, they voluntarily loosen their hold from the wall of the stomach, and fall off into the contents of the stomach and finally are expelled with the faeces or mature. The time occupied by them in the stomach averages about nine months. After being expelled with the faeces, they remain in the manure or bury themselves in the soft earth or ground where they gradually develop during the summer into the pupal state and finally emerge as the perfect adult gad or bot fly

Symptoms.

The symptoms caused by the presence of bots in the stomach are indefinite. Their presence, however, may be suspected during the winter months and spring in horses which are unthrifty and subject to attacks of indigestion and colic without other apparent cause. Horses affected with bots causing irriation of the stomach are sometimes noticed to manifest their presence by a tendency which they display of turning up the upper lip as if nauseated. In some cases the bots may be noticed in the dung which is passed.

Treatment and Prevention.

Measures should be taken to prevent horses from becoming affected by protecting them against the attacks of the flies. Horses which are being exposed to the attacks of the flies may be protected by clipping off the long hairs from the region of the head, breast, shoulders and legs. The parts mentioned should also be smeared frequently with oil. By clipping the long hairs the required supports of the eggs are thus reduced, while the oil affords additional protection by preventing the eggs from adhering to the hair.

Additional protection may also be afforded horses while at work against the attacks of the flies by means of pieces of cotton or cheese cloth fastened to the bridle and harness in such a manner as to cover the under surface of the jaws, the breast and forearms. It is difficult to destroy and remove bots from the stomach owing to their great vitality, and medicines used for this purpose are not always effective. The following are recommended as being useful:—Creolin, half an ounce; oil of turpentine, one to two ounces; given as a drench diluted in a pint of raw linseed oil or milk. During the spring and summer months when the parasites have reached maturity, they voluntarily leave the stomach and are passed out with the dung. At this time their removal is hastened by the use of purgatives, such as a pint of linseed oil or from half to one ounce of aloes, given as a ball or as a drench in a pint of water.

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Home of Belgian Horse.

When Americans stop to consider that the home of that grand breed of horses known as Belgians is located where the European war has been most fierce, they will understand why importers are fearful that not only these animals will be exterminated, but also the Ardennes horses which are raised along the French frontier.

Writing from Liege, H. A. Johnson, the American consul, said recently of the breeding of fine horses in that region:

"It is estimated that there are 275,000 horses in Belgium and horse breeding has, thanks to judicious fostering on the part of the government, become an important and remunerative industry. There are 29,000 horses, valued at $7,000,000, exported last year. The exhibit of working horses at the annual show in Brussels surpassed anything ever seen there.

"Belgian horses may be divided into two distinct groups, the Femish breed and the Ardennes horse. To the first group belong the large, massive horses in general use throughout the country. These animals are much appreciated in Engand and America and are alrgey exported to the United States for breeding purposes. The horses of the province of Namur, although belonging to the group of heavy draft horses, represent in a measure the transition from the English breed to that which inhabits the Ardennes and Condroz districts. Much smaller than the smallest Flemish horse, the Ardennes type is robust, long necked and broad shouldered. He resists fatigue and endures privation better than the other. The Condroz horse very cosely resembles the Ardennes and is prized for light, quick draft work.

Just before the war broke out, there was published in the Boston Sunday Herald the picture of a Belgian stallion for which something like $40,000 was said to have been refused after he had won the championship at Brussels a few weeks previous. J. G. Bushnell, Ill., and several other American importers, attended the show and purchased many valuable stallions and mares for shipment to the United States. Whether they and their horses got out before the storm broke, is not yet known, but it is believed that Mr. Truman reached Engand, on his way to New York.

If the war goes on, it is likely to all but exterminate the breeds in the theatre of active operations, according to the belief of many horsemen. In such an event, Belgian and Ardennes mares may become almost priceless. There are plenty of stallions of both breeds in the United States, but very few mares have ever been imported.

Value of Sound Sires.

Here is the life history or story of three mares. One of them is a cross-bred mare of a desirable type of draft horse and sound as a dollar. The other mares were good mares, but they lacked the depth of body, the depth of flank and the make of feet and legs that stand up to service year after year.

These mares belong to the Oregon Agricultural College. Bonnie, the first mentioned mare, was matched when she was five years old with another mare, which many would have thought just as good, but she lacked the feet, legs and constitution of Bonnie, although she cost nearly as much. The two mares were worked side by side for five years with Bonnie doing more than her share of the work. At the end of that time Bonnie with her vigor, her soundness and her strength worked the other mare down so that she died.

Then the college authorities started out to get another mate for Bonnie then ten years old. They picked out a five year old mare named Ida which looked good and cost $300 but when put to work Ida began to show her weakness. Perhaps it was inherited from her sire or dam, as her feet began to get bad, and now after five years of service she had sidebones both on the inside and outside of her front feet. In her hind egs she is crampy and at times hardly able to get out of her stall. When put in the stable after a hard day's work she will not touch food although Bonnie, five years older and in service five years more, steps up to the manger and eats readily and in the morning is ready for a big day's work.

In a short time another mate will have to be obtained for Bonnie. After ten years of service and after wearing out two mates that proved to be unsound and not of the best type, she is ready to do as much as any horse. If she is not hitched with one of her own kind she will perhaps outlive and outwear her next mate.

No one who has seen these mares will deny that soundness and the desirable conformation which goes with soundness pay in draft horses. No one will deny that sires that produce sound mares like Bonnie should be used; and they will also admit that sires which are unsound and produce horses that will become unsound should be barred from public service.—Carl N. Kennedy, Oregon Agricultural College, in Breeders' Gazette.

Protection of Wounds of Animals Against Flies.

When an animal is wounded, it is important to treat the wound in such a way as not to prevent its healing, and yet to prevent screw worms and house flies from attacking the open surfaces, laying eggs, or carrying infection to the animal.

The screw worm, particularly, deposeggs in wounds, and there are other flies that may deposit their eggs in this way. The larvae or maggots hatching from these eggs infest the wound and burrow more or less extensively in the surrounding tissues, so that serious damage may result.

The housefly alights on wounds to suck up the exudate, and is a cause of considerable annoyance to animals. It prevents wounds from healing and may introduce agencies of infection which adhere to its body.

The United States Department of Agriculture, in a bulletin on repellents for protecting animals from the attacks of flies, quotes the following formuals for application to wounds:

Jesen gives three formulas of repellents for application to wounds:

Formula No 1: Oil of tar, 8 ounces; cottonseed oil to make 32 ounces.

Formula No. 2: Powdered Naphthalin, 2 ounces; Hydron's wool fat, 14 ounces. Mix into an ointment.

Formula No. 3: Coal tar, 12 ounces; carbon disulphid, 4 ounces. Mix, keep in a well-stoppered bottle and apply with a brush.

Mixtures Nos. 2 and 3 are said to adhere to moist surfaces, and No. 3 is said, in addition, to form a coating over raw surfaces and protect from the screw-worm fly.

The editor at the close of the article in which the above formuals are given adds the following formula: Oil of turpentine, 1 dram; phenol, 1 dram; cottonseed oil to make 4 ounces. Mix and apply freely to wounds.

It is stated that this remedy is highly effective and is used widely in the south. It is said to induce healthy granulation of wounds.

Matching Teams for Livery or Farm.

Producing matched teams, such as are used to hearses, is a special line likely to prove profitable. A pair of black horses that will qualify for hearse purposes is hard to find and such a team usually brings a premium. Well matched farm teams also command a price considerably higher than that for ill-mated teams. Matching horses is an art, and it requires some skill to bring together two that resemble each other in all characteristics sufficiently to work in harmony. It is necessary to have more than the color of the animal in mind. Action comes first in considering the mating of horses. Proper action, strong, vigorous movement of the feet and legs, attracts a buyer as much as anything else. Style is also requird in the action of any class of horses.

Matching farm teams is more difficult than matching driving teams, as it is necessary to match gaits, temperaments and horse power. A difference of 100 pounds or so does not matter much, but if much more than that the difference in size will detract from the value of the team. Color comes last of all in the major points to be taken into consideration when matching farm teams, yet it is only teams which match in every respect that command the real fancy prices.—W. F. Purdee in Breeders' Gazette.

Raising Good Colts.

Neither overfeed nor stunt the colt at weaning time. Teach him to eat grain before he is weaned and take him away so gradually that he will never notice the transition from milk diet to grain and grass. It is a good thing to vaccinate against distemper at weaning time. My show colts were vaccinated before being taken to the shows last fall and the ones that were kept at home were not. The vacinated ones went along nicely all winter, but the others had distemper and we lost two or three.

In feeding cattel or sheep, no doubt the best system is to let the manure accumulate in the corrals throughout the season, adding bedding as needed. This won't work, however, with colts. Manure in sheds is death to them. It breeds distemper. Colt sheds should be cleaned out every week and disinfected once or twice a month.

Colts do best running out in winter, although they should have a shed to enter if they wish. The horse is naturally an out of door animal. He wants plenty of feed and plenty of exercise. A mixture of corn, bran and oats in equal parts by weight, with clover or alfalfa and a little corn fodder to pick over during the day is good colt feed.—W. S. Corsa.

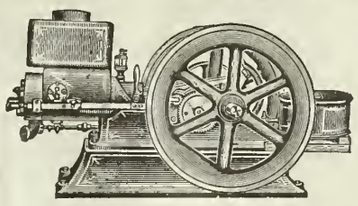
Saving Horseflesh.

Load lightly, drive slowly, stop in the shade when possible and water your horses often, advises the workhorse relief association of Boston. Sponge off the harness marks and sweat after the animal comes in from work. Do not turn the hose on him but wipe him all over with a sponge wet with vinegar water.

If you use a horse hat, be sure it is a canopy top hat, not the common bel-shaped kind. A sponge or coth on top of the horse's head is good if kept wet but worse than nothing if dry.

If a horse is overcome by heat, get him into the shade, remove the harness wash out his mouth, sponge him all over and shower his legs. Cool his head at once with cold water or chopped ice wrapped in a cloth. For internal treatment, give him four ounces aromatic spirits of ammonia or two ounces sweet spirits of niter in a pint of water or give him a pint of warm coffee.

Tie the horse outside the barn during hot nights and give him a chance to be comfortable. Watch him closely during the day. If he stops sweating suddenly, breathes short and quick, or if his ears droop, or if he stands with his legs braced sideways, give him attention at once for he is in danger of sunstroke.



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POULTRY

Pointers in Marketing Poultry.

Our trade in dressed poultry has reached rather a critical stage in its development. A very few years ago these prairie provinces were heavy importers of poultry and poultry products. More rapidly than most of us imagine, we have reached the point where home production is able to supply practically all our city trade, and imported products are no longer required. Alberta packing houses support the above statement by the fact that in 1913 the firms of P. Burns & Co., and Swift Canadian Co., for the first time, imported no poultry to their Alberta plants, the demand being wholly supplied with Alberta grown poultry. The same we believe, could be done in Manitoba, while Saskatchewan may not yet be prepared to completely supply her own demand from within her bor ders.

This condition of affairs brought a measure of disappointment to poultry raisers in the prairie provinces last year. For one thing, it made rather an uncertain market. During the early fall months, poultry was crowded into our city markets in enormous quantities. Much of this stuff was about as far as it could be from being in fit condition for market, and should have been well fed a considerable length of time. Later shipments also found slow sale, and by the end of the season every possible demand was supplied.

One point upon which some friction and dissatisfaction arose was as to the method of preparing poultry for market. Our agricultural colleges and departments of agriculture were free in suggesting methods of poultry marketing; but birds prepared in keeping with these methods were not always acceptable to dealers. We have no criticism to offer as to the methods taught the farmers by the agricultural colleges; these were no doubt up-to-date and scientifically sound as relating to the good keeping qualities of the poultry product. But the fact seems to be that different dealers have arrived at quite different conceptions as to what the public should be asked to accept. This fact is of pery little importance to the man who ships poultry alive, because then the dealer can dress his birds in any way he sees fit; but it is of much concern to the farmer who is going to dress the stuff before he sends it to market.

Possibly in a few years there wilf be some uniform system of poultry marketing agreed upon. In the mean time we advise farmers to endeavor to supply the dealer with the class of goods he calls for and look to somebody else to educate the dealer and the consuming public into demanding the changes that probably real krogress would demand. The task of educating the consuming public, for instance, as to the inferior keeping quality of drawn birds, as compared with undrawn ones may be important, but it is scarcely up to the individual poultry shipper to accomplish the task by unprofitable demonstration. For as far as the farmer is concerned, it is the dealer who must be pleased; the dealer's satisfaction is a matter of dollars and cents; and if the methods he prescribes are wrong the loss will visit itself upon the dealer primarily. The educating of the dealer as to the right methods must come from the angle of the consumer rather than from the angle of the producer.

To those who will ship dressed poultry this year, we would therefore say this: Write to the fir—s who are handling poultry and ask for quotations, also for their iostructions regarding preparation for market. Select the method that is most acceptable, consistent with the good prices, kqd ship to that dealer. If he demands live poultry, ship them a live; if heads and feet off, take them off; if feathers left on around neck and hocks, leave them on; if off take them off.

While all this is true regarding the methods of preparing the carcass, there are many points upon which all dealers kgree. They agree that every bird should be properly fattened before killing. They agree that birds should be starved about 36 hours before killing so that crops and entrails will be completely emptied before killing; otherwise the carcas will spoil very quickly. They agree that if birds are killed at home they must be thoroughly cooled for hours before boxing for shipment. This is a very important point, because poultry packed in a box while yet the carcasses contain the animal heat is cer tain to come out in a spoiling condition, and in some cases will be quite worthless.

Don't Market Thin Poultry.

Last season there were thousands of live chickens sent in crates to the Winnipeg poultry markets that were so thin as to be scarcely worth the express on the crates required to carry them to the city. This was especially the case early in the season —during September and the first part of October. Some of the carcasses when plucked were only about the size of a man's fist, and they carried no more meat than a hungry man would eat at one meal, being almost literally "all skin and bones."

So much was this true last year that one market was forced to sell many of these birds at what it could get for them alive as no person could have been induced to purchase them if they had been killed. As there was a fair demand for live chickens from householders who wished to keep a few hens for laying purposes, some of the stock was got rid ol in this way.

To ship such chickens to market is a disgsace to the men who do it. Without doubt, however, part of the movement last year arose out of the over emphasis being placed upon the demand early in the season. The gong was ttruck too soon. Farmers who wished to take advantage of the reputed early trade in fall chickens cooped up their season's cockerels and old hens and shot them into the city by express, expecting high prices for them. But nobody would buy the skinny creatures after they were killed and one single place of business had tons of these thin early fall culls still on hand in the middle of the winter. What happened to the trash later, we do not know.

The moral is plain, we think, and we very strongly urge farmers this year to fatten their chickens well before sending them to market. Don't get the notion that there is a high priced, profitable trade for birds sent in, post haste, before anyone else appears. There is a very, very limited demand for broilers (three months old chickens forced up to weigh one pound and a half each by the middle of July), but that demand is infinitesimali and the cold storage plants, during the past season have been unloading so-called cold storage "broilers" to fill any demand there was in sight.

We may as well face the fact that this fall, more than e er before, the lead pencil will come into play in connection with the poultry tsade. That is to say, poultry buyers will figure more closely to ascertain just whether or not it is real economy to eat poultry meats. This may make for a lowering in price—just to what extent no one can say jutt now—but one point it does leave clear, namely that the good selling chickens will be those that have a large amount of real meat on them.

In a single sentence Fatten the chickens well before they are sent to market. There will likely be a fair demand and fair prices for really well fleshed stuff; there is no demand now and there will not be any for the skinny, scrawny kind.

Sell the Old Hens.

On about nine out of every ten farms there are a lot of old hens, which have lived beyond their days of usefulness and are fed at a loss. In every set of egg records I have ever seen it was to be noticed that nearly every hen kept beyond her second laying summer was kept at a loss. Occasionally a hen lays better in her second laying year than in her first, but the proportion of these is not large enough to make it a safe plan to keep hens after the second season of laying. It would be better so far as egg-production is concerned to sell all hens when 18 months old, or sooner, but in practice it is probably as well to sell hens at abput 30 months old, as raising pullets to replace kens sold every year would cost about as much as the reduction in eggs would amount to.

Recently we have sold hens for 10 cents per pound fow which we paid $10 a head and one with a record or first prize at a state show as a pullet and first the next year as a hen went for 70 cents because she was too old to lay many eggs in a year. We keep hens for profit first and for the show purposes next, as we believe in utility as well as beauty, with utility first. For this reason we do not keep hens after they have laid out their second season, and this year we took out everything hatched before a year ago last spring.

If the farmers as a whole would sell their old hens during July and August this year, keeping only pullets and yearlings, they would save a lot of feed and get more money during the next twelve months. If the old hens are confined to a rather small yard and fed all the corn and water they will consume for about two weeks they will become very fat and their flesh will be almost as sweer and tender as that of a spring pullet, because the fat particles will lie between the fibers of the muscles and melt away when the fowl is cooked, leaving the meat tender and nicely flavored. The hens should be sold within the next few weeks before they begin to molt. Even if some of them are laying, the loss will not be great, as the price of eggs is low and during the very hot weather hens do not lay so regularly as in the spring

A good fattening pen may be 10 feet square and 3 feet high. Bed it well with straw and cover it with a thick straw roof, letting the hens sleep on the ground. Such a pen may be made cheaply of 3-foot chicken netting, plastering laths or even old boards. Feed all the corn the hens will eat, but do not leave any lying uneaten. Two weeks is about the average time required to fatten the hens. After they have become fat they should be sold at once, as they soon lose their appetites and do not add to their weight. A pen 10 feet square s large enough for 25 hens for the few days they will be confined.

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Everybody can Candle Eggs.

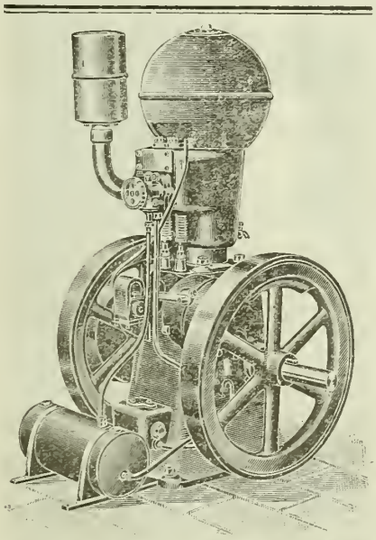
To enable farmers and housewives to test eggs before a candle and tell accurately their condition before they are opened, the Department of Agriculture has just published a colored egg-candling chart. To give a true picture of the eggs, twelve impressions were necessary to produce this lithographed chart.

The chart shows the eggs in their natural size as they appear before a candle and also as they look when open in a glass saucer. The pictures include an absolutely fresh egg, slightly stale eggs, decidedly stale eggs, eggs with yolks sticking to the shell, eggs where the chicken has developed so far that blood has been formed, moldy eggs, addled eggs, and eggs with a green white.

Comparatively few housewives are aware that a green color in the white of eggs is due to the presence of billions and billions of a certain species of bacteria that make a green coloring matter. Eggs with this greenish tint, even though the yolk seems to be perfect, are not fit for food.

As long as the Department's supply lasts, these charts will be furnished free upon application to the Editor and Chief Division Publications. Commercial shippers of eggs, however, should apply for Department Bulletin 51 a technical paper on testing by scientific methods not available to the average farmer. This bulletin includes the colored illustrations. This chart alone will be found to be not merely of great service to the housewife wishing to test the eggs she is to serve to her own family, but also of commercial value to farmers, country merchants, or egg shippers who wish to buy and handle eggs on an accurate quality basis.

The great spoilage of eggs in this country is due to bad handling and is quite unnecessary. Part of the remedy is to teach everybody, from the farmer to the consumer, how to tell the quality of an egg without breaking the shell. The country buyers the middlemen and the housewife judge of the quality of the inside of a cucumber or an eggplant, or any other vegetable, by the appearance of the outside and the firmness of its texture. It is not possible to tell the quality of an egg by looking at the shell, though it is safe to say that the eggs with shiny shells are apt to be aged. A fresh egg looks as though it had been dusted with a very fine powder; the "bloam" as the egg men say. But in order to know what is inside the shell the egg must be held in front of a strong light—such as an electric bulb furnishes—which frames through a hole about 1½ inches in diameter. The room must be dark When the egg is held close against the hole the bright light renders its contents visible, and the quality is indicated by the appearance of the yolk, the white and the air space of the blunt end. There are many eggs "candles" on the market, but the housewife can easily make one for herself by cutting a hole in a small pasteboard box, which is slipped over an electric light bulb. If gas or an oil lamp is the source of light, a tin box or can should be used.



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Purebreds vs. Mongrels.

There are a great many farmers who have an idea that because they do not keep fowls for any other purpose than for their own use, it is not necessary for them to keep anything but mongrels. Most of these people have been so long accustomed to believe that almost anything will answer for themselves that they fail to appreciate what they deserve. It may be all right for them to think they do not need as good as the land affords, but let some other fellow tell them so and see how quickly they will resent it.

There are many reasons why purebred fowls are to be preferred to mongrel or scrub stock, and as the "best is none too good" it is to be farmer's interest to acquaint himself with the comparative qualities of the more desirable breeds, and when convinced of one greater excellence of purebred poultry, dispose of the present flock of scrubs, and replace them with some particular breed or variety of fowls that is thought to be most suitable for the farm.

In farming as in every other business the greatest possible profit is the object that stimulates to never tiring effort and as farm poultry with proper care and management, are more profitable than any other thing on the farm, considering the amount invested, they should receive at the least their share of consideration and attention. The best breed for the farmer is some general purpose fowl or any good breed to which he takes a liking. A good strain of purebred fowls will be far more profitable as layers than the usual flock of mongrels; are incomparably more desirable for market purposes than the small bantam-bodied mixed birds; are more tame and docile to handle and manage, and the last, but not least favorable quality, is their beauty. How much more to be admired is a flock, every specimen of which is of the same form and color, than one where the birds are of every color and more like quail than fowls.

One would hardly believe that persons, who appear intelligent in most matters pertaining to the farm and farming, would have such erroneous and often absurd impressions and ideas of purebred fowls and their usefulness or rather worthfulness on the farm, unless convinced of it by personal conversation or observations. I have had parties argue with me that mongrel hens were very much superior layers than purebred hens; that purebreds were not so vigorous, more subject to diseases, and a greater per cent of them die in a year than the poultry that boasted no "blue blood" or aristocratic breeding, and also that purebred fowls require much more care and attention than mongrels and were difficult to raise to maturity.

Such statements as those cited are made through lack of experience with purebreds and therefore through absolute ignorance of their excellent qualities and characteristics. I have had experience with scrub stock and also with the much-to-be preferred purebrds and the latter are so much more profitable and desirable than the former that they should not be spoken of as belonging to the same family.

The great profit realized from the more prolific purebreds, the eggs, so much larger in size and so many more in number, their large, plump carcasses when dressed ready for the market, should all combine to persuade any one of common sense to choose them in preference to a flock of mongrels. As to the vigor and healthfulness of the purebreds, we have never had any cause to complain having found them less subject to disease than scrub stock. Then, too, from a flock of purebreds, by expending a small sum each year advertising, you can readily dispose of your surplus cockerels at a premium for breeding purposes and during the hatching season realize from $1 to $5 per setting for your eggs.

As to requiring more care and attention than mongrels this is another mistaken idea. I will admit that if sadly neglected and left to scratch for a living and allowed to remain without home or house through rain and storm alike, as are so many farm flocks, very little profit can be realized from a flock of purebreds, even if it be of the most noted laying strain.

It is possible for every breeder to have a flock that will in their beauty and profitableness be the admiration of all beholders. So why be satisfied with inferior, unprofitable poultry when the superior and profitable ones are easily obtained? If you keep fowls and do not keep purebreds, change your policy and you will see for yourself that the well bred birds are much more preferable than mongrels.

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FOR HOME AND COUNTRY

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Both Sides of The Fence

There you go again; always Linda, Linda, Linda! It's a pity you didn't marry her, 'stead of me. I've stood it just as long as I'm a-goin' to, James Doane; and won't take no more of your black looks and black words. I ain't made like her, and I ain't been raised same's her, neither." Minnie Doane rocked furiously back and forth in accompaniment to the vehemence of her outburst. Defiance sat oddly on her usually placid countenance and ruffled her flower-like face like a rough wind through a daisy field.

"Z'at so?" replied the man tauntingly through his closed teeth that held the stem of a short brier pipe as he lounged surlily against the kitchen door. "Z'at so? That's real news to me. So you're goin'? Let's see; that makes the sixty-ninth time you've been goin' to go, I b'lieve. Seems you can't make good even in that."

"Can't I, hey, well, we'll see," she rose quickly and faced him her eyes blazing. "I ain't been brought up to be a drudge an' I won't be none for no man. My people was gentlefolk. Pity you didn't ask for a servant in your application for matrimony, an' I could a' told you different. You said all you wanted was a wife lovin' and true——"

"Aw, cut it out,'- broke in Doane harshly, knocking his pipe against the coal-scuttle, I tell you, I'm sick of this. 'Twas bad enough at first, but now—I ain't blind. God, what a lookin' place to come to! It's a disgrace, that's what it is. Now, Linda——"

"I tell you," there was a sharp menace in her tone, "I'll hear no more of her. It's always, 'Linda's grand bakin', Linda's this, Linda's that' till I'm nigh crazy. You knew I wasn't used to housework when you was courtin." You said 'twas because I wasn't like the rest of 'em that you wanted me, an' now you come and cuss 'cause I ain't. I was a fool to marry you. I was a sight better off single, drawin' my pay every week down to the store and spendin' it as I liked. Well, I guess I can manage just as well again. I have bided my time, but I'm goin' now."

Doane continued to lean against the door, sucking on his empty pipe. He gave but a dull ear to what his wife was saying. He had heard it all so often before and it had never led to anything.

At first, when love was at a stage where he laughed at her shortcomings, he had excused; but as time went on he became annoyed, then disgusted until he felt that he could stand it no longer. He loved order and home was spelt in capitals to him. To come back night after night to a place that was still in the curl-paper state of the morning, with the soiled dishes piled high on the sink, and dusty disorder at every turn, filled him with sickening disgust. In sharp contrast he pictured his brother Steve's home just across the lot, where everything shone in fresh neatness and Linda deep in baking by the time the butcher boy came for his orders. It was no wonder that he found himself spending more and more time over there.

In the heavy silence that followed James Doane strode out of the room, his little fox terrier yapping at his heels. Through the open door the late sun shone in copper radiance, upon the untended garden. He noted with deep bitterness the scraggy border of nasturtiums that had spread sprawlingly past their allotted patch, the half-dried geraniums that waited in vain for the evening's refreshment, the hedge of sweet peas boasting of naught but twisted green spirals that ran amuck. And this was his domain, which he alone had tended in which he had once taken such pride. The incentive had been utterly destroyed.

He looked over to his brother's farm. It stood trim and spruce in its new coat of paint. Well, why shouldn't it? No wonder Steve took such pride. Linda was not pretty to look at—couldn't come a mile of Minnie in that, but she did her part and did it well. A wave of self-pity came over him. He had been cheated by a pretty face.

At his feet the little fox-terrier sat watching every move anticipating the usual long tramp through the cool woods, where rabbits and birds gave cause for nervous chase. Doane looked down at the dog; and his face softened.

"No, Dicky, not to-day. We ain't takin' no more walks till somethin's settled. Now's the time. It's been put off to long already. Things can't go on as they've been doin.'

A violent quivering of the stump of a tail seemed to urge a decision.

"I've got it," he said at last. "It's not for her to go; it's for me."

The decision came like a flash, and changed inertia into activity. With quick steps he turned and hastened up to the bedroom, the dog still at his heels.

There the familiar untidiness pervaded; the fact did not disturb him as heretofore but served to stimulate his resolve. Hurriedly he looked about trying to decide what he should take with him.

From a disordered pile of clothes that were bunched together on a few hooks in the closet, he took some garments. He would send for the rest later. He must walk out without arousing suspicion for if she saw him leaving with a large bundle there would be a fuss and he was sick of scenes.

He was going—but where? Doane had not thought further than the fact of going. A curious dull pain took hold of him which he likened to the feeling of a prisoner on leaving his cell after serving a term of years; a peculiar regret and withal a desire to be gone.

Well, there was Steve's at least for a few days; Steve would understand.

"I guess," he wrote on a leaf which he tore from his notebook, "if there's to be any goin' it's up to me. Then, after a moment's thought he added. "I'll be at Steve's until I decide what to do." On the table near the bed lay her well-thumbed prayer-book. Doane placed the note inside with a corner sticking conspicuously out. With it he laid a five-dollar bill for the week's expenses.

"There," he sighed with relief, picking up his bundle, "I guess that will do."

At the front door he stopped and looked long at the dog who, quivering with excitement in anticipation of a run, jumped ecstatically about. "No, old chap," Doane whispered, bending over to stroke the intelligent head with a hand that lingered lovingly, "You stay and look after Minnie. I can't take you along, it wouldn't be fair."

Outside the chill air smote Doane with refreshing slaps. The earth, all outdoors seemed so clean, so fresh, so neat by contrast. Over on the other side of the fence the window-panes at Steve's reflected the dazzling, blinding brilliance of the blood-red rays of the setting sun. At the gate he turned and stared long at the little cottage he had called home. The smeary, half-washed windows returned his gaze with dull eyes. He noted drearily the lace curtains that were pinned back in untidy effort to catch the remaining light. He noted the muddy steps and earthstained floor of the porch; the chairs in disordered array, the one with the broken seat still overturned since their heated controversy of the day before. Neglect everywhere; shiftlessness and sloth were the dwellers.

"Home, sweet home," he muttered in satirical bitterness, as, with a preying feeling of disassociation, he walked wearily down the road.

For a few moments after Doane had left the (oom, Minnie stood staring dully after him then turning apathetically towards the sink began to wash the belated dishes. The water was cold and the grease stuck to the plates. Sigh after sigh sought for outlet as she tried to coax a spark from the cinders that lay in heaped unresponsiveness in the stove, but they gave forth only a cold, white dust that made her cough.

"I don't care," she fretted defiantly, stooping to pick up a book she had thrust out of sight upon Doane's entrance, "He's got no right, even if he is my husband, to jaw at me like that. I do try, only he won't believe me. I can't help it if I ain't like Linda; 'sides I'd die if I was to look like her. I told him I wasn't no good in the house; I told him fair. I wish I'd a' married rich an' had servants an' everything. But this scrubbin' an' fussin' aroun' from the mornin' till night —oh, I hate it, I hate it, I hate it!"

Hot, blinding tears that smarted like acid, welled up in her eyes.

"He says I can't make good at nothing; but I will show him that I mean what I say, an' when I say I am goin' I'm goin.' And what is more, I'll leave this very minute. You betcher," she went on, taking courage with each word, "He won't have to say I ain't kep' my word. I am goin' an' never come back no more."

Quickly, yet softly she ran up to the bedroom and looked about.

"I musn't let him hear me; he'll find out soon enough," she murmured breathlessly as she dragged an old valise from under the bed and dusted it with her torn apron. With nervous haste she opened the bureau drawerd and emptied the disordered contents upon the floor; sorting from the heterogenous mass, odd bits of ribbon and long-prized trinkets which she flung pell mell into the bag. From her scanty wardrobe she selected her best dresses, slamming them in with haste.

"Guess he thought I didn't have the nerve," she soliliquized setting her teeth firmly together and taking grim satisfaction in her decision. In nervous haste, listening strainedly for a possible interruption, she changed her soiled print dress and as she pinned up stray locks of soft waving hair that ran riotously about, she surveyed herself in frightened excitement. Her eyes bright and cheeks flushed showing a face girlish and fragile. The soft light of the waning day cast its shadows over the lines recently penciled, that told of discontent and sullen resentment and, as she smiled two nearly forgotten dimples played faintly at the corners of her weak little mouth.

For a few monents she stared in the looking-glass as if about to talk to the flushed little figure that looked back at her. But then of a sud-

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den, determination was written on her face. She wrapped a shawl about her and picked up her bag.

As she turned to go she stopped suddenly, "My goodness," she exclaimed, "I most forgot to tell him good bye." With a stump of pencil she wrote hastily on a piece of wrapping paper:

"Good-bye, James, I am leaving you forever,

Your loving wife, Minnie."

"There, I guess that'll fetch him," she decided. He would not know where she was, and the world was wide. At the thought she stopped. Where was she going? She had not thought of that. She had no money to take her any distance and she hated walking. Where was she to go? She went over in her mind several places where she might stop, but there was always some reason why she couldn't. There would be questions asked and unpleasant discussions, and probably lectures. Then, as she looked across the field on the left to Mrs. Wilkin's home, she decided. Many a time she had helped Minnie straighten out her household tangles; she had been kind and patient with her and would shelter her she knew. She had best tell James, where she was in case—oh, in case he had to see her about something; so, adding a short postscript she ran lightly down the stairs, stopped only a moment to see if the coast was all clear, and pinned the farewell message on the front door where James would see it as soon as he came into the hall.

As she opened the door the dog bounded forward, leaping and barking in eloquent request to accompany her. For a moment only she hesitated. She loved the little animal devotedly as did James, but as she thought of her husband all alone in the house, she gave up the idea of taking him along.

"You stay with him, Dickey-boy; he'll need you now I'm gone," she whispered into the soft, silky ear and kissing the dog tearfully between the eyes she sped down the path out into the road.

James came from his place at the window, looked across the generous field of flowering barley that lay, soft and white as a cloud in the shimmering moonlight. There just beyond lay his home, grimly dark standing out like a silhouette in a silver frame. Through the stillness came the incessant barking of a dog; insistent in its appeal.

For the twentieth time Doane took out his watch and looked at it unseeingly; a shade of anxiety crossing his features.

"What ails that dog to bark so; why don't she shut him up?" he questioned nervously.

The clean freshness of his brother's well-ordered house irritated him. Even the very things for which he had so longed struck an unresponsive chord and he fell to criticizing in blind contrariness the things he had held up as an example to his inefficient wife. Everything seemed to flaunt itself in snug consciousness of order. The bright coppers, the clean, trim curtains with the faint suggestion of recent soap all stood forth in pious sancity. Even Linda, though she said no word, seemed to preen herself with satisfaction; all of which stood out like an affront to his wife.

It was ten o'clock and not a light was to be seen in any of the windows at his home.

"Funny," he mused, "She ain't gone up to bed yet. It's not like her to hug the dark." A strange, uncomfortable feeling tugged at his heart and left it sore.

"I wrote on purpose where I was, so's she could get me if something went wrong. And Dick why in Heaven does he keep on barking so; it is enough to drive a man crazy."

In the room beyond he heard the voices of Steve and Linda. For the first time he noted the acid stridency in the insistent reiteration that goes with nagging and wondered at Steve being so patient. One thing about Minnie, he reflected, her voice was as soft and musical as a pigeon's and never nagged.

Again he took out his watch but did not look at it; it had become mechanical now.

"She ain't et, neither, else I'd have seen the smoke in the chimney. She never sits down to a bit of bread without her tea. I can't make it out."

The reiterating barks of the dog changed to a long drawn out yowl that sent cold clammy fingers down his spine.

"My God, why don't she do something to hush him?" he swallowed hard, his Adam's apple rising and falling and rising again with his effort of self-control. With fingers that shook he waveringly sought his unsteady chin, and realizing his condition he turned away toward the interior of the room, but not for long. Like a lodestone the little house drew him back to the window. Its unresponsiveness struck him with renewed chill. It wasn't like Minnie to keep out the light. Dimly he remembered how she had clung to him during those first happy months of marriage, fearing ghosts and things, starting at each faint sound in terror as though an evil spirit were waiting to spring out at her. She was such a scary little thing, and pretty—with those funny little dimples that played an everlasting game of hide-and-seek with you; why, he had nimost forgotten about them. Steve's wife had two heavy lines running deep from her broad nose to her mouth making her face look as if it had been put together in sections and her teeth—how large and yellow they were! Strange he had never remarked it so strongly before.

Again a long drawn howl and Doane leaned far out into the night, staring with wide eyes at his home and striving to get a glimpse of life about. But not a flicker answered his strained vision.

Like a cruel hand grasping tight at his heart he jerked himself upright. "Perhaps"—at the thought that held a question, strange pictures came dancing before him, clamoring for attention. His breath stopped for an instant and his throat became parched. Now that his mind had allowed the gruesome fancies to take hold, he saw in imagination, Minnie his wife, lying a huddled heap near the stove, a carving-knife near, her throat—no, not it was his pistol that he kept in his top bureau drawer. He had loaded it the day before—no, it was a rope and she was—"O my God!" he choked —"She wouldn't do that, she

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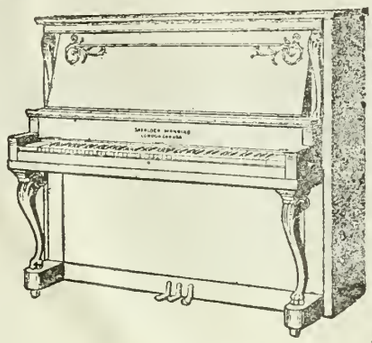

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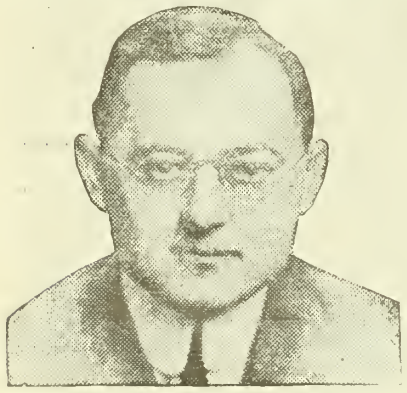

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My catarrh was filthy and loathsome It made me ill. It dulled my mind. It undermined my health and was weakening my will. The hawking, coughing, spitting made me obnoxious to all, and my foul breath and disgusting habits made even my loved ones avoid me secretly. My delight in life was dulled and my faculties impaired. I knew that in time it would bring me to an untimely grave, because every moment of the day and night it was slowly yet surely sapping my vitality.

But I found a cure, and I am ready to tell you about it FREE. Write me promptly.

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Send no money. Just your name and address on a postal card. Say: "Dear Sam Katz: Please tell me how you cured your catarrh and I how I can cure mine." That's all you need to say, I will understand and I will write to you with complete information. FREE at once Do not delay. Send postal card or write me a letter today. Don't think of turning this page until you have asked for this wonderful treatment that can do for you what it has done for me.

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wouldn't —" Suddenly he drew himself up, drops of perspiration running down his twitching face, "I'm a fool," he tried to reason with unreason. "It's the dog's barking that has got on my nerves. She ain't one to do a thing like that. Of course, she's all right." But, as he looked across the field that divided the land, he felt the silence cold and ominous. Even the dog had ceased barking, only giving out an occasional cry like that of a sick child's.

"O my God! Minnie!" he breathed, huskily, "What, what have you done In the white heat of terror, he stretched out his arms into empty space, his own shortcomings smiting him with exaggerated force. He magnified his impatience, his selfishness, his brutality until he became a monster of utmost cruelty.

"She ain't like Linda. I should a' known. She's too frail an' delicate, that's it. That's why I married her, 'cause she was so flower-like. If I had wanted a husky, I wouldn't a' chosen htr, An' here I go, putting work on her she ain't got strength to tackle. An' now see what I done. I don't blame her, poor little girl. O my God," he pleaded with stifled breath, "spare her, make me not too late, and I'll show her, I'll—"

With one bound he cleared the window and sped through the barley over the lence and on to the silent house.

"I'll ask no questions dearie," said Mrs. Wilkins, fussing maternally about Minnie Doane, as she sank into a rocking chair near the window "Land knows you re welcome to stay as long as ever you like. It's mighty lonesome having no one to bother about. Sometimes I almost wish Thomas would come back drunk even, an' give me some of his back talk. Ain't it queer, now, the way us humans is made? I often stop to think on it. When they're here an' try us most to death we pray they was dead, but the minute they're gon' we'd walk bare-footed on hot coals to get 'em back. He was all right, Thomas was when he wasn't in liquor, an' real considerate—sometimes Why, five years after we was married he brought me that stuffed owl that sets on the parlor table. It come from furren parts, Australey I guess 'twas or mebbe Africa, I don't know which.' Mrs. Wilkins looked reminiscently into space then wiping a solitary tear that stood in her dim eye she wagged her head slowly. "I declare to goodness, I do miss a man around somethin'awful. It's funny, ain't it?"

Minnie rocked quietly back and forth lending but half an ear to what the little widow was saying, while her mind strayed with her eyes through the window across the border of well-trimmed hedge of box to the cottage she had left but a a few hours before.

Mrs. Wilkins opened a cupboard. The odor of freshly-baked gingerbread escaped in spicy fragrance.

"Here dearie," she cajoled. "Eat some of these. It's a new rule I got at the Church Fair last week an ' It turned aut grand. Only one teaspoonful of shortening too."

"No, thank you, Mrs. Wilkins I've no fancy for eatin just now, althou' they do smell fine," Minnie returned wearily, scarcely glancing at the tempting brown mounds. "It's queer I've never let my eyes off that house She went on irrelevantly, half aloud, An' I ain't seen a sight of James, I know he ain't left, I'd a' seen him goin.' He always draws water from the well before nine; he never misses but he ain't come out yet."

As though urging their presence the little gingerbread cakes wafted their warm fragrant breath gently to ward her, so that she turned once more to contemplate them. James

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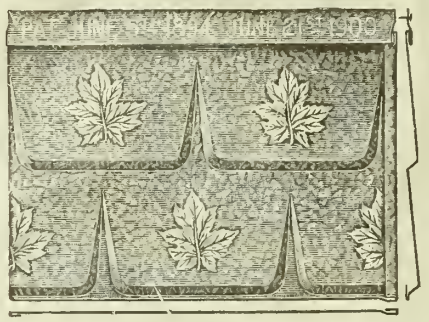

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loved gingerbread. He had said often enough, kind of as though to hint that a hatch would not go amiss. Linda made good gingerbread. It was an unwelcome reminder and turned her mind toward her grievance.

"It's all very well for them as can do it," she grumbled under her breath, "But I won t slave for any man."

The creak-creaking of the loose-jointed rocker soothed her at length, to a more gentle mood when through the stillness she noted the incessant barking of the dog.

"What's got into that dog," she spoke anxiously 'Why can't James let him out? I'll bet he does it because he knows I can't abide the noise." She got up petulantly as the barking continued and looked out over to the abandoned home, then glancing at the kitchen clock she turned quickly back.

"My Lord, only ten o'clock an' it feels like t'was nearly morning."

Mechanically she answered a "yes" or "no" to Mrs. Wilkin's unceasing prattle. It annoyed her to have to listen at all. She wanted to he alone As mechanically she followed her up to the "best" bedroom directly over the kitchen.

"Yes, I know, Mrs. Wilkins," she answered in an even, dull voice, "I guess you must be lonely without him only—only what can be the matter with Dicky—just listen to the way he is barkin'. Why don't James tend to him?"

Left alone she went over to the bureau and put out the light; she would sit and watch until she could see some signs of life over at the house. She was worried about Dicky she repeated again and again, yet this repetition did not bring conviction. It worked back to James; the dog was but the excuse. Leaning against the window frame she watched and watched for the light that must surely shine in a few minutes from their room. James always went to bed about this time. But the unfriendly casement looked back at her with sightless eyes.

What was James doing? Why didn't he light up, even if it was just to show her he was home and comfortable without her knowing she was near-by watching. If it had been her she would have had the whole house ablaze with lights. But men are different, somehow. It was awful to have to stand there and see nothing but a large dark hulk. Oh, why didn't he make a light if only for a minute and why didn't he try to still that barking?

Quickly she caught at a fleeting idea. What if something had happened. Something fearful, terrible. She had heard of such things many times; how awful tragedies came from quarrels. There was a case in the paper only a week before. She had read it over three times; it was so horrible. To think that just because a man came home and found his wife had gone and left him he had hung himself from a beam in the attic and it was days an' days before he was found and when they came upon his body—My but it made her sick even to think of it—and him some one she hadn't even seen!

Like a composite picture she drew up before her a vision, frightfully distorted. "Could he have"—with a stifled cry she shrank back from the window and threw herself upon the bed with an abandonment of weeping in which terror, contrition, love and longing were intermingled. The words Mrs. Wilkins had said came back to her. What could life be without him?

There in the darkness she pictured him lying so still, so still in the deserted house, a stream of blood, perhaps threading its thick red way from his open mouth along the floor like a snake. No wonder the dog was howling. And she was the cause of it all. Why had she left him? She had always loved him. He was right; no man would have stood as much. She could have made the home different, more like Linda's, more like Mrs. Wilkins if she had only tried a little harder.

;'O Heaven! give me another chance, just another chance," she sobbed.

Quickly, while tears coursed slowly down her cheeks, she slipped in stockinged feet to the hall, to the kitchen door and blindly sought the knob. Outside the lurid moonlight followed her as she ran, showing her face distorted by fear and labored breathing.

She opened the front door as Doane turned the handle at the rear entrance and they met midway in the hall. For a moment they stood staring foolishly at each other in the dim light that filtered through the window, not comprehending the dog racing wildly from one to the other in joyous relief.

Then as each took in the situation they laughed awkwardly; reaction from the strain of the past few hours acting as a harrier to free expression

It was for a moment only; for, as the tension relaxed the semi-darkness showed dimly two shadows that suddenly converged into one.

Then stealthily, Minnie groped back to the door, felt for the note she had pinned there and tore it quickly off Doane at the same time took the stairs at a bound for the paper he had left.

"Now, I wonder," exclaimed Minnie as she hurried to the kitchen, "if I've got any shortening for that gingerbread."—Elizabeth Myers.

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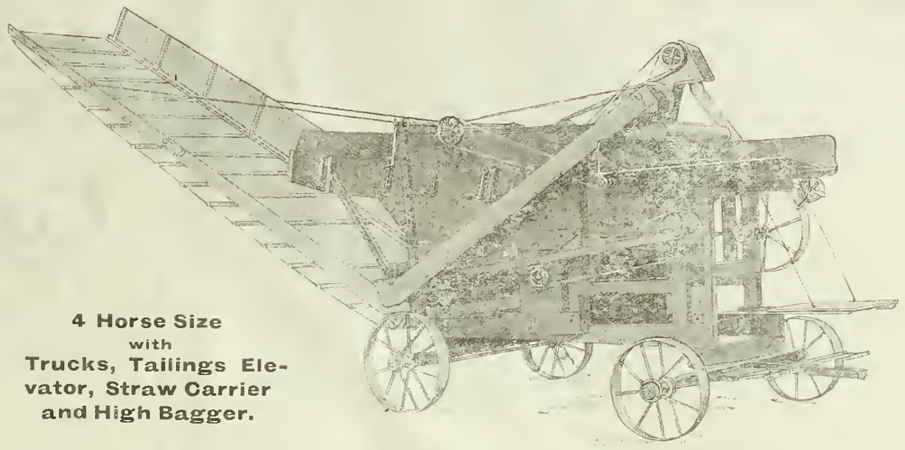

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The belly-band is made of an unhemmed strip of soft white flannel, sewed on firmly but not to tightly. At eight weeks it should be discarded for a loose, knitted band with shoulder straps.

The skirt should be of soft texture, silk and wool or cotton, fitted closely enough to avoid wrinkles.

The underskirt of soft flannel, which is preferable to a pinning blanket, is made with large, loose armholes, and is twenty-six inches long.

The dress or slip, twenty-seven inches long, should be simple and of soft material. The neck should be loose and is best tied with a soft tape. No lace or embroidery should be used on neck or sleeves. They may irritate the skin and cause eczema.

Cheese cloth diapers one yard square are the nicest for a little baby. Squares of soft linen placed inside the regular diapers are very comfortable and may be buroed.

Under no circumstances should a soiled or wet diaper be used without washing. They are best dried in the open air and foled without ironing.

Household Hints.

An old serge skirt, sponged, pressed and shortened to three or four inches from the ground will make an admirable rainy day skirt.

Do not let objects accumulate about your house; try to keep it simple and restful and remember that it is better to have a few things of real beauty than a great many mediocre or meaningless ones. Weed out!

There is something about darning stockings that seems to help the wits. Haven't you found that you thought out many a plan then? Have a pencil and paper at hand.

To clean a badly spotted zinc table scrub the zinc with hot soapsuds until you have a dull surface. Then make a paste of sifted coal ashes and kerosene; cover the spots with it and leave it on for some hours. Polish with clean, soft flannel. If the spots are still visible, dip a bit of flannel in paraffin and rub them well. Leave for a while and wash with hot suds.

If you knew of the real value of Chamberlain's Liniment for lame back, soreness of the muscles, sprains and rheumatic pains, you would never wish to be without it. For sale by all dealers.

SUFFERED FOR FOUR YEARS

From Heart Trouble and Nervous Prostration

Mrs. John Hewson, Caledonia, Ont., writes:—"I feel it my duty to let you know of the great benefit your Milburn's Heart and Nerve Pills did for me. I suffered for four years with heart trouble and nervous prostration. I was so bad that I could not go upstairs without sitting down at the top before I could go to my room. I couldn't sleep nor lie on my left side, for it would seem as though my heart would stop. I thought my time had come. I was doctoring with the doctor, but didn't get any benefit. I was advised to take Milburn's Heart and Nerve Pills, so I got two boxes, and after I had taken one box I began to feel better, and after I had taken two I could go up and down stairs without resting, so I took eight boxes, and I am enjoying good health again. I consider it a Godsend to have your pills in the house."

Milburn's Heart and Nerve Pills are 50 cents per box or 3 boxes for $1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Judging Domestic Science Exhibits.

Exhibitors in the Domestic Science Department at the various exhibitions will find judging rules for their guidance in the following scores submitted by A. Ethel Dunbrack, Supt. of the P. E. Island Women's Institutes.

THE STANDARD LOAF (Bread).

Flavor	20 points.
Baking (lack of doughiness	20 points
Texture and grain	20 points
Lightness	20 points
Sweetness	20 points
Color	5 points
Crust	5 points
Shape and Size	5 points

EXPLANATION OF SCORE CARD

Flavor—The flavor of bread should be much like the flavor of the freshly cracked nuts. It should not taste of yeast and it should not taste sour or musty.

Baking—Cut the bread through the middle of the loaf when it is at least twelve hours old. Press it lightly with the finger. The bread should be soft enough to press easily but the imprint should spring back to the level surface. Roll a crumb of bread between the fingers. If it is not sufficiently baked it will form a lump of dough. If well baked it will always crumble.

Texture and Grain—Bread should have a fine grain with small uniform holes, or air sacs all through the loaf.

Lightness—Bread should be equally light all through—a texture much like a fine sponge cake. If too light it will crumble and break when cut. If not light enough the texture will be close and heavy.

Sweetness—The bread should have no sour smell or taste.

Color—Bread should be a good, cream color.

Crust—The crust should be a golden brown on top and bottom and sides. It should be evenly brown.

Shape and Size—A loaf is more easily baked in a pan that is about ten inches long, four inches wide and five inches high. This makes a fine looking loaf that is not too large to bake well. The loaf should rise evenly and be of uniform height in all parts. It should not rise high enough to bulge over the side of the tin.

SCORE FOR CANNED FRUIT.

Fruit—Shape	15 points
Color	15 points
Flavor	30 points
Juice—Flavor	15 points
Clearness and consistency	15 points
Proportion of fruit to juice	10 to 100

SCORE FOR CANNED VEGETABLE

Flavor of vegetable	35 points
Condition of vegetable	35 points
Pro. of vegetable to juice	20 points
General appearance	10 to 100

SCORE FOR JELLY.

Ideal fruit jelly is a beautifully colored, transparent, palatable product obtained by so treating fruit juice that the resulting mass will quiver, not flow when removed from its mold; a product with a texture so tender that it cuts easily with a spoon and yet so firm that the angles thus produced retain their shape a clear product that is neither syrupy, gummy, sticky not tough; neither is it brittle yet it will break and does this with a distinct beautiful cleavage which leaves sparkling characteristic faces.

Color	10 points
Transparency	20 points
Taste	25 points
Hold shape, not flow	15 points
Tender, will cut easily	15 points
Firm angles retain shape	5 points
No signs of crystallization	10 to 100

The essential difference between preserves, jams, marmalades no where very clearly defined. Preserves from the meaning of the word originally meant the cooking of definite quantities of fruit and sugar, usually equal quantities, to such a consistency that the mass would keep without being heremetically sealed, that is the concentration of sugar present would be sufficient to prevent the growth of any organizins. In preserves, as the name also indicates an attempt is also made to have the fruit keep as near as possible its original appearance and shape, and the effect of the cooking in the sugar solution makes the fruit appear clear. In the preserves we can distinguish two essentilally different parts, the fruit and the juice.

Jams differ from preserves in that though the whole fruit is usually used, it is crushed in the juice so as to produce a homogeneous mixture. As a rule only the small fruits of which the whole may be used are utilized in jam making, for only in these are we able to use the whole fruit. When we discard the seed and all or part of the skin the resulting product is a marmalade or butter. In a butter the pulp only is used and it is usually strained to remove any lumps and distribute the pulp evenly through the juice. In a marmalade part of the peel or skin may be left in and there are distinguishable two distinct portions, the clear juice and the particles of fruit. The test as to when done should be easy especially in cases. Where there is any tendency to jelly, the same as for jelly.

SCORE FOR PRESERVES.

Fruit:

Shape	10 poiats
Clearness and Color	10 points
Flavor	15 points
Texture	10 points

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers. Box P. 309 Windsor. Ont.

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—

IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvellous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it towards the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyne, whether new or renewal subscription. When sending in money state which size you want. Send today.

We guarantee these burners to do as represented or money refunded. Extra burners 35c. each.

The Maritime Farmer

SUSSEX, N. B.

We are exclusive agents for these burners in the Maritime Provinces. We want agents for exclusive territory.

Juice:

Clearness and color	10 points
Flavor	15 points
Consistency	10 points
Proportion of juice	20 to 100

SCORE FOR JAMS.

Homogeneity (even distributing of pulp and juice and seed	38 points
Consistency	30 points
Flavor	30 points
Color	10 to 100

BUTTER SCORE

Smoothness	30 points
Consistency	30 points
Flavor	30 points
Color	10 to 100

MARMALADES SCORE

Hemogeneity	15 points
Consistency	25 points
Clearness	20 points
Flavor	25 points
Color	15 to 100

PICKLES.

In pickles the preservation is effected by the use of the vinegar and spices. This means the strength of the vinegar must be sufficient to start a preservation action also it must be sufficient in amount to cover the material pickled. Any sign of spoiling will disqualify the sample so it will not be judged at all.

PLAIN VEGETABLE PICKLES.

These will be judged under two heads (1) sweet; (2) sour, the same score being used in each case.

SCORE, PICKLES.

Flavor	30 points
Texture, firm not tough	20 points
Not soft or flabby	30 points
Color	10 points
Pro. of pickle to liquid	5 points
General appearance	5 to 100

MIXED VEGETABLE PICKLES

Choice and pro. of material	20 points
Con. and color of fluid	10 points
Flavor	30 points
Texture of vegetable mater.	30 points
Color	5 points
General Appearance	5 to 100

RELISHES.

In this class is included all ithe freshly ground pickles.

Choice and pro. of material	20 points
Size and uniformity pieces	10 points
Flavor	40 points
Texture of material	20 points
Color	5 points
General appearance	5 to 100

SWEET FRUIT PICKLES

A sweet fruit pickle has two distinct parts, the fruit and the juice. The aim should be to retain as much as possible of the flavor of the fruit. The only function of the juice is to serve as a flavoring medium and a source of flavor for the pickled fruit.

Texture of fruit	25 points
Flavor	40 points
Appearance of fruit	10 points
Clearness of syrup (cloudiness indicates loss of substance from the fruit	10 points
Consistency of syrup	10 points
General appearance	5 to 100

DOUGHNUTS

Flavor	50 points
Texture	35 points
General appearance	15 to 100

Flavor—Should not taste of soda, too much shortening or soaked up in lard. Pleasant taste with enough of salt to take aff sweet flat taste of dough. Spices permissible.

Texture — Feathery rather than short, free from holes and soda spots Not too close nor too dry.

General appearance—Nicely browned. Uniform in shape and size.

PASTRY.

Flavor	40 points
Texture	40 points
Appearance	20 to 100

Flavor—Should be of a sweet butter flavor rather than evidence of lard. Sufficiently salt to take away insipidness, flaky.

OATMEAL COOKIES

Appearance	15 points
Texture	35 points
Taste	50 to 100

CANDY.

Appearance	50 points
Variety	30 point
Work and Individuality	20 points

MEAT.

In judging cooked meat two main points are taken into consideration, namely that red meats should be cooked rare while white meats should be well cooked.

FRUIT CAKE.

Texture	25 points
Fruits and Nuts —	
Kinds	5 points
Size of pieces	5 points
Distribution	10 points
Proportion	5 points
Flavor	40 points
General appearance	10 to 100

POUND CAKE.

Flavor	45 points
Texture	30 points
Color	15 points
General appearance	10 to 100

Flavor—Not too salty; no soda flavor; sweet butter flavor; combined with richness; oo stale egg or bad butter flavor; must have no extract flavoring in evidence. Just delicate flavoring if any;

Texture—Close, even, moist, but not soggy.

Color—Yellow but not too deep. Score full on color if uniform, as it depends on color of butter and egggs used.

General appearance—Uniform on shape. Sharp edges on loaf. Golden brown on top, deep yellow on sides and bottom.

FANCY TEA CAKES.

Appearance	50 points
Variety	30 points
Work and Individuality	20 to 100

TEA BISCUIT.

Flavor	40 points
Texture	35 points
Color	15 points
General appearance	10 to 100

Flavor—Should not taste too buttery, or floury, or of soda.

Texture—Light and feathery, not soggy with butter or Shortening. Should be flaky.

Color—Creamy with no soda spots through crumb.

General appearance — Uniform in size and in color. Suggesting luciousness instead of flat and heavy biscuits. Cooked a deep yellow.

BARRELS OF SATISFACTION

Have You a Barrel of REGAL FLOUR In Your Home?

If so, you know what a delight this flour is on baking days; the rich, nutritious bread it makes---the kind that meets with the instant approval of the whole family!

If you have never used Regal Flour you should try it *now.* Tell your grocer to send you a barrel.

THE ST. LAWRENCE FLOUR MILLS CO., Ltd., Montreal

7 Choose Your Sweater Coat for style and fit!

WHEN you buy that sweater-coat (without paying any more) get one that looks stylish and remains that way, one that always fits well and won't bag or sag or stretch after a week's use.

Penmans Sweater Coats are made from fleeciest, choicest selected wools. They are knitted to shape according to well-defined physical types. You can get your exact fit in a Penmans Sweater Coat.

Don't be satisfied with anything less than Penmans—you'll find your color choice at any good dealer's

Penmans Limited
Paris, Ont.

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Sweaters
Underwear
Hosiery

The Charlotte County Exhibition

A Maritime Farmer representative visited the Charlotte County exhibition held in St. Stephen N. B. on the 15th to the 18th inclusive.

A good brand of weather brought out thousands of the residents of the county of Charlotte and the adjoining State of Maine. Good facilities for transportation via river and railway makes St. Stephen a centre easily accessible to the thrifty fishing hamlets on the islands and along the sea coast of the mainland of New Brunswick and the State of Maine.

A successful fair had been held during the previous week at Calais on the United States side of the majectic St. Croix and naturally American cousins across the line were anxious to come to St. Stephen and see how theCharlotte county exhibits comparaempr |lescvx county exhibits compared with their Washington county products.

We did not visit the Washington Co. fair but we are told the display was a very creditable one. The display made by the Charlotte county farmers, horticulturists and fishermen was one of which the management of the St. Stephen fair had every reason to be proud. Five hundred plates of apples sounds good for a Charlotte county fruit exhibition. Such was the aggregation which Mr. Gorham, Assistant Provincial Horticuturist was caked upon to judge at St. Stephen. The quality, both in size, cleanliness and color was all that could be desired at this season. The floral exhibits were up to the average of those seen at our provincial shows which showed that the decoration of home and its surroundings are not neglected in and around St. Stephen.

B. T. Reid had a big contract when it came to judging field and garden products. There was a profusion of well grown vegetables of all kinds and contests were both keen and close.

The products of the deep were shown in well cured lots of cod, haddock, pollock, hake and other kinds of fish. An interesting feature of this exhibit was a display made by the biological station at St. Andrews of preserved specimens in glass jars of various forms of sea life found in the vicinity of Charlotte county.

W R. Simpson, Oak Bay, had the best colection of grain in the straw.

Wesley Berry, Oak Bay; Harry Leeman, St. Stephen and W. B. Simpson, had the best assortments of potatoes.

Arthur Cluxton, Leverville and Frank Scott, Honeydale, had the best collections of field roots.

D R. Chower, Milltown; H. D. McKay St. Stephen, showed the prize collections of garden vegetables.

The poultry was judged by Seth Jones of the Provincial Department. There was a big showing in the Rock, Wyandotte and Leghorn classes with a fair showing in the other sections. There was a good display of watterfowl and some nice turkeys.

J. Frank Roach, Sussex, judged the Swine. There were some Berkshires, Chesters, Yorkshires and Hampshires but in every case there was little if any competition although some of the specimens shown would stand competition

Mr Roach also judged the sheep classes. No special fitting had been attempted but the sheep were all in good field shape.

Horses were judged by J. T. Prescott, Sussex. with general satisfaction. St. Stephen horsemen take considerable pride in their horses and some very good individuals and teams were shown although competition in most classes was not keen|

The dairy catte were judged by J. Frank Roach. There were small herds of pure bred Ayrshires, Jerseys, Holsteins, Guernsey and French Canadian and their grades, a good useful lot.

Of domestic arts there was an abundance of cleverly made articles that showed both good taste and skill in the planning and exectution of design. Preserves, pickles, jellies, canned goods, etc., were an appetizing looking aggregation.

Dairy products were judged by C. W. McDougall and H. B. Durost judged the apiarian products.

CATTLE

DAIRY BREEDS

Jerseys

Bull, 3 years and upwards—1, Ernest Hanson, Milltown.

Bull, 1 year—1, Ernest Graham, Moore's Mills.

Bull, junior, under 18 months—1, Ernest Hanson.

Cow, 4 years and upwards—1 and 3, Ernest Hanson; 2, Edward Hanson, St. Stephen.

Cow, 3 years—1, Thos. McClure, St. Stephen; 2, Wilfred Todd, Milltown.

Cow, 2 years—1, Edward Hanson.

Heifer, under 18 months—1, Ernest Hanson; 2, A. D. Ganong, St. Stephen.

Heifer, under 1 year—1, A. D. Ganong; 2, Ernest Hanson; 3, Leander Simpson, Oak Bay.

Heifer, 6 months or under—1, Ernest Hanson.

Herd, 1 bull and 4 females—1, Ernest Hanson.

Breeders' Young herd—1, Ernest Hanson.

Ayrshires

Bull, 3 years and upwards—1, Edwell Emerson, Rollingdam.

Bull calf over 6 months—1,Frank Lever. Leverville.

Bull, under 6 months—1 and 3, Edwell Emerson; 2, Tilley Reid, Leverville.

Cow—1, A T. Reid, Leverville; 2, Edwell Emerson.

Heifer, 2 years—1, Wesley Berry, Oak Bay; 2, Martin Reid, Leverville.

Heifer—1, A. T. Reid.

Heifer 12 months and over—1 and 3, Edwell Emerson; 2, Frank Lever.

Heifer, over 6 months—1, Edwell Emerson.

Breeders Young Herd, 4 females under 2 years—1, Edwell Emerson

Holsteins

Bull—1, Levi Stewart, Bailie.

Bull, under 2 months—1, Manzer Moffit. St. Stephen.

Bull calf, 6½ months—2, Howard Trafton, Lynnfield.

Bull calf, under 6 months—1, Manzer Moffit; 2, E. H. Barter, St. Stephen.

Cow, 4 years and upwards—1, Levi Stewart.

Heifer calf under 2 years—1, Manzer Moffitt

Heifer, over 6 months—1, Levi Stewart.

Heifer, under 6 months—1, Levi Stewart.

French Canadian Bull—1, W. S. Poole, St. Stephen.

Heifer Calf—1, Irene Dinsmore, St. Stephen.

Guernsey Cow, 4 years—1, W. R. Simpson, Oak Bay.

Cow, 3 years, beef grade—1, Wm. Moffitt, St. Stephen.

Pair steers—1, Asher B. Getchell, Lynnfield.

Steer, 1 year old—1, W R. Simpson.

Grade Jerseys

Cow—1, F. M. McCready, St. Stephen.

Jersey Cow, 3 years—1, Wm. Moffitt.

Jersey cow, 2 years—1, Lewis Acker, St Stephen; 2, Wm. Moffittt.

Grade Jersey Heifer—1, F M. McCready; 2, Wilfred Todd.

Heifer, 1 year old—1, Fred Coffey, Moore's Mills; 2, Harry Tourtilotte, St. Stephen; 3, Wm. Moffitt.

Heifer calf, 6 months—1, R. Torrance, St. Stephen.

Grade Ayrshire Cattle

Cow, 4 years and upwards—1, Edwell Emerson.

Cow, 3 years—1, Edwell Emerson.

Grade Ayrshire, 1 year—1, Martin Reid, Leverville; 2, Tilley Reid.

Heifer, 1 year and over—1, Frank Lever; 2, Tilley Reid.

Heifer, uhder 6 months—1, Cameron Berry, Oak Bay

Grade Holsteins

Cow, 4 years or upwards—1, Albion Moffitt, St. Stephen.

Cow, 3 years old—1, Manzer Moffitt, St Stephen.

Heifer, 1 year—1, Harry Tourtilotte; 2, Levi Stewart.

Grade Holstein—1, Albert Burns, Milltown, N. B.

Heifer, 6 months or under—1, Albion Moffitt; 2 and 3, Melborne Reynolds, St. Stephen.

Cow, 3 years—1, L. B Mitchell, St. Stephen.

Grade French Canadian

Cow—1, Manzer Moffitt; 2, W. S. Poole.

Heifer, 1½ years—1, Richard Thomas, St. Stephen.

Grade Heifer—1 and 3, W. S. Poole; 2, Wm. Moffitt.

Grade French Canadian Heifer—1, W. S. Poole; 2, Ralph Stewart, Old Ridge.

Herd, 4 French Canadian females—1, W S. Poole.

Fat Cattle

Beef animal any breed, not over 2 years—1, Wm. Moffitt; 2, Manzer Moffitt.

Pair Fat Cattle, any age—1, Wm. Moffitt.

Special

Bank British North America's Prize, Milking contest—1, 2 and 3, Ernest Hanson.

J. W. Richardson's Prize—1, Manzer Moffitt.

Cup—Edwell Emmerson.

SHEEP

Oxford Downs

Ram, 2 shears and over—1, Joseph Trundle, Waweig.

Shropshires

Ram, 2 shears and over—1, Ernest Hanson, Milltown; 2, Howard Trafton, Lynnfield.

Ewe, 2 shears and over—1, Howard Trafton; 2, Chas Dick, Moore's Mills

Ewe lamb—1, Howard Trafton; 2, Chas. Dick.

South Downs

Ram, (Spring 1911)—1, John A. Bell, Milltown.

Cheviots

Ram—1, C. A. Armstrong, Waweig; 2, Seth Bartlette, Old Ridge.

Leicesters

Ram, 2 years old—1, John Logan, Tower Hill.

Leicester ram—1, John Logau.

Any Other Pure Breed

Dorset ram—1, Freeman Lever, Leverville.

Shearling Dorset ram—1, B. A. Davidson, Tower Hill.

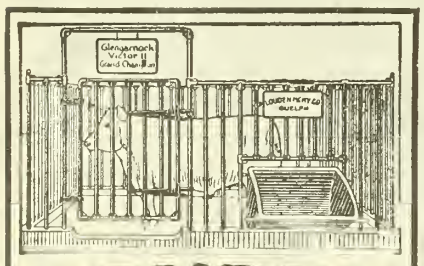
Ram, Dorset—1, Martin Reid, Leverville.

Ram lamb—1, Will McGibbon, Moore's Mills.

Firebox linings withstand years of use because made of McClary Semi-Steel. See a

McClary's Kootenay Range

You'll notice the linings are made in nine pieces. There's a good reason--ask the McClary dealer. 84



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Sanitary Steel Pens

— for —

Bulls, Cows, Calves and Hogs

Comfortable, Permanent, Secure

THE best animals in the country are stabled in LOUDEN pens, because the owners appreciate the convenience and protection secured, and the animals the comfort and freedom so necessary, when they are continually shut up.

Louden pens are constructed of the best tubular steel, and dust and germ proof malleable couplings, finished in aluminum. For quality, strength and service they lead.

Write for catalogue and for Free Barn Plans if you are building or re-modelling farm buildings.

The LOUDEN MACHINERY CO.
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GUNS TRAPS ANIMAL BAIT & All Camp & Trap Supplies

Everything for the Camp and Trap line at remarkably low prices. *"Hallam's Animal Bait"* for all flesh-eating animals. *"Hallam's Muskrat Bait"* for muskrats, and *"Hallam's Trail Scent"* will materially increase your catch of furs.

We buy FURS, HIDES AND WOOL the year round at highest prices.

FREE

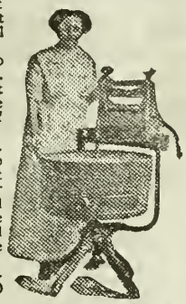
"HALLAM'S TRAPPER'S GUIDE' 96 pages; English or French; tells how and where to trap, game laws, etc., also 'HALLAM'S TRAPPER'S SUPPLY CATALOG,' 26 pages. Two good books FREE.

Write to-day to Department 78

JOHN HALLAM, Limited
111 FRONT ST. EAST, TORONTO

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.



So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally,
F. W. Morris, Mgr., Nineteen Hundred Washer Co., 357 Yonge Street, Toronto, Ont.

Ewe, 2 shears and over—1, Martin Reid; 2, Will McGibbon.

Ewe, Shearling—1, Martin Reid.

Ewe lamb—1, Martin Reid.

Grade Long Wool

Ewe, 2 years—1, Robert Hastey, Oak Hill.

Pr. Ewe shearling—1, Robert Hastey

Grades Medium Wool

Pair Ewes, 2 shears and over—1, Freeman Lever, Leverville; 2, Ernest Hanson.

Pair Ewes, shearling—1, Joseph Trundle, Waweig; 2, Freeman Lever.

Pair Ewe lambs—1, Tilley Reid; 2, Ernest Hanson.

Fat Sheep.

Ewe, 1 year—1, Tilley Reid; 2, R. W. Whitlock, St. Stephen.

Ewe lamb—1, Martin Reid; 2, R. W Whitlock.

Wether—1, R. W. Whitlock.

Wether lamb—1, Martin Reid; 2, R. W. Whitlock.

SWINE

Improved Berkshires

Boar, under 6 months—1, Albion Moffitt, St. Stephen.

Sow, 2 years old—Albion Moffitt.

Sow, over 1 year—1, Albion Moffitt.

Sow, under 6 months—1, Albion Moffitt.

Improved Yorkshires

Boar, 2 years old—1, Albion Moffitt.

Boar, 6 months and over—1, Edwell Emmerson.

Boar, Yorkshire—1, E E. McCarlie, Oak Bay.

Sow, over 6 months—1, Albion Moffitt.

Sow under 6 months—1, Abion Moffitt.

Breeding sow, with litter—1, Albion Moffit.

White Chesters

Boar under 6 months—1, Fred Greenlaw, Leverville.

Hampshire boar—1, Asher B. Getchell, Lynnfield.

Fat Pigs

Fat hog—1, Tom McDonald, St. Stephen.

Spring hog—1, Manzer Moffitt, St. Stephen; 2, Archibald Maxwell, St. Stephen.

Grades

Sow, under 1 year—1, Joseph Trundle, Waweig.

Sow, under 6 months—1, Joseph Thomas, St. Stephen.

Breeding sow with litter—1, Wm. J. Wilson, Moores Mills; 2, Seth Bartlette Old Ridge; 3, Joseph Thomas.

HONEY

Comb Honey in sections—1, Wilfred Todd, Milltown; 2, Walter Howland, Tower Hill, 3, W S. Poole, St. Stephen.

Liquid extarcted honey .light)—2, Wilfred Todd.

Liquid extracted honey (dark)—1, John Logan, Tower Hill; 2, Wilfred Todd.

Granulated honey in glass—2, Wilfred Todd.

Dispay for market—1, Wilfred Todd; 2, John Logan.

Comb honey super as left by bees—1, Martin Reid; 2, W. S. Poole.

Beeswax—1, Walter Howland; 2, Martin Reid.

Display for educational purposes—2, Wilfred Todd.

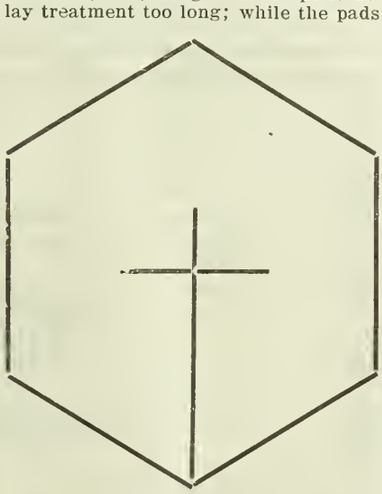
Italian bees in observation hive—2, Wilfred Todd.

Black bees in observation hive—1, Wilfred Todd; 2, D. R. Chowen, Milltown.

The Control of the Cabbage Maggot.

(Continued from page 855)

from the greater certainty of protection and liability of the latter to injure the plants. It is easier to apply the pads than to make one application of the emulsion, and to insure effectiveness of the carbolic acid, repeated treatments are necessary. In using the emulsion, also, the grower is apt to delay treatment too long; while the pads



Shape of Tar-Pad Slightly Reduced

are best applied as soon as the plants are set and then need no further attention.

Cost

In the past, the tarred-paper disks have been offered for sale at about seventy ents a thousand, and they can be made at home for less than this. In our experiments on sandy soil, with plants of suitable size, one man was able, without any previous experience, to adjust the pads carefully at the rate of 300 per hour. On this basis the cost of protecting cabbage will run approximately from $1.35 to $1.50 a thousand plants. The labor cost will vary according to the character and condition of the ground, and the way in which the plants are set. It is difficult to protect properly, by the disks, plants that are set low in the ground or are wilted.

Recommendations.

In the employment of tar-pads as a means of protecting early cabbage, truckers should arrange to transplant seedlings of good size with rather long stems. Disks cannot be satisfactorily adjusted about small plants, for in setting such seedlings it is necessary to place them low in the soil so that only the leaves protrude. Moreover, while transplanting it is well to avoid placing the seedling in a depression. This frequently occurs when the work of setting is done by hand, for in making a hole for the roots more earth is removed than is necessary, so that after the operation is completed the plant occupies the center of a shallow basin. Tar-pads placed about cabbages that have been set in such situations are liable to become covered with soil during the first shower, which reduces their efficiency.—F. H. Hall, Geneva Exp. Sta., N. Y.

How Sod Affected an Apple Orchard.

(Continued from page 859)

confer with the Minister of Trade and Commerce in relation thereto.

That all fruit packages including berry boxes, shall be well and properly filled, and in cases where there is evidence of under-filling inspectors shall have the right to weigh or measure fruit in such packages to find out if there is violation and prosecutions shall follow at the discretion of the Department.

RESOLVED That we would recommend that the Dominion Fruit Commissioner make inquiries with a view to selecting a standard box for domestic use.

WHEREAS the amendments to the Inspection and Sale Act recently passed, require that all shipments of imported apples should be marked in accordance with the amendments of the Inspection and Sale Act, Part IX, and that other marks inconsistent with the mark specified by the Act shall be erased; and

WHEREAS the designation "C" is allowed by the inspectors to be retained on boxes marked by the importers "No. 2," such apples subsequently being sold as "C" which is recognized as equivalent to "Choice":

RESOLVED That we respectfully request the Honourable the Federal Minister of Agriculture to take such steps as are necessary to have this mark, and all marks on imported fruit inconsistent with the provisions of the Act, removed by the importer at the point of destination.

RESOLVED That all forms used in the manufacture of eleven and six-quart baskets shall be inspected by an officer of the Fruit Branch, appointed for that purpose, and when conforming with the requirements of the Inspection and Sale Act, shall be stamped with a Government stamp:

And further that the Inspection and Sale Act shall be amended to make it a legal offence to manufacture from other than stamped forms on and after January 1st, 1915.

Resolutions were also passed thanking the Hon. Martin Burrell for calling the meeting and for his untiring efforts to aid fruit men, thanking men who had addressed the meetings for their splendid addresses and offering to contribute liberally in aid of Great Britain in the present struggle.

A strong resolution setting forth the loss felt by the fruit growers upon the death of the late A. McNeil, formerly Chief of the Fruit Division, and appreciating his efforts was also passed as well as a resolution asking the Government to consider transportation matters as pointed out in an address by Mr. McIntosh.

"There's a GOOD Job! I Used Amatite ROOFING"
"NOW I have the best roof in this township. One that will last—one that's waterproof—one that will resist the hardest storms—and I didn't have a bit of trouble laying it."
That's about what every Amatite owner says. Its superiority over all other ready roofing is apparent to any one who uses it.
Amatite does away with all roofing troubles and unnecessary expenses because it is made with a real mineral surface that needs no painting. It is durable, fire retardant, practical, economical.
Don't buy any other roofing till you look up Amatite.
Write to nearest office for samples.
Amatite REGISTERED ROOFING TRADE B MARK READY TO LAY MINERAL SURFACED NEEDS NO PAINTING DIRECTIONS INSIDE OF ROLL
The Carrite-Paterson Mfg. Co., Limited
St. John, N. B. Halifax, N. S. Sydney, N. S.

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All goods shipped parcel post.

THE MARITIME FARMER
SUSSEX, N. B.

Running up and down stairs, sweeping and bending over making beds will not make a woman healthy or beautiful. She must get out of doors walk a mile or two every day and take Chamberlain's Tablets to improve her digestion and regulate her bowels. For sale by all dealers.

Many Uses of Barrels.

How often we see barrels thrown around and rotting away, when they had as well be turned to good use—real and profitable use!

Sink a barrel in the ground to keep the swill in and you will not have to feed the hogs any ice-cold swill during the winter. But put it where the children will not get into it, and keep a good, tight lid on it.

By sawing a barrel in two one can make two good vessels in which to water the stock. Half a barrel also may be filled with good soil and some vining flowes planted in it, that will form a neat ornament for the lawn.

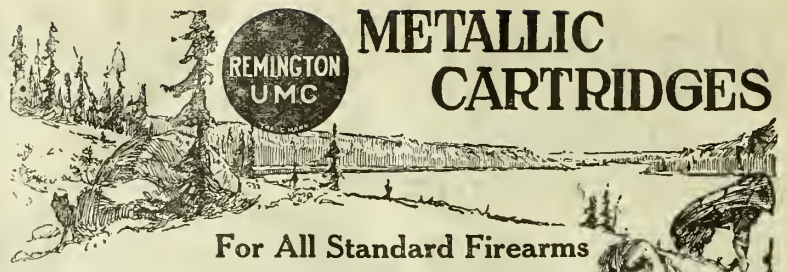
Barrels may be laid on the side, a slight depression being made in the ground to keep them from rolling an made into fine coops for the chicks. Throw in enough dry dirt to raise the "floor" on which the chickens roost to a level (or a little above) the ground outside to prevent the rain soaking in. Bore air holes in the sides and rear end and arrange a screen frame to put over the front part to keep the chicks in and the vermin out; clean out the droppings occasionally and renew the dirt floor.

Another good use to which we have put a barrel is to smoke meat in it Bore several holes in the bottom of a barrel (or arrange small hooks to hang the meat on). Invert the barrel over a good sized basin full of chips, etc., etc. and set them a-fire; leave a small opening at one side of the barrel for a draft and keep the flames smothered down till they will not set the barrel on fire. Watch the meat closely, as this is a quick method of smoking. When through, wrap each piece of meat in cheesecloth and hang away.

One summer, years ago, we had no good place in which to keep our milk and butter. Taking a large barrel, we sank it into the ground to within four or five inches of the top. Dirt and sand then were packed around the sides and water poured on them. A six-inch frame of boards then was set around the top of the barrel and it was filled with dirt. To cover all this we arramged a lid with hinges Inside the barrel we would set milk cream and butter, having them in pails or broad dishes, and on top of these vessels we would place fruit, vegetables and other eatables which one so often has to throw away when they have no place to keep them from one meal to another. Small shelves and hooks could be arranged on the inside of such a place and a considerable quantity of different articles kept therein. The sand surrounding the barrel should be dampened occasionally to keep it cool. It should be aired out once a week.

Lard for the Teats.

It is a good plan to have a small can of lard conveniently near at milking time, and in case of warts, ulcers chaps or bruises, apply it regularly after each milking to the parts affected, until the trouble is removed. A slight scratch or sore may look insignificant, yet it may be painful to the cow when grasped by the strong hand of the milkman. As the sore is so often broken open during milking, it require a long time to heal unless even constant attention. It sometimes happens that large rough teats become hard and rough after weaning the calf; these are soon rendered soft and pliable by the use of lard. Rubbing with lard will also quickly reduce inflammation of the udder. It will be no loss of time for the dairymen to attend to these teat troubles, for the cows will stand better while being milked, and there will be much less "crying over spilt milk," and the milker will obtain a greater yield at the same time. A veteriaarian might advise something better than lard; but many dairymen have found ir sufficient in keeping the teats and udders of their herds in good condition, the important features being timeliness and persistent application.



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IT must be a satisfaction to the individual rifle, pistol or revolver user to know that his preference for Remington-UMC Metallics is shared alike by professional experts, crack shots and sportsmen in all parts of the world.

So in ever increasing quantities Remington-UMC Metallics are made for every standard make and for every calibre in use—rifle, pistol and revolver.

Get them from the dealer who shows the *Red Ball Mark of Remington-UMC*—the Sign of the Sportsmen's Headquarters.

To keep your gun cleaned and lubricated *right*, use Rem Oil, the new powder solvent, rust preventative, and gun lubricant.

Remington Arms-Union Metallic Cartridge Co.
Windsor, Ontario

Breeding for Sex.

In speaking of this question an exchange sums up the scientific side of the proposition as follows:

The most up-to-date scientific explanation is that about half of the male germ cells contain an even number of what are known as chromosomes, while the other half contain an odd number. Spermatozoa containing an odd number of chromosomes when joined with the female germ cells, will result in male offspring. Those containing an even number result in female offspring. It would seem, therefore, that the determination of sex is a matter of chance, and that in every case the probabilities are for an even break. It is doubtful if man will ever learn how to control sex.

To Tell the age of Calves.

The calf when born has two pairs of incisors, the other two pairs appearing during the first month. When a calf is eighteen months old, it loses the middle pair of milk incisors, and grows a permanent pair. The next pair, one on each side, is replaced at twenty-seven months of age, the third pair at thirty-six months, the fourth or outside pair at forty-five months The time of appearance of these incisors varies within rather narrow limits, so that we are able to tell the age of young cattle fairly accurately.

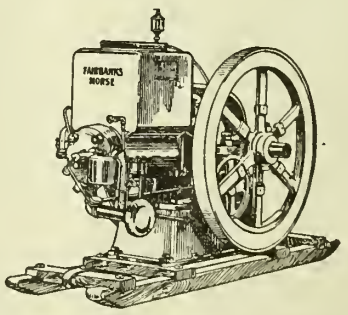
The calf also has a temporary set of molars, which are later replaced with permanent ones, but they are not considered in estimating the age of the animal.

Better Crops From Tilled Soils.

Soil drainage must be given more attenton on many farms. S. B. Haskell of the Massachusetts college gives the following timely suggestions:

In going over the state last spring after the wet weather of April and the early part of May, I was struck by the great number of late fields of corn seen on either side. In many cases this lateness was due to surplus water in the soil at the time when it should have been warming up, and also due to the fact that a slough or seep through the field rendered it impossibe to work that field until the remaining area became too dry for the best results. On the hillsides the same thing was seen,

Fairbanks-Morse Farm Engine



Serves every power purpose on the average farm. Easy to operate, simply and durably made, reliable at all times and will run on cheap fuels. Of the 160,000 Fairbanks-Morse Engines built during the past 35 years, 90% are still in active service. The best possible evidence of their dependability.

Many types and powers. Vertical and horizontal—portable and stationary—1 to 200 h.p.

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The Summer Complaint of Infants

IS CHOLERA INFANTUM

Many Children Die from this Trouble When They Could be Cured by the Use of DR. FOWLER'S EXTRACT OF WILD STRAWBERRY

A remedy which will quickly offset the vomiting, purging, and the profuse diarrhoea, accompaning a case of this nature.

Mrs. George Henley, Boxgrove, Ont., writes:—"I can recommend Dr. Fowler's Extract of Wild Strawberry for Cholera Infantum. My little girl was so sick I did not think she could live, as we could not lift her up, for when we moved her, her bowels would move. I gave her "Dr. Fowler's" and the first dose helped her, and one bottle cured her. I recommended it to my sister whose child was sick, and it cured her also. Then again I have told other friends about it, and they have found that it is a grand medicine to have in the house all the time."

There are many preparations on the market to-day, claiming to make the same cures as "Dr. Fowler's" but these no-name, no-reputation, so called strawberry compounds are nothing more or ess than rank imitations, and are liable :o be a detriment to your health.

When you ask for "Dr. Fowler's" oe sure you get it. Do not accept any other as these substitutes may be dangerous.

See that our name is on the wrapper.

Price, 35 cents.

The T. Milburn Co., Limited,
Toronto. Ont.

the trouble being caused by the spring spots which came to the surface, making planting impossible until too late for the best utilization of the soil. If land owners only understood the benefits which result from underdrainage, and the low cost of improvement by this method, a much larger amount of tile would be used than at present.

The drains may be made of either burnt cay or cement. One is as good as the other,, which means that the cheaper shoud be purchased. It is not necessary that the tie drain be porous. Water enters through the joints. It is as impossibe to pace two ties together so as to excude water, as to pace two bricks together with the same end in view. Porous tile may be used, however, where they are to be laid below the frost line, the only advantage being that these are sometimes cheaper than those hard burned or glazed tile. Also, they are not quite as brittle as tile of the latter classes. In shape, either the round or hexagonal types may be used, other forms being usually of too great weight to admit of long distance transportation. Occasionally, second-hand terra cotta building blocks may be obtained. These having regular openings through which the water may pass as fully as efficient as regular drainage tile, but may, of course, be used only where the price is exceedingly reasonable.

Stone Drains Not So Good

Drains of the above kinds are in the end much cheaper than stone drains, although, perhaps, no more efficient. It is nearly impossible to obtain men who can lay stone drains closely enough to make them last. Also, the lower cost of digging the ditch for the reception of tile makes these ditches with tile laid in the bottom and covered with earth thrown in, in the end much cheaper than open drains themseves. The size of open drains must give them a slope so flat as to greatly inrease the amount of earth which must be removed during the excavation

For the majority of farmers the greatest improvements can be effected by simply putting a line of tile through these paces where sloughs are formed during the spring of the year. These need not be put in more than two or three feet deep, although, of course, the bottom must have an even grade. If the digging is done at the time of the year when water is flowing in the ditches, there will be no trouble in securing an even fall. After the bottom of the ditch is made ready for the reception of the tie, these are laid end to end, making joints as close as possible, and covering the top with a strip of tar paper, straw, or any other coarse material. In some cases a layer of coarse gravel is used the effect of this material being to prevent the entrance of silt when the soil above is settling back into a hard condition. In silt sois there is a greater need of protection of this kind than in clay or sand. As soon as the tops are covered in this way, earth enough is thrown down from above to hold the tile in place and finally the whole of the ditch is covered either by hand or horse labor. It is desirable to tamp several times during the process of filling, although this is not absolutely necessary.

As regards cost, diggin gmay be done at prices varying from 40 cents to over $1 per running rod. Wherever hardpan is encountered, quicksand met with, or stones to be blasted, the cost naturally increases very greatly. Tile may be bought of wholesale dealers in lots of 500 or more; 3-inch tile should not cost, delivered to any Massachusetts railroad station, more than 3 cts. apiece. The factory cost is often not more than 1½ cents apiece and sometimes even less. For any slough where there is not a definite stream of running water, 3-inch tile will be large enough, larger sizes, of course, costing considerably more and not being used unless observation shows that the flow of water is heavy

The cost of laying the tie and filling the ditches varies from 10 to 20 cents per running rod. It will be seen that the total cost of ditching may then be as low as $1 per running rod, including everything, although the average cost wil perhaps be higher. When this cost is offset against the greater ease of cultivation secured, the longer growing season, the warmer soil, the greater freedom from the mosquito pest, and the greater value of fertilizers applied, the great profit from permanent drainage of this kind can be appreciated.

Fattening Horses for Winter.

What is a baanced ration for fattening a horse in winter?—G. S. A.

The proper ration for fattening horses would depend somewhat upon the class of animals fed. At the Illinois experiment station several tests were made respecting the efficiency of different rations for fleshing horses for market. Some of the conclusions resulting from this work may be helpful to the inquirer. They may be thus summarized:

A mixed grain ration of corn and oats, when fed with clover hay, is more efficient than a single grain ration of corn for producing large gains in an eighty-four day feeding period.

A ration of one-fourth oats and three fourths corn proved more ecvonomical than one of half oats and half corn.

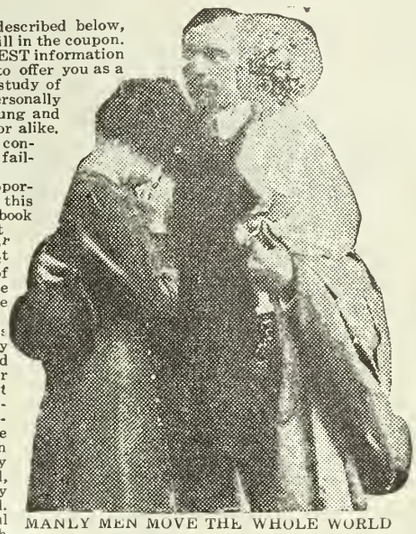
Clover hay when fed with a mixed grain ration of corn and oats is more efficient for producing gains than timothy hay. In this test clover hay produced 58 per cent more gain than timothy.

Best resuts were secured with a nutritive ratio of 1:8.—J. L. EDMONDS, Illinois Experiment Station, in Breeders' Gazette.

The cold fall rains are harder on the colts than the winter storms. Get them in the barn or shed during these rains. A little time spent in doing this is money in your pocket.

Book for Men, Free

8,000 Words, 30 Illustrations



MANLY MEN MOVE THE WHOLE WORLD

TO MY READERS:

Of the little illustrated advice book described below, which I gladly send free to all men who fill in the coupon. I beg to say that it represents the very BEST information of a private nature which I am able to offer you as a result of over 30 years' observation and study of my subject, during which time I have personally interviewed many thousands of men, young and elderly, single and married, rich and poor alike, who came to me in confidence with their confessions of debility, lost nerve force and failing strength.

It is, reader, this vast and unusual opportunity which has enabled me to compile this very popular and valuable little free book (over a million of which have been sent everywhere to men who wrote me for them), and in a manner to reflect the exact living, breathing experiences and needs of real men who sought information as to the newer ways of self treatment without the use of drugs.

Remember, this book of over 8000 words and 30 illustrations will come to you by return mail in reply to your request, and in a perfectly plain, sealed envelope, for it is no one's business but your own what the envelope contains. There is absolutely no obligation on your part to buy anything or pay anything, and merely the receipt of this book which does not mean in any way that you are to use one of my VITALIZERS (see description below) and, in fact, only a portion of the book has any reference to the VITALIZER at all. Primarily it is a compendium of useful information for private reference, which you and all other men may easily profit by through life.

Therefore, please use the coupon, or if nearby, I should be very glad to have you call.

SANDEN, AUTHOR.

It is a fact, reader, which you and I must recognize and admit, that the whole world admires and is fascinated by strong, vigorous, husky, manly manhood, and we must also admit that it is this same manhood and this alone which is back of the real leaders and producers in every walk of life. No matter where we go, we find it to be the manly, vigorous, vital fellow who forges to the front, who fascinates men and women of his community, who does the really great things. An unmanly man merely means nature's laws gone wrong, for it is he who halts and hesitates, who takes the back seat, who does not fit into the picture in a way that a manly, vital nature should. And yet, reader, it is my firm believe that any man, no matter what his past, no matter what dissipations or follies may have left their mark upon his physical and mental being, I say to you that such a man, unless there be some unusual reason, may hope for a complete return of his strength, vigor and self confidence, if he but go about his self restoration in a natural commonsense way.

I make a little appliance which we will call a VITALIZER, because I think that is the best word to describe its strange power. I don't want you to think of getting one of these VITALIZERS just now, but I would like you to investigate my claims as to what I believe can be accomplished by almost any weakened man who uses this VITALIZER faithfully for a few weeks. I speak, of course, of him who is willing to give up dissipation and lead a decent, conservative life, not only while using the VITALIZER, but for the future. The other kind of man, the dissipated, can hope for nothing from any treatment, no matter what it may be, hence such a man is eliminated from my consideration.

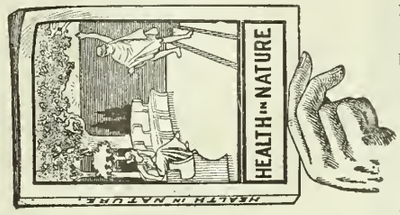
This little VITALIZER is made to wear upon the body all night. It weighs only several ounces and is no more unhandy than any ordinary belt, yet it generates a great FORCE that I call VIGOR, which flows inio your blood organs and nerves while you sleep. Men say it often takes any pain or weakness out of the back in one application, and that 60 to 90 days' use has been sufficient to restore manly strength and to put men in the "never felt better in my life" class. Special attachments carry the FORCE of the VITALIZER to any part of the body, for the use of women as well as men in cases of rheumatism, kidney, liver, stomach, bladder, disorders, ete.

Over two hundred thousand of these VITALIZERS have been used or are now being used by men all over the world.

You had better learn more of this VITALIZER. It is fully described in my free book. If you live near me, why not call and test the VITALIZER yourself.

WHAT THE FREE BOOK TELLS

The free illustrated advice booklet mentioned above is meant to be a single declaration of certain important truths that every man in the world should know. The day has gone by when men are kept in ignorance of the real problems pertaining to the e private subjects, and this illustrated advice booklet, which I send to men sealed, by mail, gives certain important facts relating to sex, just as these facts are. The booklet also fully describes my VITALIZER and you are told how you may get one for your own use if you decide that you want one. Please use coupon below, or call. Hours 9 to 6.



DR. M. F. SANDEN,
140 Yonge St., Toronto, Ont.

Dear Sirs,—Please forward me your book, as advertised, free, sealed.

NAME .....

ADDRESS .....

Periods of Gestation.

We are frequently asked to give the period of gestation for common farm animals. Below we give the approximate periods of gestation in these animals, together with the average period of incubation in our common farm poultry. It must be remembered that these figures are only approximate, and that considerable variation will occur. A record of 764 cows showed a variation of from 220 days to 313 days, an average of 285 days. A record of twenty-five sows showed extremes of 109 and 123 days. The age, breed, condition, care and feed of animals affect the length of the period of gestation.

Following is the table:

Mare—11 months!
Cow—9½ months.
Sheep—5 months.
Sow—4 months.
Dog—63 days.
Turkey—26 to 30 days.
Geese—27 to 30 days.
Ducks—24 to 26 days.
Hen—19 to 24 days.

Hon. J. A. Murray Appeals to Farmers

This Should be Big Acerage Year in New Brunswick---Should Help the Empire

The Maritime Farmer recently asked the heads of the Agricultural Departments of the three Maritime Provinces for an expression of opinion as to how the farmers of Canada may best serve the Empire during the present trying period. The first article, from the pen of Hon. J. A. Murray, Minister of Agriculture for New Brunswick, urges every farmer to make preparations for the biggest crop ever. Prices next year will probably be higher than they are this, but apart from that every possible acre of land should be prepared this fall for next year's crop. An article by Hon. George Murray, Premier of Nova Scotia, which arrived too late for publication in this issue, will appear in our next. It will be well worth reading.

Dear Sir:—

My attention has been directed to an article in your issue of the Maritime Farmer under date of Aug. 25th in which you ask the question as to how farmers can best help England in her death grip with Europe.

Your answer to this question is, that here in the Maritime Provinces our agricultural classes do all in their power to increase the acreage under cultivation, providing for the largest crop that it is possible to raise.

I have read this article with very considerable interest and desire to most heartily endorse the attitude you have taken in this matter, and I am glad to commend it to the serious and favorable consideration of our farmers in the province of New Brunswick. The Empire's need at the present moment is quite apparent. Many thousands in Great Britain have gone to the front, leaving behind those who are dependent upon them. These people must not be neglected, and England naturally turns to the agricultural portions of the Empire, than which there is none greater than Canada, to assist her in supplying the wants of these people. I might point out the fact that the answer of the British Government to every province in Canada, when making an offer of a gift of food to the Empire, has been that the offer was thankfully received and the gift would be most gratefully accepted. This is an indication that, even thus early in the struggle that is taking place, the importance and the necessity for food supplies are recognized by the authorities in England.

During the last few weeks Canada has sent many thousands of her young men, volunteers for active service in Europe. Her response to the call "To Arms" was splendidly spontaneous and fills us all with pride for the brave men who have gone to aid the Motherland in this hour of her need. We delight to give expression to the tribute of praise, to the pride that we feel at this generous response from the highest type of Canadian manhood.

While, however, we honor the brave we must realize that, as you have so clearly indicated in the article referred to, assistance can be given England at this time in other ways than that of bearing arms. One of the most effective means by which the people of New Brunswick can at the present time give evidence of their loyalty and their desire to assist is by a united effort to put under cultivation all the available farm land possible, in order that we may do our share towards relieving the burden by being in a position to supply those who are nearer the scenes of active service.

To the farmers of New Brunswick, this presents an opportunity, not only for patriotism, but for future profit to themselves, by placing them in a position to supply a market that will be open for a long time to come.

I am glad, in this way, to cordially approve the sentiment expressed in your article and to appeal to the agricultural classes of New Brunswick to unite with those who have, in ways that are more apparent, gone to the service of the Empire, and lend themselves to the cultivation of the large acreage in this province which has heretofore not been utilized in this way.

The New Brunswick Department of Agriculture will facilitate this movement in every possible way, and I invite correspondence from every section of our province on matters relating to the subject and any advice that can be given, as to crops to be raised and methods to be pursued, will be gladly and cheerfully given, and the whole resources of the Department devoted to assisting our people in the performance of a work that is patriotic in its nature and of inestimable benefit to the people, not only of the province, but of the nation at large.

Yours very truly,
J. A. MURRAY,
Minister of Agriculture.

EVERY FARMER SHOULD KNOW

how to make the most money out of his land. If your Fall Wheat crops have been diseased and poor, there is a seed dressing that will ensure you a better field at trifling cost.

CORVUSINE D.G

prevents ground rot, assists germination and is an excellent smut dressing. Corvusine is NOT poisonous, birds and animals will not touch it, and it has none of the dangerous features of bluestone and other obnoxious chemicals. 1

WRITE FOR PARTICULARS OF THIS WONDERFUL SEED DRESSING TO

McArthur, Irwin, Limited - Montreal, P.Q.

The Yellowness of Milk and Butter.

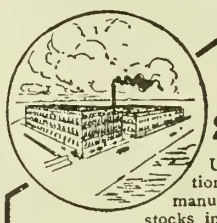
Chemical tests show that the yellow pigment in milk consists of several well-known pigments found in green plants. Of these the principal one is carotin, so called because it constitutes a large part of the coloring matter of carrots. The other yellow pigments in the milk are known as xanthophylls. These are found in a number of plants, including grass, but are especially abundant in yellow autumn leaves.

These pigments pass directly from the feed into the milk. This explains the well-known fact that fresh green grass and carrots increase the yellowness of butter, the only standard by which the average person judges its richness. On the other hand a large proportion of these pigments is deposited in the body fat and elsewhere in the cow. When the ration is changed to one containing fewer carotin and xanthophylls constituents, this hoarded store is gradually drawn upon, and in consequence the yellowness of the milk does not diminish so rapidly as it otherwise would. This yellowness increases, however, the instant the necessary plant pigments are restored to the ration.

Green grass is probably richer in carotin than any other dairy feed. Cows fed on it will therefore produce the highest colored butter. Green maize, in which xanthophylls constitute the chief pigment, will also produce a highly colored product. On the other hand a ration of bleached clover hay and yellow maize is practically devoid of yellow pigments and the milk from cows fed upon it will gradually lose its color. It is, of course, indisputably true that the breed does influence the color of the milk fat; but vary the ration and there will be a corresponding variation in the color of the milk fat in each breed. In cows of the Jersey and Guernsey breeds the body fat is frequently of such a deep yellow color that some butchers and consumers look with disfavor upon the beef from these breeds. For this prejudice there is absolutely no justification. The yellowness of the fat springs from the same causes as the yellowness of the milk fat and there is no reason for objecting in one case to the very thing that is prized in the other.

Renneting Cheese.

In the manufacture of cheese an important point is to produce a curd of the correct consistence. This is effected by adding the proper amount of rennet to milk which is at a suitable temperature and contains the right percentage of acid, chiefly lactic acid. After the rennet has been incorporated in the milk it is most essential to maintain it at the renneting temperature until the curd is cut. The jacket of the cheese vat should be full of water at about two degrees above the renneting temperature, and the vat covered while the milk is coagulating. If the milk is allowed to fall in temperature a soft curd and loss of fat result. By having the water in the jacket of the vat too hot the temperature of the milk will rise, and the curd then become too tough. Except in rare cases there is a difference in the quality of the evening's and morning's milk. In the evening the quantity of milk yielded is smaller, and the quality higher than that yielded in the morning.



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Unusual business conditions are forcing large manufacturers to sacrifice stocks in order to keep their mills running. To the alert buyer this represents an unprecedented opportunity to save money. These chances come only once in a long time—when they do come it pays to act quick.

WALL BOARD

Wall Board takes the place of both lath and plaster. It gives a finished wall without further decorating. Anybody can put it on. Now selling at a special price. 2½ Cents Square Foot

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Lowest prices on record. Genuine Asphalt Felt Roofing 100 per cent. saturation, contains no tar or paper. In full rolls of 108 square feet with nails and cement. 79 Cents Roll 108 Sq. Ft

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BUILDING PAPER

A great snap at this price. Full measure rolls 400 sq. feet in each. Use it plentifully at this price. SAMPLE FREE. 35 Cents Roll 400 Sq. Ft

The Halliday Company Limited.
FORMERLY STANLEY MILLS & Co.
HAMILTON ESTAB. 1866 CANADA

The Udder of the Breeding Animal.

We are scarcely concerned here with the value of the "three-papped cow" as a milker, but when we hear it said. as we do sometimes, that the cow gives al the more milk with the three teats when the fourth is closed, we are inclined to dissent The man who has a "three-papped cow" to sell is always ready to believe, and affirm, that the remaining quarters take upon themselves the function of that which is "lost," but the buyer is rarely found who will give as much money for a cow with a "lost" quarter as he would if her udder were sound. That there are some "three-papped" cows who give as much, or a great deal more, milk than others with four sound quarters is true enough, but that the cow who has lost a quarter gives as much milk as she would do if she had a perfect udder is, it seems to us, absurd. In our opinion it should be carefully ascertained that an animal is perfectly fitted for reproduction before it is set apart for breeding purposes, and special care should be taken to see that in the case of the female the udder and teats are perfect, because it is obvious that on this depends her usefulness as a milk producer, or her ability to rear her offspring. We have seen many heifers and ewes with imperforate teats, and in one case a ewe without any teats at all.

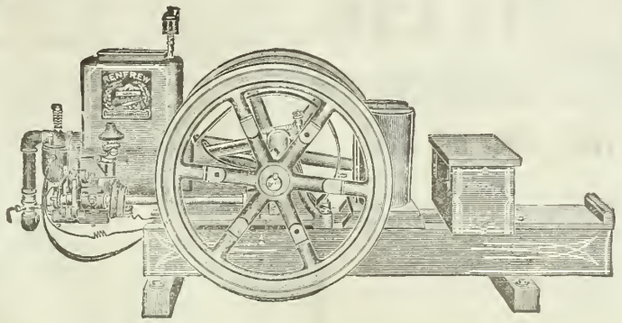
Trouble with the Teats.

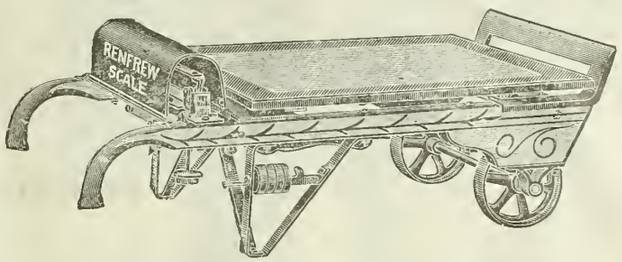
When the imperfection is discovered, as it generally is when parturition is approaching, or, as often happens in the case of the ewe, after it has occurred there is not much to be done. In such cases, if perfect in other respects, which is commonly the condition, the gland enlarges, but there is no exit for the milk, it is not available for the offspring, and inflammation of the udder results from its retention. The practical dairy farmer knows that there is no more fertile cause of mammitis than "hefting," or imperfect removal of the milk, and if this is the result of neglect of clean stripping, what is likely to happen where no milk can be got a quarter for whose secretion there is no means of exit? The usual result of retention of the milk on account of the teat being impervious is that abscess formation occurs, and the curdled and decomposed milk is thown off in the pus. Thus the heifer with an imperforate teat or teats is very likely to give a good deal of trouble, even under the most favorable conditions of being able by operation to provide an artificial passage. In some cases an incision at the end of the teat may open a partly developed duct, from which the milk may be removed or drawn off with a teat-tube or milk syphon, but even so, "blind" teats are troublesome because the artificial opening into the duct is necessarily imed by nature, and is generally sore and perfect as compared with that provid painful. We believe that animals with even minor congenial mammary deformities should be rejected for breeding purposes, as these, like other vices of conformation, may be transmitted to the progeny. The annals of breeding record the transmission of many acquired defects, but this is quite a different matter from a case of congenital deformity of deficiency, to which there is certainly an inheriter tendency

The examination of the mammae should not be confined to those which have not been used for breeding purposes, for those which have already produced young may, during the suckling period or driving off process, have received injuries or suffered from disease, resulting in structural changes in the gland substance that quite unfit them for milk production. There may be circumstances under which it would not be very risky to breed from such again: but is it not a fact that in most cases the mammary inflammation terminating in induration or atrophy, or "lost quarter," occurs subsequent to the animal becoming in-calf, when the farmer has no option but to let nature take her course? Few deliberately breed again from the "three-papped" cow, and even if this was the general practice, it is, as we have endeavoured to show, not by any means the same thing as breeding from a heifer having a teat or teats without ducts through which to draw the milk that the gland substance will secrete.—Veteran.

Renfrew Standard 3 Winners

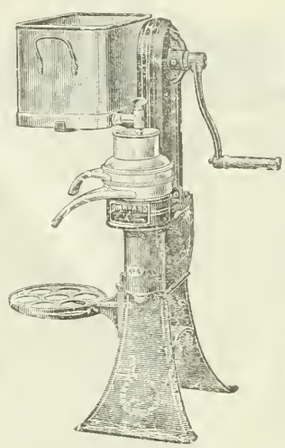
HERE is an engine that starts without cranking in all kinds of weather—that has a fly ball governor just like a steam engine—that has the most economical Carburetor built. We have the proofs right from farmers to substantiate its gasoline economy. This engine also requires but little water for cooling, and is so easy to manage, a young boy can run it. All styles and sizes from 2 1-2 to 60 H. P. Also the Little Renfrew of 1 1-2 H. P. Write for Gasoline Engine Catalogue.





Some farmers may think they can get along without a good scale. So they can. But they are losing more than enough to pay for one in a very short time. Our scale booklet tells why. It also describes in detail the Renfrew Handy Two Whee Truck Scale, which will weigh anything from 1 lb. to 2,000 lbs., regardless of size. Write for copy.

The 1915 Model Standard marks the latest radical advance in cream separator construction. The one frame now accomodates all sizes of bowls. In future, instead of buying an entire new machine when you require a larger size, all you need to do is to exchange for larger size bowl and fittings. Another advantage of this interchangeable capacity feature is that the frame and working parts are strong, rugged,and powerful enough to drive a 1,000 lbs. bowl—the larg est size. Think of the tremendous margin of safety this means on the sizes from 350 to 800 lbs. Also bear in mind that every Standard has sufficient over-capacity to skim from 100 to 300 lbs. an hour faster than rated capacity and still do the work equally as well as other separators. There are other new features, too. Get our separator catalogue which gives full particulars.



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Office for Maritime Provinces : SUSSEX, N. B.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

FOR SALE.—White Wyandotte Cockerels. Choice stock $2.00. G. H. BURNETT, St. John.

CHOICE SHORTHORN BULLS FOR SALE WALTER EATON, Upper Canard, Nova Scotia.

FOR SALE — Young Pigs, Yorkshires. R. O'LEARY, Richibucto, N. B.

FOR SALE—At a bargain, a good "Dairy Farm" 18 cows, young stock and machinery. Apply to A. A. REID, Box 22, Oxford, Cum. Co,, N. S.

100 POST CARDS, POSTPAID. 35c. Big assortment—Lovers, Comic, Friendship, Views, etc. FARMER EMPORIUM, Beebe, Que.

SOUTHDOWN YEARLING RAMS FOR SALE. —McEwens strain, registered. Apply E. SHARP, Van Horne's Farm, St. Andrews, N. B.

FOR SALE —Holstein Bull two years old, best of breeding, fine animal. JOS. R. TAYLOR, Upper Dorchester, N. B.

EXPERIENCED married man wants job on a farm as manager with best of experience, age 33. Apply Z, care Maritime Farmer.

FOR SALE—Trenholm Hay Press mounted on trucks. Has pressed only 70 tons. A bargain.—THE SUSSEX MOMOR CO., LTD., Sussex, N. B.

FOR SALE,—O. J. C. Pigs, 4 weeks old, cheap if ordered at once.—A. A. McLEAN, Lime Hill, Inverness Co., N. S.

FOR SALE.—Imported Purebred Berkshire Pigs, from first prize winners; now ready for delivery.—SHAW BROS. Victoria, Carleton Co., N. B.

SHEEP $7.00, LAMBS $6.00, Oxford Downs. High Grade flock headed by best Pure Bred Ram obtainable in years. WM. B. LYNCH, Kempton, Col. Co., N. S.

FOR SALE.—One Jersey Bull, eight months old, Resistered. Also one bull-calf, Registered, two months old. Apply J. A. DUFFY, Nauwigewauk, N. B

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

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TWO LITTERS YORKSHIRE PIGS for sale. Also a few high grade Holstein heifers one year old and upwards. ARTHUR E. FERGUSON, Bathurst Village, N. B.

FOR SALE.—White Wyandotte Cockerels, 260 egg strain, large, blocky birds, grand table fowl. If you have a White Wyandotte Flock you want one to head it, and if you have a mixed flock one of these will double the egg yield. Price from $1.00 to $2.00 each.—B. V. MILLIDGE, St. John, N. B.

FOR SALE.—Partridge Wyandotte Cockerels $2.00 each. Choice stock.—THOS. A. REARDON. Sussex, N. B.

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AYRSHIRE BULL FOR SALE.—Belvoir Augustus—36664—a grandson of the N. S., A. C. bull, McQuittiston Secretary, calved January 15, 1911. Sure stock getter. Just the right kind for an Agricultural Society. W. M. CHISHOLM, Loch Lomond, N. S.

LADIES WANTED TO DO PLAIN and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send Stamp for particulars. NATIONAL MANUFACTURING CO., Montreal,

FOR SALE.—Fancy Pigeons, all kinds. Barred Rocks, Pullets and Cockerels. White Wyandotts, Pullets and Cockerels and breeding pen of both. All exhibition stock. Apply WILL JORDAN, Kentville, N. S., Box 203.

WE WILL PAY YOU $120 to distribute religious literature in your community. Sixty days work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used.—INTERNATIONAL BIBLE PRESS 182 Spadina Ave., Toronto.

FOR SALE—My two Shear Registered Pure Bred Shropshire Stock Ram. If interested write for particulars and price.—JOHN MACKENZIE Marble Mt., N. S.

FOR SALE—One pure bred Berksbire Boar, 16 months old, excellent conformation and size. Sire and dam prize winning.—J. ALLAN, "Langwater Farm," Drummondville P. O., Richmond Co., N. S

Running up and down stairs, sweeping and bending over making beds will not make a woman healthy or beautiful. She must get out of doors walk a mile or two every day, and take Chamberlain's Tablets to improve her digestion and regulate her bowels. For sale by all dealers.

The Ross Rifle

Bring Home Big Game

To anchor big game and prevent its getting away as so often happens, even when fairly hit, take a "Ross" 280 High Velocity Rife with you on your next trip, and use the Ross Sporting Ammunition with copper tube expanding bullet, patented

The combination gives the lowest trajectory practically doing away with the necessity of judging distances, and the 'shocking' power of the Ross Copper tube bullet that brings down any game it hits. Sportsmen all over the world are adopting the "Ross" 280 and using its special ammunition. Ross 280 High Velocity Rifles $55. Ammunition $7.50 per 100—other models Ross Rifles from $12.00. Full illustrated catalogue on request.

Ross Rifle Co., Quebec, Que

SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion Land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead Price $3.00 per acre.

Duties—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent on certain conditions.

A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price $3 00 per acre. Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth $300.

The area of cultivation is subject to reduction in case of rough, scrubby or stoney land. Live stock may be substituted for cultivation under certain conditions.

W. W. COREY, C. M. G.
Deputy of the Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—64388.

FREDERICTON BUSINESS COLLEGE

Our Fall Term opens on

Tuesday, September 1st

NOW is the time to write for FULL PARTICULARS.

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W. J. OSBORNE
PRINCIPAL
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The implicit confidence that many people have in Chamberlain's Colic, Cholera and Diarrhoea Remedy is founded on their experience in the use of that remedy and their knowledge of the many remarkabe cures of colic, diarrhoea and dysentery that it has effected. For sale by all druggists.

How an Amateur Cured a Case of Milk Fever.

Editor The Maritime Farmer:

Allow me to congratulate you upon the very great improvement lately observed both in the appearance and subject matter of the Maritime Farmer. However, I merely mention this in passing.

My name figured in the last issue of your paper in the article on "Milk Fever, and How to Combat it." This is a timely subject and I take this opportunity of giving a detailed account of how an amateur, who not only never attempted to cure milk fever by air inflation of the udder, but who had never seen that remedy applied, scored complete success.

The cure was effected in South Brookfield, Queens Co., N. S., where I was engaged in carrying out orchard demonstration work. The cow, a fine type of a grade Jersey, the property of Postmaster Andrew Freeman began to show signs of milk fever, the second day after dropping her calf—staggering on her hind legs, the loss of appetite, etc. I did not hear of the case till the cow was down and apparently out and given up to die. Contrary to Mr. Avery's statement I found the cow lying on her left side motionless; the eyes partly closed and glazed looking. No bicycle pump was available, so I was forced to use a common atomizer, which cost $1.25, but was worth in this emergency $60.00. By moistening the teats I managed to insert the somewhat blunt end of the tube into the teat and held theinstrument in place, while Mr. Freeman worked the rubber bulb.

We had not worked 15 minutes with the cow before she bagan to show signs of recovery; opening her eyes, and turning them to look at us. In about 30 minutes we succeeded in filling the four quarters of her bag as tight as a drum. We did not tie tape about the teats. Last winter I listened to a talk at the Bridgewater Short Course, given by the late lamented Dr. Standish, on this same subject, and I do not think he spoke of tying the teats with tape to prevent the escape of air. After dinner we repeated the operation with the atomizer and then had to leave to visit some orchards, not returning until 6.30 p. m. Much improvement was then noticeable in the patient — she had turned over in an attempt to get up. We assisted her in getting on her legs and she began to eat hay. On the following morning I looked in at the stable on my way to take the stage to Fulton, at 5.30 a. m., and found the cow up eating hay and lowing for her calf.

Four days later Mr. Freeman sent me the following letter which speaks for itself.

"Dear Mr Robinson:—

Am very pleased to say that my cow has entirely recovered from her sick spell thanos to Dr. Standish and L. D. Robinson. Have had her in the pasture yesterday morning and again this afternoon. Her mess of milk has gone up from 1 quart to 5½. I have not measured it for the last day or so. Her udder is entirely natural and she appears to feel fine. Yours sincerely,

A. W. Freeman."

The simplicity of the remedy, and the completeness of the cure seem almost miraculous.—L. D. Robinson, Berwick, N. S.

In the Root Field.

"You have got some splendid roots John, and they certainly are big for this time of the year. Man, but you must have a mascot to help you, or else you must have been born with

They fill the game bag

FOR successful shooting in field or marsh and high scores at the traps, use

Dominion Shot Shells

Absolutely uniform and dependable—producing complete shooting satisfaction.

The crimp on each shell is firm and hard, the action in pump guns is positive. The shooting of one shell shows the qualities of every other—close pattern; sure, quick primers; high velocity; even pressure; moderate recoil.

Ask your dealer for the "Canuck," the quick load for fast shooting. Other popular shot shells: Imperial, Regal, Sovereign and Crown.

Sold everywhere.

Send 10 cents postage for set of colored game pictures.

Dominion Cartridge Co., Limited
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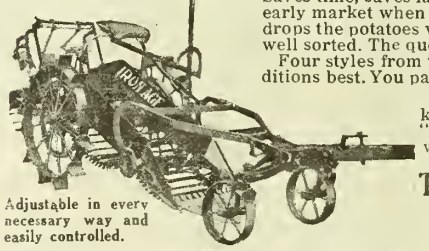
MONTREAL

TRADE MAR"

"The only ammunition entirely made in Canada."

Digging Potatoes with an IRON AGE

Costs less to keep in repair than any other elevator digger.



Adjustable in every necessary way and easily controlled.

Saves time, saves labor, gets all of the potatoes, helps you get to an early market when the price is right. Digs, separates thoroughly, drops the potatoes where you want them, and in most cases fairly well sorted. The question is: Can you afford to be without a digger?

Four styles from which to choose the one that suits your conditions best. You pay for and your horses draw only what you need

We have been making Diggers 10 years and know what to build for this work. Our booklet "D" tells the whole story in an understandable way. May we send it ?

The Bateman-Wilkinson Co. Limited
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THE HALL IMPROVED UNDERSHOT THRESHER.

Is Guaranteed to run Smoother, clean the grain Better. Stand the strain of an engine Longer. Will thresh more grain than any 26-inch cylinder machine of its class made, and sells for less money.

Agents Wanted Where Not Represented

Write us for prices and particulars,

Hall Manufacturing Co., Limited,
SUMMERSIDE, Prince Edward Island.

Farmer Ads Bring Results----Try One Today

all kinds of good luck."

"Oh, I don't know about that. To be sure, Bill, if due allowance is only made for their requirements in regard to cultivation, plant food, and time of seeding, the roots very seldom fail. In fact I count them as being one of my most reliable crops."

"You don't say. As for me. I have found them to be just about as unreliable as everything else under the sun. This year, at home, the seed not even germinated, at least not in time. Most of it never came up until after the last rain, and under such conditions neither cultivation or manure help very much. I got started rather late with the seeding, and, do you believe me—the drills were just as dry as dust a couple of days after seeding, and much of the seed actually blew away in that terrific wind we had the first days of June."

"Say, Bill, but you are a regular old-timer. Now I begin to understand why you call the roots unreliable. You hauled the manure out this spring?"

"Well, yes, I didn't have time in the winter."

"And you never harrowed the land I suppose?"

"Of course I did. Do you think I would seed without harrowing as some farmers do? No, sir, not for me. I don't believe in that method. I plowed down the manure, disked my land twice, and harrowed and rolled it before drilling, and rolled it again before I started to seed."

"Yes, but you never touch it at all until close upon seeding time? Did you not put on a light harrow as soon as the land could carry the horses?"

"Of course not. You can't jump over the whole farm at once. You have to do everything in turn. But say, John, what are you driving at?"

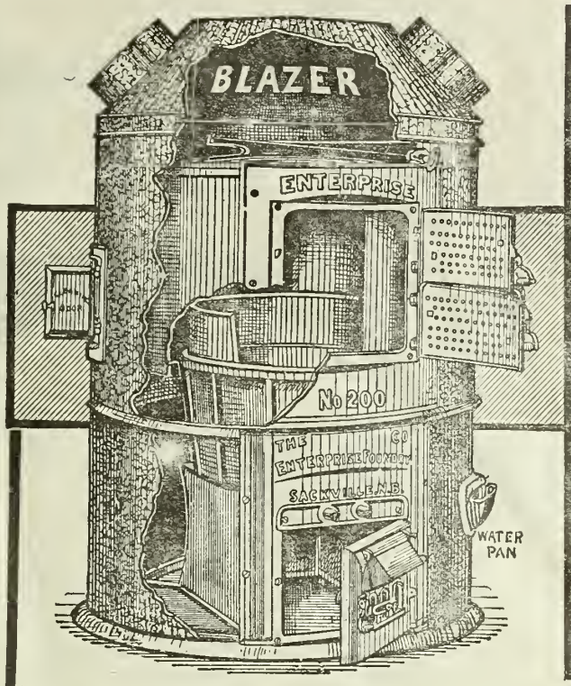
"It is only this, Bill, and excuse me for saying so, that you have sinned against the first commandment in soil management, to wit: 'Thou shalt not dry out thy land.' In the first place you omitted to give your land a stroke with a peg-tooth hartow early in spring and consequently did not prevent the capillary and evaporative pumps from working at full speed at the very beginning of the season. Secondly, you plowed down manure in the spring, which you may be as careful as you like, always means loss of moisture. And finally, you laid up the land in drills increased the soil surface, and consequently gave the evaporative pump an excellant lubrication. I will admit that it is advisable to use drills in exceptional cases, but as a rule, the flat land method is better under our dry summer conditions. It at least saved my roots this year. By harrowing early in spring I prevented evaporation to a very great extent, and there was sufficient moisture in the ground at seeding time to ensure perfect germination of the seed. The roots got a good start, and after seeding I created a good surface mulch with the aid of a harrow."

"Do you mean to say that you actually harrowed the roots after seeding?"

"Why, certainly. I not only hartowed them immediately after seeding, but I also gave them two strokes of the harrow across the rows before thinning. You can see the result on the swedes which have not yet been singled out to their proper distance. I use plenty of seed in order to get a good catch and under favorable conditions there are, of course, far too many plants. However, after the harrows have done their work thinning is mere play."

"Well, judging from the results there must be something in your method. And I almost believe that I will try it next year."

"All right, Bill, but don't forget to prepare and clean your land this fall by double plowing and repeated topworking between the two plowings."
—Paul A. Boving, Macdonald College Que., in Journal of Agriculture.



REASONS

SCIENTIFICALLY correct *principle*—supplying warmed *fresh* air, and ventilating the house as well as heating it.

PROPER PROPORTIONS—strength where strength is required, generous dimensions, but not too high for low cellars.

BEST MATERIALS—steel where steel is best, charcoal iron where it is better.

LARGE ASH-PIT, anti-clinker grates; large feed door; direct damper, worked from the front; easily-reached water-pan; heavy, two piece flanged fire-pot (patented by us); gas-proof steel radiator. Easy to clean out.

MOST ECONOMICAL—costs less to install than hot-water radiator systems; gives generous heat; low coal consumption; requires little attention, no repairs, and will last a lifetime.

Made in Four Sizes.

The ENTERPRISE Hot Air Blazer Furnace

is correct in principle, durably constructed of the best materials and economical and convenient in operation. It supplies a generous quantity of warm, fresh air to every part of the house, with less coal than is burned by many furnaces greatly inferior in heating capacity.

Patented and exclusive features are responsible for this economy, and also for its great durability.

Health as well as comfort, demands pure air in the house. Ordinary heating systems warm the same air over and over again, until it is dry, dead, and unwholesome. The Blazer Furnace ventilates the house, and heats all parts of it evenly, protecting occupants from headaches and colds.

Write for this book. It is free.

There is a Blazer representative in your vicinity who will be glad to explain its features fully and to estimate the cost of installation in your home. If you do not know him, write us for his name.

Enterprise
FOUNDRY CO. SACKVILLE, N.B.

Sore Mouth in Young Pigs.

A Subscriber writes: "I have been interested in the discussion in your columns on the subject of "Black Teeth in Young Pigs." Having had years of experience in raising hogs, both in the United States and Canada, I venture an opinion on this question.

"It has often appeared to me that any trouble in the mouths of young pigs can be easily diagnosed as the result of black teeth. In all my experience I have never known of these black teeth to do any injury to the health of a pig. What I have seen, however, and what has proven to be the source of very heavy losses in the U. S. is a trouble commonly called contagious canker sore mouth in the young pigs. We have always concluded that this trouble started from the young pigs fighting while sucking—a slight scratch about the mouth being the source of the infection. This is very contagious and spreads among a litter very rapidly.

Any common disinfectant will heal these sores in a few days. A common treatment is a mixture of one-third carbolic acid and two-thirds fresh melted lard. Rub this around the lips and mouths of the young pigs and over the udder of the sow."

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B
Jos. R. Taylor, Upper Dorchester, N. B.
John E. Barton, Welsford, N. B.

Ayrshire Oattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

B. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Milking Shorthorns.

E. W. Heurtley, P. O. Sutherland's River, N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Cheviot Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Southdown Sheep

E. W. Heurtley, P. O. Sutherland's River, N. S.

Shropshires

C. A. Archibald, Truro, N. S.

Yorkshires.

R. J. Messenger, Lawrencetown. N. S.
E. W. Heurtley, P. O. Sutherland's River, N. S.
Steward Bros., Murray River, R. R. No. 1, P. E. I.
J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
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The S. H. White Co. Ltd., Forest Glen, N. B
A. A. McBeath, Marshfield, P. E. I.
Wm. A. Churchill, Lakeside. Yarmouth Co., N. S
Sydney J. Goodliffe. Sussex, N. B.

Chester Whites.

Thos. W. Prowse, Union Road, P. E. I.
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Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
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For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

Riverview Stock Farm

High Class Holstein Cattle and Yorkshire Pigs

Several young Bulls fit for service for sale, sired by Bob Dorindo, 9532, several times champion and a son of the well known champion Mercena Vale 5828. Dams are heavy producers and show ring winners.

D. R. NICHOLSON, Coxheath, N. S.

Registered Stock for Sale

Guernsey and Ayrshire Bulls ranging from nine months to eighteen months old.
Guernsey and Ayrshire New Milch Cows. Also Young Calves of both breeds. Last but not least, Registered Shropshire Ram Lambs. The above will be shown at Shubenacadie District Exhibition.

John McDonald & Son
Shubenacadie, N. B. - Bloomfield Farm

Few, if any, medicines, have met with the uniform success that has attended the use of Chamberlain's Colic, Cholera, and Diarrhoea Remedy. The remarkable cures of colic and diarrhoea which it has effected in almost every neighborhood have given it a wide reputation. For sale by all druggists.

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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, hetland ponies of the smallest type and best breeding Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

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Do your bees pay their keep? If not it is your fault. Use modern appliances, and make them the most profitable stock on the farm. We carry a full line of Beekeepers' Supplies: Hives, Honey Extractors, Packages, etc.

Write for particulars.

E. L. COLPITTS,
PETITCODIAC, - - N. B.

HIGHFIELDS POULTRY FARM

FOR SALE

Pure S. C. W. Leghorn Cockerels from imported stock from the States and England. Orders booked now.

Also White Wyandotte Cockerels of good size and color.

Also Pure White Pekin Ducks and Drakes bred from birds specially imported from the States.

Inspection invited.

HIGHFIELDS FARM
Hampton, - - N. B.

"Meadowlands" Stock Farm

Clydesdale Horses & Shorthorn Cattle

We have for sale 3 pure bred Shorthorn Bull Calves, milking strain, 3 and 4 months old. Also 1 Bull Calf 11 months old, from good milking dam. He is a red roan and will make an extra good herd header.

MORRIS SCOVIL & SON
Meadowlands, Gagetown, N. B.

DURHAM BULLS

Six nice pure bred Durham hulls from eight to fifteen months of age, out of heavy milking dams, for sale. Also a number of nice calves and yearling heifers, well bred for milking qualities and in fine shape.

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PISGAH PLACE:

Clydesdale Horses, Ayrshire Cattle
Yorkshire Hogs

FOR SALE

A Yearling Bull from imported stock His dam is a prize winner at Halifax and St. John and last year gave over 10,000 lbs. of milk. His sire is from noted prize winners in Scotland. Also a 3 mos. old bull calf, whose dam is qualified in the R. O. P. with 7492 lbs. of milk and 306 lbs. of fat. His sire has qualified ancestors Pure bred Yorkshire little pigs ready to go in October and November.

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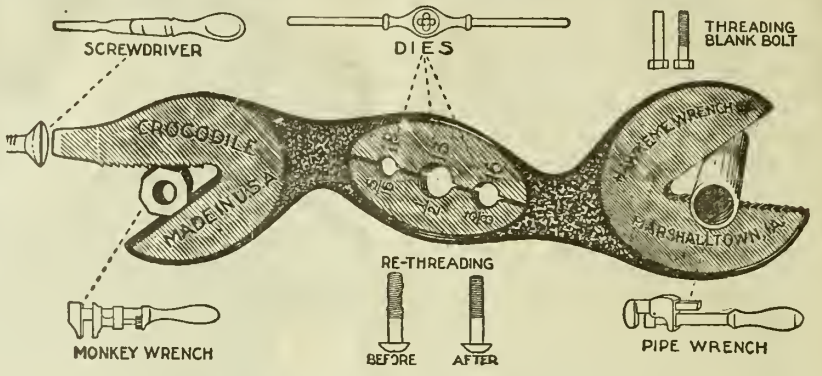
It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

The Crocodile Wrench

An All Around Handy Tool for the Home, Farm and Shop



Six Handy Farm Tools in One

The Crocodile Wrench is drop forged from the finest tool steel and scientifically tempered. Every wrench guaranteed against breakage. It is 8 1-2 inches long and weighs ten ounces.

A pipe wrench, a nut wrench, a screw driver and three dies 5-16, 3-8 and 1-2 inch for cleaning up and re-threading rusted and battered threads, also for cutting new threads on blank bolts. Dies will fit all bolts used on standard farm machinery.

Teeth and dies are case-hardened in bone-black, making them hard and keen.

The dies on this wrench alone would cost $1.50, and would be worth more than that to every farmer, as they would often save valuable time, besides an extra trip to town for repairs.

Sold everwhere for 75 cents cash.

How to Procure a Crocodile Wrench

On receipt of $1.00 we will send you the Maritime Farmer for one year and also one of these Crocodile Wrenches. New subscriptions will date from time of receipt, renewals from date of expiration of present subscriptions. Send us two new cash in advance subscribers to the Maritime Farmer at 80 cents each and we will send you a wrench for your trouble. Or for 75 cents cash we will send you a wrench.

The Maritime Farmer, Sussex, N. B.

PARTNER WANTED!

For a growing Poultry Supply Business, a good opportunity for a man interested in poultry desiring a steady income. The business at present in good paying condition and growing to such an extent that the owner needs assistance, prospects for future very bright. Books and all particulars of the Company open for inspection, correspondence invited.

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AYRSHIRE CATTLE AND CHESTER SWINE.

I am offering the following for sale:—One two-year old Ayrshire bull out of the famous cow White Heather, several choice bull and heifer calves and a few good cows.

Chester White Swine—Orders booked for spring litters.
Correspondence solicited. 'Pone 111.

J. FRANK ROACH, - - Sussex, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

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We carry the famous

HARAB FERTILIZERS

Quality the best. Prices right and terms easy. Write for particulars before placing orders elsewhere.

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GUERNSEYS

Buff Orpingtons and White Wyandottes.

R. R. BLACK,
Highland View Dairy, Amherst, N. S.

OF THE
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OCT 1914

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MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

REGISTERED TRADE MARK

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 19. SUSSEX N. B., SEPTEMBER 29, 1914 No. 24

We Thought This Ad. Was Important Enough To Put On The Front Cover

WE are paying our good money to have this ad. appear on the front cover, because the front cover is the most conspicuous part of the Maritime Farmer, and every subscriber is therefore certain to see this ad. And, we hope, read it, because it contains information of importance to you, no matter whether you do or do not enjoy the benefits of a telephone service in your locality.

If you do enjoy telephone service in your locality, and your company is an independent local one, proposing to extend its lines or add more telephones to the system, we want you to remember that we guarantee four things:

FIRST.—The quality of all our telephones, switchboards and construction materials.

SECOND.—To make prompt shipments.

THIRD.—To furnish accurate and reliable information on all telephone matters.

FOURTH.—To charge you the same price as we do all our customers. We have never attempted to sell our telephones in Nova Scotia or New Brunswick at higher prices than we charge in Ontario or elsewhere.

IF your locality is not served with a telephone system, but is considering the building of one, bear in mind these three things.

FIRST.—That we have been closely identified with the majority of the independent local and municipal systems that have been built in our own province of Ontario.

SECOND.—We are the largest independent manufacturers of telephone equipment in Canada, and, as we must depend for our Eastern business on the independent local systems, we are therefore directly interested in their success. It is to our advantage to put forth our very best efforts to insure any new system getting started in a manner to insure its success.

THIRD.—If our service is good enough to secure the business of the large majority of independent local and municipal systems now in our own Province where competition is keen, does it not seem reasonable to believe that we can serve you satisfactorily too?

FREE:

Our No. 3 Bulletin tells how to build telephone lines. Our No. 4 Bulletin —just off the press—fully describes our magneto telephones. Both free on request. Write for them.

Canadian Independent Telephone Co., Ltd.

1820 DUNCAN STREET TORONTO

Let's make a Jelly Roll—
With FIVE ROSES flour.

Its *Strength* and *Fineness* hold your batter together in the long well-greased pan.

Bakes *evenly*.

Smooth Texture—soft, golden Crumb, spongy, porous, yielding.

No holes, nor lumps to *vex* you.

And when you turn it out on the damp napkin hot and *savory*, and you spread the under side with "jell"—

It doesn't get *soggy* nor crumbly.

Roll it gently, carefully.

Not a *crack*—not a *break*.

Perfect Smoothness—a Perfect Roll— *Yours*.

Bake anything, make anything.

Use FIVE ROSES—*bread and pastry*.

Melting puff paste—flaky pie crust—crinkly fritters—tooth some rolls.

FIVE ROSES for anything—*everything*.

Be flourwise.

Five Roses Flour

Not Bleached — LAKE OF THE WOODS MILLING COMPANY LIMITED KEEWATIN TRADE MARK REGISTERED — Not Blended

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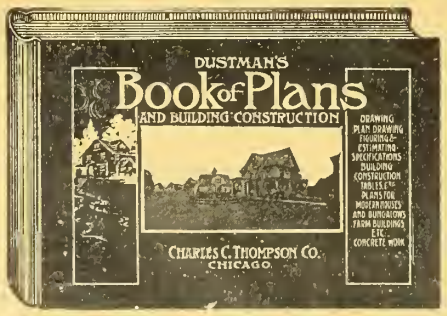

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Here's a different book from those upon the market. It contains information not generally known outside the building trades; just such information which the building public want. The author has written a book in which he has embodied the cream of over thirty years successful experience. He is widely known as a practical and expert architect and is an authority on the construction of medium priced homes.

Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns, farm buildings, store fronts, store buildings, garages, etc., etc.

CONTENTS :

General Construction Plans—Arrangement of Rooms—Things to be Considered in Laying out a building—Heating Facilities—How to Estimate Cost—Figuring Amount of Material Required—Time Saving Tables—Mechanical Drawing and How it is Applied in Construction of a Building—Plans with Estimated Cost of 150 Houses, Bungalows Barns, in Frame, Concrete or Brick Construction—Country Houses—General Barns, Cattle and Horse Stables—Dairy Barns—Poultry Houses and Silos—Hints as to Best Style of Structure—Details of Interior Construction and Finish—Window and Door Framing—Stairways—Store Fronts—Roof Construction—General Directions For Mixing and Placing Concrete—Proportions—Sand and Gravel—Itamized List of Material Costs—Writing of Specifications.

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THE MARITIME FARMER, SUSSEX, N. B.

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Next Session of Full Course begins November 3rd, 1914.

Next Short Course for Farmers and Farmer's Sons begins Jan. 5th 1915.

Next Short Course in Domestic Science, Dairying, Horticulture and Dairying for Ladies begins Jan. 5th, 1915.

Further additions to the buildings and to the number of the faculty have made it possible to accomodate an increasing number of students.

Tuition Free to all Students from the Maritime Provinces

Students can take a fall course in the various branches of Agriculture, Veterinary Science, etc., and at the same time in English, Mathematics, Book-keeping, the various sciences and other lines regularly studied in high schools and colleges.

STUDENTS COMPLETING THE TWO YEARS COURSE AT TRURO CAN ENTER THE THIRD YEAR AT GUELPH, ST. ANNE DE BELLEVUE AND OTHER AGRICULTURAL COLLEGES.

Those who have followed this course in the past have not only economized their money but have almost invariably stood in the first rank in their classes at these institutions.

Write for calendar to

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Principal Agricultural College, Truro, N. S.

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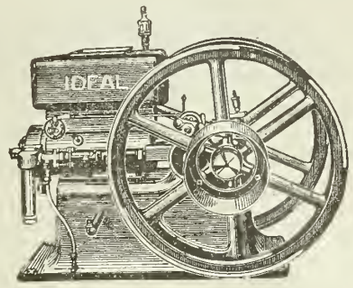

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Good Live Agents Wanted in Unrepresented Territory

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A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

The Gold Dust Twins' Philosophy

THE floors and doors appear to wait until the dust germs congregate; the housewife hails each dawning day with grim and harrowing dismay. Says she: "My work will NEVER end; o'er dusty stretches I must bend, until, with aching back and hands I finish what the day demands."

The "Floor-and-Door-a" Girl

Then Mrs. Jones, one afternoon, dropped in, at time most opportune. An optimist, she knew the wiles of household work—its sighs and smiles. She told of how she polished floors and woodwork and the endless doors, until when Hubby saw them, too, reflections said: "Why, howdy-do!"

"The Gold Dust Twins," said she, "I find, help leave the woes of dust behind. Each mark of sticky hands on doors, each tread of muddy feet on floors, all fade before the slightest touch of Gold Dust, and the work is such that, when the woodwork has been done, I find said work was only fun." This line of reasoning must show that those who've tried it OUGHT to know. If you, in one day's duties, find that there's a Grouch in ev'ry Grind, invite the Gold Dust Twins to share such tasks as tire and fret and wear.

From kitchen floor to bedroom suite, these tireless little chaps make neat, and best of all, the sum expense is measured up in meager cents. They put both dust and dirt to rout and run the last old microbe out.

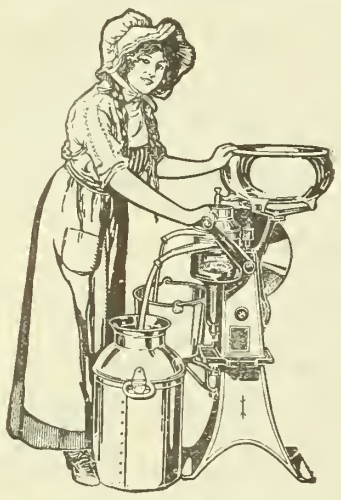
The Gold Dust Twins

DE LAVAL

as superior to other Separators as other Separators are to gravity creaming.

THE above heading sums up the cream separator case, as it concerns every prospective buyer of a separator and every user of an inferior separator, in as few words as it could well be put.

Other separators skim cleaner than is possible on the average with gravity creaming, and De Laval Cream Separators skim as much closer still than other separators, particularly under the harder conditions of cool milk, running heavy cream or separating the milk of stripper cows.



Other separators produce a cream superior to gravity creaming, and De Laval cream is smoother, less frothy and so much better than the cream of other separators that De Laval made butter always scores highest in every important contest.

Other separators save time and labor over gravity setting or creaming of milk, and De Laval Separators by reason of their easier turning, greater capacity, easier cleaning and easier handling save a great deal of time and labor over other separators

Other separators save their cost every year, as a rule, over gravity creaming; and De Laval Separators save their cost every year over other separators and last from ten to twenty years, or on an average five times as long as other separators.

DE LAVAL Separators cost a little more than other separators, but very little, and they soon save that small difference and go on saving it every few months for all the years they last.

WHY STOP HALF WAY IN BUYING A CREAM SEPARATOR ?

Why then but half solve the problem of best results and greatest economy in dairying by the purchase of an inferior separator or go on dairying with this important problem but half solved if you are already using an inferior separator that you might so easily replace with a De Laval ?

Why not solve it now in the only sure and safe way possible ? If you haven't a separator, buy a De Laval. If you have a poor separator, replace it with a De Laval. If it is not convenient to pay cash you may buy a DeLaval on such liberal terms that it will actually save and pay for itself.

Every De Laval local agent is glad of the opportunity to prove every claim here made. It will cost you nothing and may save you much to give him the opportunity. If you don't know the nearest De Laval agent simply address the nearest main office, as below.

DE LAVAL DAIRY SUPPLY CO., Limited

50,000 Branches and Local Agencies the World Over.

MONTREAL, PETERBORO, WINNIPEG, VANCOUVER

Pure Seeds for Farm or Garden

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Parcel Post Orders Our Specialty

Dunlap Bros. & Company, Limited

Direct Importers of Shelf and Heavy Hardware, Bar Iron and Steel, Carriage Woodwork, &c.

Amherst, - - Nova Scotia

Have You Tried Our Fibreware Squab Breeding Nests, Made of Wood-Pulp, Durable and Sanitary, Because They Can Be Kept So Clean So Easily ?

If you are not using them, it will be to your interest to write us for perticulars.

Keep the Pigeons Free from Vermin by Using Eddy's Sanitary Wood-Pulp Nests

Made only at Hull, Canada, by

The E. B. EDDY COMPANY, Limited

TAYLOR'S
SOLID LEATHER SHOES

Mr Consumer

See that the next pr. of Shoes you buy have the name TAYLOR stamped on the Sole.

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If you want to increase your Trade keep a stock of the TAYLOR solid leather Shoes.

The Red T Brand of Boots and Shoes that we have put on the market are made of **Solid Leather** and on the **latest style** of **Lasts.** Ask your dealer for the

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EGGS FOR HATCHING

Brom Bright Highest Class Exhibition Barred P. Rocks. The leading winners of America's largest shows—the Best. The verdict of three world's fair, Cockered and Pullet Mating. Regal W. Wyandottes winners at Kentville Poultry Show of 5 firsts, 2 seconds, 1 third, and 6 Specials. Winner of Silver Cup.

Setting $2.00 per 13.

Kentville Poultry Yards,
KENTVILLE, N. S.

WE BUY LIVE POULTRY

Prices quoted on Live Market Poultry at any time.

KINNEAR POULTRY CO., LTD.
SUSSEX, N. B.

FOR SALE.

To prevent inbreeding I offer for sale my Jersey bull O'Rorke No. 1757, coming three years old, a sure stock getter and a large percent heifer calves, good size, quiet and all right in every way. Apply to

H. B. Schofield, Lakeville, N. S.

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Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding **The Farmers Most Profitable Cow** should be sent to the Secretary of the Association

W. A. CLEMONS, St. George, Ont.

MOUNT PLEASANT HOLSTEINS

When you want a pure bred Holstein Friesian bull calf from high producing record stock, let us quote you our prices before you place your order. Write, or better still, call to see us. 'Phone 68-4.

JEFFRIES BROS., Mount Pleasant Farm, SUSSEX, N. B.

EGGS FOR HATCHING

From Rose and Single Comb Rhode Island Reds. Silver cup winners at Amherst Winter Fair. Best pens $3.00 per 15 eggs. Second pens $2 00 per 15 eggs. No mating list. Write for particulars.

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For fall setting, Herbert, Hiram, King and Cuthbert.

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Importers and Breeders, Clydesdales, Dairy Shorthorns and Border Leicester Sheep. A number of choicely bred animals for sale.

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We have show stock for sale in the best of condition.

In the beef strain we offer five beautiful heifer calves from 4 to 8 months old. Color, red. Will also sell cows from 2 1-2 years to 9 years of age. Colors, mostly red, a few roans, some are excellent milkers. Our herd is now headed by "Royal Knight" 398531, Am. Shorthorn Breeders Assn., sired by a brother of the world's champion Rose of Glenside—18,075 lbs. milk and 735 lbs. butter in one year. Prices are reasonable and cheerfully supplied.

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Our present offering is three bulls, fit for service. They are all good individuals and have good official backing. Can part with a few heifers ready to freshen next fall; also some bull calves. Our Berkshires are about all sold and we are now booking orders for ram lambs for fall delivery. Write for description and prices.

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Prices within reach of every farmer who wishes to improve or renew his stock.

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Ram Lambs with substance and choice quality.

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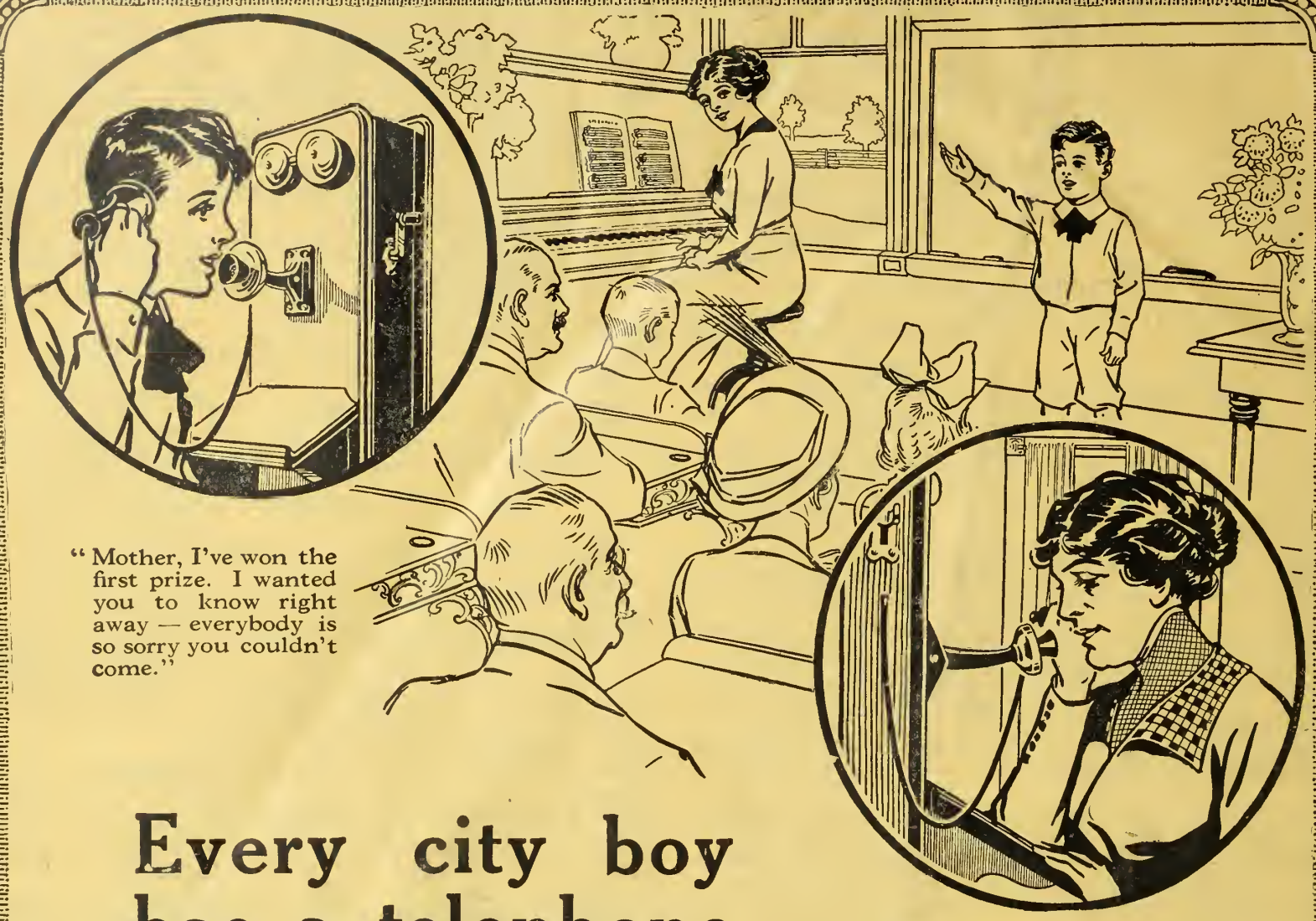

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